CITY PLANNING BOARD

BOARD AGENDA

Planning Board Regular Meeting - Tuesday, August 11, 2020 - 2:00 p.m.
City Hall - City Commission Chambers, 100 North U.S. #1, Fort Pierce, Florida

1. **CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

4. **CONSIDERATION OF ABSENCES**

5. **APPROVAL OF MINUTES**

   a. Minutes of the July 14, 2020 Planning Board Short Term Rental Workshop

   b. Minutes from the July 14, 2020 Planning Board meeting

6. **HEARING OF THE LOCAL PLANNING AGENCY**

   a. Future Land Use Map Amendment - Aria Apartments - 3000 Okeechobee Road

7. **NEW BUSINESS**

   a. Rezoning - Aria Apartments - 3000 Okeechobee Road

   b. Rezoning- Willow Lakes - NW corner of West Midway Road and I-95

   c. Conditional Use - Fort Vacation Rental - 715 S. Ocean Drive, Unit F

d. Site Plan and Conditional Use - Aria Apartments - 3000 Okeechobee Road

e. Site Plan - Blue Sky Landing - 2419-211-0004-000-8

f. Final Plat - Bent Creek Subdivision (Tract B-2)

g. Updated Board Procedures

h. Short Term Rental Recommendations

8. **COMMENTS FROM THE PUBLIC**

Any person who wishes to comment on any subject may be heard at this time. Please limit your comments to three (3) minutes or less, as directed by the Chair, as this section of the Agenda is limited to thirty minutes. The Planning Board will not be able to take any official actions under Comments from the Public. Speakers will address the Board and the Public with respect. Inappropriate language will not be tolerated.

9. **DIRECTOR'S REPORT**

10. **BOARD COMMENTS**

11. **ADJOURNMENT**

Any person seeking to appeal any decision by the Planning Board with respect to any matter considered at this meeting is advised that a record of proceedings is required in any such appeal and that such person may need to insure that a verbatim record of the proceedings is made including the testimony and evidence upon which the appeal is to be based.
Persons who require special accommodations under the Americans with Disabilities Act (ADA) should contact (772) 467-3729, at least five (5) days prior to the meeting. Persons who are hearing or speech impaired may use the Florida Relay System by dialing 711.

Planning Board - 2 PM **5. a.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Minutes of the July 14, 2020 Planning Board Short Term Rental Workshop

LOCATION

N/A

RESPONSIBLE STAFF

N/A

RECOMMENDATION

N/A

Attachments

Planning Board Short Term Rental Workshop Minutes

E-mailed comments from Larry Winter

E-Mailed comments from Marcia Baker

Form Review

Form Started By: Alicia Rosenthal Started On: 07/16/2020 10:40 AM

Final Approval Date: 07/23/2020

D R A F T

CITY OF FORT PIERCE
PLANNING BOARD

Planning Board Minutes

OF THE WORKSHOP OF THE FORT PIERCE CITY PLANNING BOARD HELD ON TUESDAY, JULY 14, 2020, IN FORT PIERCE CITY HALL, COMMISSION CHAMBERS, 100 NORTH US HIGHWAY 1, FORT PIERCE, FLORIDA.

1. CALL TO ORDER

2. ROLL CALL

Mr. Burdge entered the meeting at 1:03 PM.

Present: **Solomon Lee**; **Tim O'Connell**; **Michael Broderick**; **Bob Burdge**; **Patricia Diaz**; **Gloria Johnson-Scott**; **Frank Creyaufmiller**, **Chairman**

Staff Present: **Peter Sweeney** , **City Attorney**
Jennifer Hofmeister, **Planning Director**
Alicia Rosenthal, **Executive Assistant**

3. **CONDITIONS OF APPROVAL FOR SHORT TERM RENTALS**

Ms. Hofmeister gave a presentation on vacation rentals that highlighted the City of Fort Pierce and other localities regulations, current conditions of approval, additional language for consideration, and sample placards with suggested information.

Mr. Sweeney provided the Board an Indian River County vacation rental handout and he explained the City of Fort Pierce Conditional Use process for short term rentals. Mr. Sweeney said a City Commission denied short term rental can re-apply after six months and possibly be approved if the circumstances changed.

Mr.Broderick suggested that the additional conditions include that the property manager needs to show proof of residency, no on street parking and a permit fee be required for vacation rentals.

Ms. Hofmeister noted that new recommendations for conditions will need to be formalized and presented to the City Commission by the Planning Board Chair or Vice-Chair.

4. **COMMENTS FROM THE PUBLIC**

Any person who wishes to comment on any subject may be heard at this time. Please limit your comments to three (3) minutes or less, as directed by the Chair, as this section of the Agenda is limited to fifteen minutes. The Planning Board will not be able to take any official actions under Comments from the Public. Speakers will address the Board and the Public with respect. Inappropriate language will not be tolerated.

Michelle Longarzo and Paul Schall both spoke highly in favor of vacation rentals.

Marcia Baker and Larry Winter e-mailed comments were provided to the Board.

5. ADJOURNMENT

VACATION RENTALS
Indian River County

Vacation rentals (residential units rented-out or offered for rent for a period of less than 30 days) are allowed in unincorporated Indian River County, subject to the following:

1. State license from the Florida Department of Business and Professional Regulation (DBPR): 850-487-1395 or www.myfloridalicense.com/dbpr

2. Local Business Tax Receipt (LBTR) from the Tax Collector of Indian River County – 1800 27th Street, Vero Beach FL, 32960 (772-226-1343). The application is available on-line at http://www.irctax.com/LocBusTaxApp-NewBusChkList.html

3. Register with the Clerk of the Court for tourist development tax: 772-226-3164

4. Compliance with Indian River County special parking regulations for vacation rentals (regulations attached):

   - Maximum number of cars **parked outside a carport or garage**:

     – Rental unit without carport or garage: 2 parking spaces plus 1 space per bedroom with a maximum total of 5 spaces

     – Rental unit with carport and/or garage: 1 parking space per bedroom with a maximum total of 5 spaces.

5. Compliance with prohibition: No single-family residence, including a vacation rental single-family unit, can be rented-out for a wedding or a similar event characterized by music, dancing, catered food, tents, outdoor tables, alcohol, or use of shuttles or valets for guests.

   Exemption: Agricultural property 4 acres or larger upon obtaining a temporary use permit (TUP) from County Planning.

6. Vacation Rental license from County Community Development Department (application attached) and compliance with county vacation rental ordinance (Ord. No. 2016-006).

COMPLAINTS ABOUT VACATION RENTAL VIOLATIONS [may remain anonymous]

Unincorporated County: Code Enforcement Office: 772-226-1249
Report On-Line: www.ircgov.com/violations

Report of public disturbance/nuisance: Sheriff's Office 772-569-6700 option 2

City of Vero Beach: Tom Ramsey (south zone) 772-978-4551
Melody Sanderson (north zone) 772-978-4561
On-Line: covb.org Departments/Code Enforcement

ATTACHMENTS: 1) IRC Vacation Rental Parking & Commercial Event Prohibition
2) Commercial Event at Residence Code Enforcement
3) IRC Vacation Rental License Application
4) State Guide to Vacation Rentals

Indian River County Vacation Rental Parking Regulations and Commercial Event Prohibition

Vacation rental: any residential dwelling which is rented or leased more than three times in a calendar year to a tenant, individual, group of individuals, or party for a period of less than 30 days, or which is advertised or held out to the public as a dwelling which may be regularly rented or leased for a period of less than 30 days. [901.03]

Vacation Rental Special Parking Regulations

1. For a vacation rental that has a carport or garage, the number of automobiles that may be parked outside of a carport or garage shall be limited to one automobile per bedroom not to exceed a total of five (5) automobiles parked outside the carport or garage. Automobiles parked outside of a carport or garage shall be parked within a designated and improved or stabilized driveway and not within any required yard area.

2. For a vacation rental that has no carport or garage, the total number of automobiles parked shall be limited to two automobiles plus one automobile per bedroom not to exceed a total of five (5) automobiles parked on site. Automobiles parked outside of a carport or garage shall be parked within a designated and improved or stabilized driveway and not within any required yard area.

3. For all vacation rentals, all automobiles except for service and delivery vehicles shall be parked on-site and shall not be parked within a road right-of-way except within a designated and improved or stabilized driveway. [911.15(4); repeated in 912.17(2)]

Reference: Ordinance 2015-014; Code (LDR) sections 901.03, 911.15(4), 912.17(2)

Commercial Event at Residence Prohibited

"Commercial event at residence": a gathering of people for a celebration that may include but not be limited to a: birthday, anniversary, wedding, reunion or sporting event characterized by music (live or recorded), dancing, catered food, tents, outdoor tables, alcohol or use of shuttles or valet for guest.

1. Held or occurring at single family residence.
2. Leased by the owner or the owner's agent for consideration in exchange for holding the event at the residence.

(8) – Prohibition of commercial event at residence

(a) As defined in 901.03, it shall be a violation of this code for any owner to lease a single family residence as a location for a commercial event at residence to be held. It shall be prima facie evidence of a violation of this code for an owner to advertise or hold out the property to be used as a location for a commercial event at residence.

(b) A commercial event at residence held at a site that is:
   1. Four acres or greater in area and
   2. At a site that is zoned agricultural or
   3. At a site used for agricultural purposes

   Must first apply for and receive a Temporary Use Permit as prescribed by IRC Code Chapter 972 prior to conducting the commercial event at residence.

(c) If the owner of the property is not on the premises at the time of a commercial event at residence, it shall be a rebuttable presumption of a violation of this section.

Reference: Ordinance 2015-013; Code (LDR) sections 901.03, 911.15(8), 912.18(3)

Indian River County Code Enforcement Process

Commercial Event at Residence (e.g. weddings)

- County code prohibits the renting of a residence for the purpose of conducting a "commercial event" such as a wedding or celebration characterized by music (live or recorded), dancing, catered food, tents, outdoor tables, alcohol, or use of shuttles or valet for guests.

- If a citizen suspects a prohibited event is going to take place or is taking place, they should contact IRC Code Enforcement at 772-226-1249 or on-line at: http://cdplus.ircgov.com/CodeSearch/codesearch.dll/6C9E7u3GduwjCBDAmkGCBq/$/. Pictures or any evidence of a violation submitted by a citizen are welcome and can be used as evidence. Evidence submitted "after-the-fact" is still relevant to any investigation.

- Citizen complaints can be made anonymously.

- Upon receiving a complaint, a Code Enforcement Officer will investigate.

- If a first time violation is verified, the violator will be advised of County code requirements and sent a warning letter.

- If any subsequent violations occur, code enforcement action will be taken. Fines for commercial event at residence violations are as follows:

    - ❖ First violation after warning: $1,000 per event*
    - ❖ Repeat violation: $5,000 per event*

* NOTE: these fine amounts were adopted by the Board of County Commissioners on June 21, 2016.

INDIAN RIVER COUNTY

VACATION RENTAL LICENSE APPLICATION

CODE ENFORCEMENT SECTION
COMMUNITY DEVELOPMENT DEPARTMENT
1801 27TH STREET (BUILDING A)
VERO BEACH, FLORIDA 32960
(772) 226-1249

DATE RECEIVED_____

Note: Required acknowledgment form attached

Applicant name_____

Applicant mailing address_____

City, State, ZIP_____

Applicant phone number_____

Applicant email address_____

Vacation Rent Unit address_____

City, State, ZIP_____

1. Rental unit manager contact information:

   Manager name:_____

   Cell phone number:_____

   Email address:_____

   Mailing address:_____

2. Attach the following:

	Attached	Not Attached
a. State license for vacation rental unit		
b. Local business tax receipt from the Tax Collector		
c. Local tourist tax account # from the Clerk of the Circuit Court		

3. Parking information:

   Total number of garage and/or carport parking spaces:_____
   Location and number of parking spaces accommodated on improved or stabilized driveway (attach sketch or aerial):_____

	Provided in rental unit	Not Provided in rental unit
4. Verification that state license fire protection items have been provided in the vacation rental unit: smoke alarms, emergency lighting, fire extinguisher. Verification of carbon monoxide (CO) alarm, when required.		

5. Unit is served by (check one): Public sewer:_____ On-site septic/drainfield system:_____

   Note: If served by an on-site sewage treatment and disposal system, the applicant is required to provide an existing system evaluation approved by the Health Department if the Health Department has no record of the system size permitted by the department. Code Enforcement will contact you if the Health Department has no record of the system size.

6. Total Number of bedrooms: _____

   Square footage of each bedroom:_____

	Attached	Not Attached
7. Execute and attach the vacation rental regulations acknowledgement form.		

8. Application fee submitted: $250.00

THE ABOVE INFORMATION AND STATEMENTS ARE TRUE TO THE BEST OF MY KNOWLEDGE AND I WILL COMPLY WITH CHAPTER 911.15(9), LAND DEVELOPMENT REGULATIONS OF INDIAN RIVER COUNTY, FLORIDA.

APPLICANT NAME (PRINT): _____

APPLICANT SIGNATURE _____**DATE**_____

STATE OF FLORIDA, COUNTY OF INDIAN RIVER SWORN AND SUBSCRIBED TO BEFORE ME THIS_____**DAY OF**_____ **, 20**____**, WHO IS/ARE PERSONALLY KNOW TO ME OR HAVE PRODUCED THEIR,**_____
_____

AND WHO DID NOT TAKE OATH:

_____
NOTARY PUBLIC
STATE OF FLORIDA AT LARGE

MY COMMISSION EXPIRES: _____

==========FOR OFFICE USE ONLY==========

DATE RECEIVED:_____DATE ACCEPTED: _____

PROJECT/APP REQ #:_____ STVRL #:_____

REVIEWER:_____ APPROVED:_____ DENIED:_____ BY:_____

EXPIRATION DATE: _____

INDIAN RIVER COUNTY
VACATION RENTAL REGULATIONS

ACKNOWLEDGMENT FORM

1. **I have reviewed and understand the following vacation rental regulations:**

   a. Prohibition on commercial events at residence (e.g. weddings and celebrations).
   b. Special parking regulations.
   c. Sea turtle protection lighting regulations and dune protection regulations (for rental units located east of SR A-1-A).
   d. Noise regulations: Chapter 974 noise regulations which include day and night decibel level limitations, more stringent "no disturbance" requirements from 10 pm to 6 am, and no excessive noise that would cause annoyance to any reasonable person of normal sensitivity.
   e. Limitations on dock/boat use: (for waterfront rental units): no more than 2 boats moored per dock, dock used by unit owner or renter only, no live-aboard use; (all rental units): no more than 2 boats stored or parked per unit.
   f. Fire safety requirements and maximum sleeping occupancy limitations.
   g. Fines and citation penalties for violations.

2. **The following information has been posted or displayed inside the vacation rental unit:**

   a. Manager contact information.
   b. Maximum number limit of parked automobiles and boats, and approved parking locations.
   c. Trash and recycling pick-up days and protocol for placing and retrieving/storing containers.
   d. Noise regulations: day and night decibel level limitations, more stringent "no disturbance" requirements from 10 pm – 6 am, and no excessive noise that would cause annoyance to any reasonable person of normal sensitivity.
   e. Location of smoke alarms, emergency lighting, and fire extinguisher.
   f. Emergency room information.
   g. Sea turtle protection lighting information and dune protection information (for rental units located east of SR A-1-A).
   h. Maximum sleeping occupancy (number of persons).

3. **I have contact any applicable property owners association or homeowners association and am aware of any applicable private restrictions.**

4. **I will ensure that any advertisement and any rental offering associated with the vacation rental unit will contain the following information:**

   a. Local license number.
   b. Occupancy limit confirmed by the County Code Enforcement Officer.
   c. Maximum number of vehicles allowed to be parked outside a carport or garage.
   d. Noise regulation summary (see item 1d. above).
   e. Commercial event at residence prohibition.
   f. [For any unit located east of SR A-1-A] Requirements of 932.09(1), 932.09(4), and 932.06(1)-(4).

I hereby acknowledge that I fully understanding and have provide the propriate information noted above:

Applicant Name (print): _____ Date: _____

Applicant Signature: _____

Attached for applicant's reference:

1. Prohibition on commercial events at residence 911.15(8)
2. Special parking regulations 911.15(4)(b)
3. Vacation rental regulations 911.15(9)
4. Noise Regulations Chapter 974
5. Limitations on dock boat use 917.06(6) & 932.07(1)
6. Sea Turtle protection regulations 932.09(1) and 932.09(4) and dune protection 932.06(1)-(4)
7. Fines and citations

DEFINITION

Commercial event at residence a gathering of people for a celebration that may include but not be limited to a: birthday, anniversary, wedding, reunion or sporting event characterized by music (live or recorded), dancing, catered food, tents, outdoor tables, alcohol or use of shuttles or valet for guests.

1. Held or occurring at single-family residence.

2. Leased by the owner or the owner's agent for consideration in exchange for holding the event at the residence.

911.15(8)

(8) *Prohibition of commercial event at residence.*

(a) As defined in Section 901.03, it shall be a violation of this Code for any owner to lease a single-family residence as a location for a commercial event at residence to be held. It shall be prima facie evidence of a violation of this code for an owner to advertise or hold out the property to be used as a location for a commercial event at residence.

(b) A commercial event at residence held at a site that is:

1. Four (4) acres or greater in area; and
2. At a site that is zoned agricultural; or
3. At a site used for agricultural purposes

must first apply for and receive a temporary use permit as prescribed by IRC Code Chapter 972 prior to conducting the commercial event at residence.

(c) If the owner of the property is not on the premises at the time of a commercial event at residence, it shall be a rebuttable presumption of a violation of this section.

(d) Notwithstanding the prohibitions contained in paragraph (a) above, should this ordinance impair an existing contract for a commercial event at residence that is scheduled to be performed prior to September 30, 2016, holding the commercial event at residence shall not be a violation of this Code, so long as the contract documents are provided to the community development director by October 31, 2015.

911.15(4)(b)

(4) *Parking or storage of vehicles.*

(b) *Parking or storage of automobiles.* Except as provided in subsections 1—3. below, a maximum of three (3) automobiles (not including recreational vehicles) may be parked outside of a carport or garage on a single-family zoned lot. However, one (1) additional vehicle for each licensed driver permanently residing at the premises may be parked on the lot. No automobile may be parked or stored in any required yard area except in a designated and improved or stabilized driveway. The limitations on the number of automobiles parked outside of a carport or garage shall not preclude the parking of automobiles by persons visiting a single-family home.

1. For a vacation rental that has a carport or garage, the number of automobiles that may be parked outside of a carport or garage shall be limited to one automobile per bedroom not to exceed a total of five (5) automobiles parked outside the carport or garage. Automobiles parked outside of a carport or garage shall be parked within a designated and improved or stabilized driveway and not within any required yard area.
2. For a vacation rental that has no carport or garage, the total number of automobiles parked shall be limited to two automobiles plus one automobile per bedroom not to exceed a total of five (5) automobiles parked on site. Automobiles parked outside of a carport or garage shall be parked within a designated and improved or stabilized driveway and not within any required yard area.
3. For all vacation rentals, all automobiles except for service and delivery vehicles shall be parked on-site and shall not be parked within a road right-of-way except within a designated and improved or stabilized driveway.

Chapter 974

Section 974.01. Short title and purpose.
Section 974.02. Definitions referenced.
Section 974.03. Noise and vibration restrictions, in general.
Section 974.04. Specific noise and vibration prohibitions.
Section 974.05. Additional noise control standards by zoning district.
Section 974.06. Exemptions.
Section 974.07. Opportunity for administrative approval.

Section 974.01. Short title and purpose.

This chapter shall be known and may be cited as the "Indian River County Noise and Vibration Control Ordinance."

It is the purpose and intent of this chapter to regulate uses and activities in such a manner as to prevent excessive noises and vibrations which degrade the quality of life, disturb the public peace, and jeopardize the health, safety and welfare of the citizens of Indian River County. It is further the intent of this chapter to recognize that factors such as the time of day, location (e.g., proximity to residences), and necessity of sounds incidental to allowed uses and activities must be considered in balancing the protection of public peace, individual freedoms and private property rights.

(Ord. No. 90-16, § 1, 9-11-90)

Section 974.02. Definitions referenced.

The definitions of certain terms used in this chapter are set forth in Chapter 901, Definitions, of the Indian River County Land Development Code.

(Ord. No. 90-16, § 1, 9-11-90)

Section 974.03. Noise and vibration restrictions, in general.

It shall be unlawful for any person to make, continue, or cause to be made or continued any excessive, unnecessary, or unreasonably loud noise or vibration which disturbs the peace or quiet of any neighborhood or which would cause discomfort or annoyance to any reasonable person of normal sensitivity. Moreover, it shall be prohibited for any person to engage in any use or activity that creates any such noise or vibration contrary to the specific provisions of this chapter.

(Ord. No. 90-16, § 1, 9-11-90)

Section 974.04. Specific noise and vibration prohibitions.

The following standards and restrictions shall apply to uses and/or activities in unincorporated Indian River County, except as may conflict with the provisions of section 974.06, Exemptions, of this chapter. Uses and/or activities in compliance with the standards and restrictions of this section shall not be subject to the noise control standards set forth in section 974.05.

(1) *Radios, television sets, musical instruments, and similar devices.* It shall be unlawful to use, operate, or permit to be played, used, or operated, any radio receiving set, musical instrument, phonograph, television set, or other machine or device for the production or reproduction of sound between the hours of 10:00 p.m. and 6:00 a.m. in such manner as to create a noise or vibration disturbance to neighboring premises.

Pertaining to radios, cassette players, disk players and similar devices associated with motor vehicles, no such device shall be operated in such a manner as to create a noise or vibration disturbance at one hundred (100) feet or more from such device, when operated on a public right-of-way or public space.

(2) *Construction equipment and activity.* It shall be unlawful to operate any equipment or perform any outside construction or repair work on buildings, structures, roads, or projects within the county between the hours of 8:00 p.m. and 6:00 a.m. unless an administrative approval as set forth in section 974.07 for such construction or repair work between such hours has been obtained from Indian River County on the basis of good cause shown.

(3)*Engine mufflers.* It shall be unlawful to operate any internal combustion engine, including such an engine associated with a motor boat, or motor vehicle without a muffler or other device which will effectively prevent loud or explosive noises therefrom.

(4)*Animal noises.* It shall be unlawful to keep or maintain any animal (including birds) without providing and maintaining adequate sound-control techniques to eliminate any excessive, offensive, and unnecessary noise. This provision shall not apply to property within an agricultural zoning district.

(5)*Vehicle repair in residential areas.* It shall be unlawful to repair, rebuild, or test any motor vehicle between the hours of 8:00 p.m. and 6:00 a.m. on property within or abutting any residential zoning district in such a manner as to disturb the peace, quiet, and comfort of the residents of the area.

(6)*Activities in the vicinity of schools, courts, churches, and hospitals.* It shall be unlawful to create any excessive noise on any street adjacent to any school, court, church, or hospital which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in a hospital.

(7)*Loading or unloading of vehicles, opening bales, and boxes.* It shall be unlawful to make, create, or maintain any loud or excessive noise within the county that would result in a disturbance to neighboring properties in connection with the loading or unloading of any vehicle or the opening or destruction of bales, boxes, crates, or containers.

(8)*Peddlers, hawkers, or vendors.* It shall be unlawful for peddlers, hawkers, or vendors to shout or cry along or on a roadway to the disturbance of the peace or quiet of a neighborhood.

(9)*Drums, cymbals, and loudspeakers.* It shall be unlawful to create, make, or maintain any noise by the use of any drum, cymbals, loudspeaker, or other similar instruments in the county for the purpose of attracting attention to any performance, show, sale, or display of merchandise, or place of business. This provision shall not apply to ice-cream trucks or approval public events.

(10)*Bells or sirens on vehicles.* It shall be unlawful for any person to use in conjunction with any unauthorized vehicle any bell or siren similar to that used on ambulances or vehicles of the sheriff, fire departments, and other public safety agencies.

(11)*Skateboard ramps.* It shall be unlawful to use any skateboard ramp or similar configuration between 8:00 p.m. and 6:00 a.m. in a residential zoning district in such a manner that would result in a disturbance to neighboring properties.

(12)*Air-blow cleaners.* It shall be unlawful for any person to operate any air-blow cleaning equipment or similar devices for the cleaning of parking lots, walkways, driveways, or similar areas between the hours of 10:00 p.m. and 6:00 a.m. that would result in a disturbance to neighboring properties.

(13)*Places of public entertainment.* It shall be unlawful for any public entertainment establishment or person associated with or working for said establishment to operate, play or permit the operation or playing of any radio, television, phonograph, drum, musical instrument, sound amplifier, or similar device between the hours of 9:00 p.m. and 6:00 a.m. in such a manner as to create noise or vibration that is a disturbance to neighboring premises.

(14)*Sounding of train horns or whistles.* It shall be unlawful for any engineer, conductor, fireman or other person in charge of or in control of any locomotive or railroad train of any railroad company operating wholly within this state to sound any railroad train horn, whistle or other audible warning signal between 10:00 p.m. and 6:00 a.m. in advance of or at any rail highway crossing located within Indian River County, providing that the crossing is equipped with train-activated automatic traffic-control devices, which shall include, flashing lights, bells and crossing gates.

(15)*Landscape maintenance.* It shall be unlawful for any person to undertake landscape maintenance activities in such a manner as to create a noise or vibration disturbance to neighboring premises between the hours of 8:00 p.m. and 6:00 a.m.

(16)*Power generators.* It shall be unlawful for any person to manually or automatically exercise or test a power generator in such a manner as to create a noise or vibration disturbance to neighboring premises between the hours of 6:00 p.m. and 8:00 a.m. Manual or automatic exercising or testing

of power generators shall be for the minimum duration necessary to meet manufacturer's specifications.

(Ord. No. 90-16, § 1, 9-11-90; Ord. No. 2009-016, § 1, 10-13-09)

Section 974.05. Additional noise control standards by zoning district.

Except as may conflict with the specific noise and vibration provisions of section 974.04, it shall be unlawful to project a sound or noise from one property into another property within the boundary of the zoning district which exceeds the limiting noise spectra set forth in Table I below.

(1)Sound or noise projecting from one district into another zoning district with a different noise level shall not exceed the limits of the district into which the noise is projected.

(2)The limits hereinabove referred to shall be in accordance with the following table:

TABLE I. APPLICABLE NOISE LIMITS

Measurement period one-quarter hour (continuous), as measured at the property boundary of the receiving parcel. In multifamily developments (including duplex developments), the measurement shall be taken from the receiving premises.

Zoning District	Sound Level in Decibels A-Scale (DBA)					
	Day 6:00 a.m.—10.00 p.m.			Night 10:00 p.m.—6:00 a.m.		
	L 1	L 10	L 50	L 1	L 10	L 50
Conservation	65	60	55	60	55	55
Residential	70	65	60	65	60	55
Commercial	75	70	65	70	65	60
Industrial	75	70	65	75	70	65
Agricultural*	75	70	65	75	70	65

Level L(1). That noise (A-weighted sound level) exceeding one percent of a measurement time equivalent to at least fifteen (15) minutes.

Level L(10). That noise (A-weighted sound level) exceeding ten (10) percent of a measurement time equivalent to at least fifteen (15) minutes.

Level L(50). That noise (A-weighted sound level) exceeding fifty (50) percent of a measurement time equivalent to at least fifteen (15) minutes.

*Residential developments within Agricultural Zoning Districts shall be subject to the decibel level thresholds for the "Residential" Zoning Districts.

(3)If the noise occurs at any time on Sunday or holidays, the decibel level applicable between 10:00 p.m. and 6:00 a.m. shall prevail.

(4)Noise levels shall not exceed the peak noise levels, independent of time duration, set out in Table II below:

TABLE II. PEAK NOISE LEVELS

Zoning District (dBA)	Sound Level in Decibels A-Scale
Conservation	75
Residential	80
Commercial	85

Industrial	85
Agricultural	85

(5)For noise of impulsive character (hammering, etc.), the permissible decibel levels set out in Table I shall be corrected by subtracting five (5) decibels. Impulsive sound is any sound of short duration, usually less than one second with an abrupt onset and rapid decay, e.g. explosions and blasting.

(Ord. No. 90-16, § 1, 9-11-90; Ord. No. 2011-008, § 2, 9-13-11)

Section 974.06. Exemptions.

The following noises or vibrations shall be exempt from the restrictions set forth in the other sections of this chapter.

(1)Noises of authorized safety signals and warning devices;

(2)Noises resulting from any authorized emergency vehicle, when responding to an emergency call or acting in time of emergency or any other public safety operation;

(3)Noises resulting from emergency work, which is to be construed as work made necessary to restore property to a safe condition following a public calamity, or work required to protect persons or property from any imminent exposure to danger;

(4)Noises incidental to mosquito control activities by the Indian River County Mosquito Control Board;

(5)Noises incidental to the activities of bona fide agricultural operations;

(6)Noises resulting from use of an emergency power generator during a power outage, provided that the generator is operated in accordance with manufacturer's specifications, with all standard equipment, and is in proper operating condition. Notwithstanding, noises resulting from use or testing of a generator by a utility company to support installation, repair, maintenance, or restoration of service operations are exempt from the restrictions set forth in this chapter;

(7)Noises resulting from an air conditioner, pool heater, and similar outdoor mechanical equipment that is properly located, or county-approved as a "quiet" low decibel model unit, or installed with a county-approved sound barrier or other county-approved noise-mitigating improvement as set forth in section 911.15(2)(c) of Chapter 911, Zoning, and section 912.07(1)(b)6. of Chapter 912, Single-Family Development.

(8)Noises or vibrations associated with uses or activities whereby an administrative approval to produce such noises or vibrations contrary to the restrictions of this chapter has been obtained from the community development director, as set forth in section 974.07 of this chapter.

(Ord. No. 90-16, § 1, 9-11-90; Ord. No. 2009-016, § 2, 10-13-09; Ord. No. 2013-022, § 3, 12-10-13)

Section 974.07. Opportunity for administrative approval.

A deviation from the provisions of this chapter may be granted via an administrative approval from the community development director. In reviewing a request for an exemption from the noise and vibration restrictions of this chapter, the community development director shall consider the following factors:

Whether or not the proposed use or activity necessarily warrants a deviation from the noise and vibration restrictions of this chapter;

Whether or not the noise and/or vibration associated with the proposed use or activity is compatible with surrounding land uses so as not to create a disturbance to adjacent properties;

Whether or not the applicant has taken or will take all effort to limit excessive noises or vibrations associated with the proposed use or activity to meet the intent of this chapter; and

In cases where the use or activity is proposed between 8:00 p.m. and 6:00 a.m., whether or not such hours of operation are necessary, and if so, are noises and vibrations associated with the use or activity minimized.

(Ord. No. 90-16, § 1, 9-11-90)

Section 917.06. - Specific accessory uses and structures.

(6)Piers, docks, boatslips and waterfront structures. No dock, pier, boatslip, or waterfront structure accessory to a single-family residence shall be rented, leased or sold to a party unless said party rents, leases, or buys the associated single-family residence. See Chapter 932, Coastal Management, for more information relating to piers, docks, boatslips and waterfront structures.

Section 932.07. - Piers, docks and boatslips.

(1)Restrictions upon regularly moored watercraft; maintenance. Watercraft shall not be regularly moored along any shore without consent of the riparian land owner. Regularly moored watercraft shall not be used as live-aboard vessels, offices or commercial enterprises except in commercial marinas with approval and facilities for that purpose. Regularly moored watercraft shall be kept in seaworthy condition when not in a permitted repair area. The mooring of live-aboard vessels (as defined in Chapter 901) in commercial marinas shall be limited to those boat slips designated for live-aboard vessels use on an approved site plan meeting the provisions described in section 971.35(3).

Section 932.09. Sea turtle protection.

(1)*Purpose.* The purpose of this section is to protect threatened and endangered sea turtles which nest along the beaches of Indian River County, Florida, by safeguarding adult and hatchling sea turtles from the impacts of light. The regulations of this section also serve as a light management mechanism in furtherance of Indian River County's Sea Turtle Habitat Conservation Plan.

(4)*Existing development.* To meet the intent of this section, lighting of existing structures which can be seen from the beach shall be in compliance with the following:

(a) Lights illuminating buildings or associated grounds for decorative or recreational purposes shall be shielded or screened such that they do not directly or indirectly illuminate the beach, or turned off after 9:00 p.m. during the period from March 1 to October 31 of each year.

(b) Lights illuminating dune crosswalks or any areas oceanward of the landward side of the dune line shall be turned off after 9:00 p.m. during the period from March 1 to October 31 of each year and shall not directly or indirectly illuminate the beach.

(c) Security lighting shall be permitted throughout the night so long as low-profile luminaries are used and screened in such a way that those lights do not directly or indirectly illuminate the beach. Motion detector switches may be used.

(d) Window treatments in windows within line-of-sight of an observer standing anywhere on the beach on single and multistory structures are required so that interior lights do not illuminate the beach. The use of non-reflective tint or film on windows or awnings is preferred; however, the use of black-out draperies or shade screens will suffice.

(e) All exterior light fixtures on the seaward or shore-perpendicular sides of buildings, or on the landward side of buildings if the fixtures are visible from the beach, shall be lamped with a long wavelength light source, such as amber or red light emitting diodes (LED), low pressure sodium, or true red neon. It has been recommended by the Florida Fish and Wildlife Conservation Commission that no such light source emit light below five hundred sixty (560) nanometers (nm).

Section 932.06. - Dune and shoreline protection.

In order to protect the natural vegetation and the main dune bluff fronting on the Atlantic Ocean, the following restrictions shall be observed:

(1) *County dune stabilization setback line.* The county hereby adopts the 1978 FDNR Coastal Construction Control Line (C.C.C.L) as the County Dune Stabilization Setback Line (D.S.S.L.), as recorded on June 10, 1981 in county Plat Book 10, Pages 93-93H.

(2) *Encroachment, ingress, disturbance.* Except as provided herein, encroachment or ingress onto or any disturbance of the main dune or natural vegetation seaward of the county dune stabilization setback line is prohibited, including encroachment or disturbance caused by individuals upon foot or by vehicle of any kind. Ingress by foot seaward of the county dune stabilization setback line must be associated with an approved dune crossover structure.

(3) *New construction; disturbance of dunes, vegetation.* The land between the coastal construction control line and the county dune stabilization setback line is established as a zone of regulation, whereby the Bureau of Beaches and Shores of the Florida Department of Natural Resources and Indian River County may permit construction activity and construction related dune alteration. Except as provided herein, new construction and/or disturbance of the dune and associated native vegetation is not permitted seaward of the county dune stabilization setback line.

(4) *Vehicles prohibited seaward of dune stabilization line; exception.* Except as expressly provided in subsection (5), it shall be unlawful for any person to operate, drive or propel any truck, tractor, bulldozer, grader, crane, automobile, motorcycle, dune buggy, moped, minibike, all-terrain cycle, or any other vehicle seaward of the county dune stabilization setback line excluding, however, any of the aforementioned vehicles when operated by an officer of any agency of the state or of a political subdivision of the state in the furtherance of official duties, or those operations which have received the express authorization of the board of county commissioners. The parking or storage of automobiles, trailers, motor homes, recreation and like vehicles is prohibited seaward of the dune stabilization setback line (DSSL). Boats may be stored seaward of the dune stabilization setback line if stored, located and moved in a manner that does not disturb, damage or destroy the existing dune or associated dune vegetation, and in a manner that does not interfere with the natural reestablishment of the dune or associated dune vegetation. Storage of boats is also subject to the requirements of section 911.15(7). However, boats stored in accordance with the requirements of this section by or with the permission of the abutting upland land owner, shall be exempt from the requirements of section 911.15(7)(b)1. and 912.17(3)(b)1.

Vacation Rentals & Timeshare Projects

The Division of Hotels and Restaurants is responsible for regulating public lodging establishments in Florida, which includes licensing and inspecting Vacation Rentals and Timeshare Projects [see Chapter 509, Florida Statutes (FS), and Chapter 61C, Florida Administrative Code (FAC)].

Florida law defines a "Public lodging establishment" as transient public lodging establishments and non-transient public lodging establishments. [Section 509.013(4), FS]

Transient public lodging establishment means "any unit, group of units, dwelling, building, or group of buildings within a single complex of buildings which is rented to guests more than three times in a calendar year for periods of less than 30 days or 1 calendar month, whichever is less, or which is advertised or held out to the public as a place regularly rented to guests."

Vacation Rental: Vacation rentals are transient public lodging establishments defined in s. 509.242(1)(c), FS, as: any unit or group of units in a condominium or cooperative or any individually or collectively owned single-family, two-family, three-family or four-family house or dwelling unit that is also a transient public lodging establishment, but that is not a timeshare project.

Timeshare Project: A timeshare property (as defined in Chapter 721, F.S.) that is located in Florida and is also a transient public lodging establishment. (E.g., a timeshare property that rents by the week to guests outside the timeshare community.) (509.242(1)(g), F.S.)

License Classifications

Vacation rentals and timeshare project licenses have three different classifications (61C-1.002(4)(a), F.A.C.):

- **Single License**: May include one single home or townhome, or a unit or group of units within a single building that are operated by the owner.
- **Group License**: Covers all units within a building or group of buildings in a single complex that are licensed to a licensed agent. (Multiple group licenses may be issued to different licensed agents for units located on the same property.)
- **Collective License**: Issued to a group of houses or units found in separate locations that are represented by the same licensed agent. (A collective license may have a maximum of 75 houses or units per license and is restricted to counties within one district.)

If you operate both vacation rental condominiums and vacation rental dwellings, you may not combine them on the same license in any of the three licensing categories.

Licensed Agent

A licensed agent is someone that the property owner has authorized, through a rental agreement or contract, to hold out the property for rent on a transient basis. The licensed agent does not have to hold a license from the Division of Real Estate.

Only a licensed agent can hold a group or collective license. A licensed agent may not hold a single license. The licensed agent is responsible for all violations cited during an inspection if the violations occurred while the unit or dwelling was listed under the licensed agent (or if the division records list the property under the licensed agent).

Licensing

To obtain a Vacation Rental or Timeshare Project license you need to fill out an Application for Vacation Rental or Timeshare Project License. The application packet is available at https://www.myfloridalicense.com/intentions2.asp?chBoard=true&boardId=200&SID.

The Application for License must be submitted along with the following items:

- A list of all units or houses to be licensed.
- A completed DBPR HR-7020, Certificate of Balcony Inspection if the units or houses are 3 or more stories in height and the railings, stairwells and/or balconies are not in common areas.
- Appropriate Fees: Fees are based on the number of units to be licensed. An automated fee calculator and fee tables are provided on our website at http://www.myfloridalicense.com/dbpr/hr/licensing/Apply-License.html. You also can contact the Customer Contact Center at 850.487.1395 to obtain the correct license fee. In addition to the license fee, there is a one-time application processing fee of $50.

Licensing Exclusions

The definition of a public lodging establishment does not include (509.013(4)(b), F.S.):

- Any dormitory or other living or sleeping facility maintained by a public or private school, college, or university for the use of students, faculty, or visitors.
- Any facility certified or licensed and regulated by the Agency for Health Care Administration (AHCA) or the Department of Children and Families (DCF) or other similar place regulated under s. 381.0072, F.S. E.g., hospitals, nursing homes, assisted living facilities, sanitariums and day care centers.
- Any place renting four rental units or less, unless the rental units are advertised or held out to the public to be places that are regularly rented to transients.
- Any vacation rental or timeshare project that is rented for periods of at least 30 days or 1 calendar month, whichever is less; AND is not advertised or held out to the public as a place regularly rented for periods of less than 1 calendar month, provided that no more than four rental units within a single complex of buildings are available for rent.
- Any migrant labor camp or residential migrant housing permitted by the Department of Health (DOH); under Chapters 381.008-381.00895, F.S. or any mobile home park inspected by the Department of Health (DOH) and regulated under Chapter 513, F.S.
- Any nonprofit organization that operates a facility providing housing only to patients, patients' families, and patients' caregivers and not to the general public.
- Any apartment building inspected by the U.S. Department of Housing and Urban Development (HUD) that is designated primarily as housing for persons at least 62 years of age. This exclusion applies to individual buildings, not entire complexes (unless every building in the complex fits the criteria).
- Any roominghouse, boardinghouse, or other living or sleeping facility that may not be classified as a hotel, motel, apartment, timeshare project, vacation rental, nontransient apartment, bed and breakfast inn, or transient apartment under s. 509.242, F.S.

Sanitation

- Halls, entrances, hall/stair runners and stairways (unless common) shall be clean, ventilated, and well-lighted day and night.
- Kitchen appliances and refrigeration equipment shall be kept clean, free from odors and in good repair.
- If dishes and glassware are provided, you must sanitize them between guests. (Proper warewashing requires a three-compartment sink or commercial dishmachine; OR the operator must post a notice informing guests that the dishes and glassware have not been sanitized according to public food service establishment standards. The notice must include the specific language on the notice available from the division website at http://www.myfloridalicense.com/dbpr/hr/forms/lodging-publications.html.)
- Toxic items must be properly stored and labeled.

- Potable water shall be supplied and adequate sanitary facilities for guests. E.g., showers, handwash sinks and toilets that are connected to approved plumbing.
- Water from a nonpublic system (e.g., well) shall be sampled and tested at least annually and as required by state water quality regulations.
- The most recent sample report for the nonpublic water system shall be available upon request.
- The kitchen sink is required to have hot and cold running water under pressure.
- Ice making machines must use water from an approved source and shall be constructed, located, installed, operated, and maintained to prevent contamination of the ice.
- Ice machines for customer self-service shall be protected from contamination and equipped so the ice can be automatically dispensed.
- Units must be kept free of vermin.
- If provided:
  - Bedding and linens, sheets and pillowcases, and bedding items (e.g., mattresses, comforters and pillows) must be kept clean and in good condition.
  - Soap must be available either individually wrapped or from a dispenser.
  - Ice buckets shall be cleaned and sanitized between each guest or be provided with a sanitary single-service food-grade liner that is changed daily.

Safety

- A current Certificate of Balcony Inspection (DBPR HR 7020) must be filed with the division every three years, unless exterior balconies and stairwells are "common" elements of a condominium. (For exemption to this requirement, the licensee must provide proof to the division that these areas are common elements.) The balcony certificate is available from the Division of Hotels and Restaurants website at http://www.myfloridalicense.com/dbpr/hr/forms/lodging-publications.html; by e-mail request submitted at www.myfloridalicense.com/contactus; or by phone request to 850.487.1395.
- Railings shall be installed on all stairways and around all porches and steps.
- Heating and ventilation must be kept in good repair or installed to maintain a minimum of 68 degrees Fahrenheit throughout the building.
- Boiler Certificate required, if needed. (Not required if boiler is located in common area.) A water heating device is considered a boiler if it exceeds any one of the following limits: maximum heat input of 400,000 BTUH; water temperature of 210 degrees Fahrenheit; water capacity of 120 gallons.
- High hazard areas like boiler rooms and laundry rooms shall be kept clean and free of debris and flammables.
- At least one (1) approved locking device is required that cannot be opened by a non-master guest room key on all outside and connecting doors. (Cannot be a sliding chain or hook and eye type of locking device.)
- Smoke alarms must be installed in every living unit.
- Electrical wiring must be in good repair.
- A fire extinguisher must be present, properly charged and accessible.
- If present, fire alarm panel must have power and be maintained.
- Automatic fire sprinklers may be required in Vacation Rental condominiums if the majority of the rental units are located within a single building of three stories or more or greater than 75 feet in height. (If 50% or fewer of the units within the building are rented transiently, a fire sprinkler system is not required.)
- Specialized smoke alarms for the hearing impaired shall be available at a rate of one per every fifty rental units with a maximum of five required.
- Specialized smoke alarms for the hearing impaired shall be available upon request without charge.
- Must meet all local fire authority requirements.

General

- License must be current and renewed annually.
- License shall be conspicuously displayed in the office or lobby (if available) or made available upon request.
- Any change in the number of units must be reported to the division.
- License is not transferrable from one place or individual to another.
- If provided, baby cribs must meet safety standards established by the Consumer Products Safety Commission.

GUIDE TO

Vacation Rentals and Timeshare Projects

For Florida's Public Lodging Establishments

Division of Hotels and Restaurants

Florida Department of Business & Professional Regulation

www.MyFloridaLicense.com/dbpr/hr

DBPR Form HR 5025-753 2015 May 19

ORDINANCE 2016- 006

AN ORDINANCE OF INDIAN RIVER COUNTY, FLORIDA, CONCERNING AMENDMENTS TO ITS LAND DEVELOPMENT REGULATIONS (LDRS); ESTABLISHING REQUIREMENTS FOR A COUNTY VACATION RENTAL LICENSE AND OTHER VACATION RENTAL REGULATIONS BY CREATING ZONING CODE SECTION 911.15(9); AND PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; CODIFICATION; SEVERABILITY; AND EFFECTIVE DATE.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF INDIAN RIVER COUNTY, FLORIDA THAT INDIAN RIVER COUNTY LAND DEVELOPMENT REGULATIONS (LDRS) CHAPTER 911, ZONING, BE AMENDED AS FOLLOWS:

SECTION #1:

Zoning code section 911.15(9) is hereby created to read as follows:

(9) Vacation rental local license and regulations

(a) For purposes of vacation rental local regulations, "bedroom" is defined as follows: any room used principally for sleeping purposes and meeting applicable building code requirements for a bedroom.

(b) The owner of a vacation rental unit shall obtain from the community development department a vacation rental license. A separate license shall be required for each vacation rental unit. Each license shall be valid for a period of three (3) years from the date of issuance unless terminated by the owner or found by the county to be in violation of license conditions, and each license may be renewed every three (3) years upon approval by the community development department. A license may be transferred to a new owner upon submission of updated license information and execution of and assumption of license obligations and conditions on a form provided by the community development department.

1. A license application shall be submitted to the community development department on a form provided by the department.
2. License application review shall be managed by the community development department in coordination with other county departments, local agencies, and state agencies.
3. Prior to issuance of a license or a license renewal, a county code enforcement officer shall conduct an inspection of the vacation rental unit for compliance with the requirements of this section of the zoning code [911.15(9)].

(c) License application submittal requirements are as follows:

1. Rental unit manager contact information (cell phone number, email address, mailing address).

2. Documentation that the applicant has obtained the following:

a. State license for vacation rental unit
b. Local business tax receipt from the Tax Collector
c. Local tourist tax account from the Clerk of the Circuit Court

3. Parking compliance information: number of garage and/or carport spaces, number of rental unit bedrooms, maximum number of automobiles allowed outside of garage/carport, location of spaces accommodated on improved or stabilized driveway.

4. Verification that carbon monoxide alarms, if required by code, and state license fire protection items have been provided in the vacation rental unit: smoke alarms, emergency lighting, fire extinguisher.

5. Unit interior under air information: square footage and number of bedrooms.

6. Verification of whether the unit is served by public sewer service or an on-site sewage treatment and disposal system (septic/drainfield system). If served by an on-site sewage treatment and disposal system, the applicant will be required to provide an existing system evaluation approved by the health department if the health department has no record of the system size permitted by the department.

7. Acknowledgment form provided by the community development department, executed and dated by the rental unit owner and manager. The acknowledgment form shall provide information regarding the following county requirements for vacation rentals.

   a. Prohibition on commercial events at residence (e.g. weddings)
   b. Special parking regulations
   c. Sea turtle protection and dune protection regulations (for rental units located east of SR A-1-A)
   d. Noise regulations: Chapter 974 noise regulations which include day and night decibel level limitations, more stringent "no disturbance" requirements from 10 pm to 6 am, and no excessive noise that would cause annoyance to any reasonable person of normal sensitivity.
   e. Limitations on dock/boat use: (for waterfront rental units): no more than 2 boats moored per dock, dock used by unit owner or renter only, no live-aboard use; (all rental units): no more than 2 boats stored or parked per unit
   f. Fire safety requirements and maximum sleeping occupancy limitations
   g. Fines and citation penalties for violations

8. Acknowledgment that the following information will be posted or displayed inside the vacation rental unit prior to inspection of the unit by the county code enforcement officer and shall thereafter be continuously posted or displayed inside the vacation rental unit:

   a. Manager contact information

b. Maximum number of parked automobiles and boats, and approved parking locations
c. Trash and recycling pick-up days and protocol for placing and retrieving/storing containers
d. Noise regulations: day and night decibel level limitations, more stringent "no disturbance" requirements from 10 pm – 6 am, and no excessive noise that would cause annoyance to any reasonable person of normal sensitivity.
e. Location of smoke alarms, emergency lighting, and fire extinguisher.
f. Emergency room information
g. Sea turtle protection and dune protection information (for rental units located east of SR A-1-A
h. Maximum sleeping occupancy (number of persons)

9. Acknowledgement that the applicant has contacted any applicable property owners association or homeowners association and is aware of private restrictions, if any, that may affect operation of a vacation rental at the subject residence.

10. Application fee established by resolution of the Board of County Commissioners.

(d) Vacation rental local regulations are as follows:

1. To the extent that there is no conflict with these vacation rental regulations of section 911.15(9), all county regulations applicable to a residential unit that is not operated or used as a vacation rental unit shall also apply to a vacation rental unit.
2. Parking and storage of vehicles shall conform to the requirements of zoning code section 911.15(4)(b).
3. Commercial events shall be prohibited in accordance with zoning code section 911.15(8).
4. The overnight maximum sleeping occupancy of a vacation rental unit shall not exceed the following:
    a. For a unit served by public sewer service, 2 persons per bedroom plus 2 additional persons.
    b. For a unit served by an on-site sewage treatment and disposal system (septic/drainfield system), 2 persons per bedroom plus 2 additional persons or the number of persons accommodated by the system as determined by the health department, whichever number of persons is less.
    c. Notwithstanding paragraphs 4.a. and 4.b. above, a maximum (cap) of 10 persons shall apply to each unit whether the unit is served by public sewer service or by an on-site sewage treatment and disposal system (septic/drainfield system).

The unit occupancy limit confirmed by the county code enforcement officer shall be stated on the local license.

5. Fire protection items required for a state vacation rental license shall be provided in the vacation rental unit.
   a. In addition, a carbon monoxide (CO) alarm, when required under Section R315, Carbon Monoxide Alarms of the Florida Building Code – Residential, shall be provided.

6. Changes in the vacation rental manager and/or changes in the manager contact information shall be provided to the community development department within ten (10) days of the change.

7. The local license number, the occupancy limit confirmed by the county code enforcement officer, the maximum number of vehicles allowed to be parked on site outside any garage or carport, the noise regulations statement contained in section (c)7d of these regulations, and a statement that there are special sea turtle protection and dune protection regulations for units located east of SR A-1A, shall appear or be stated in any vacation rental unit advertisement or any rental offering associated with a vacation rental unit.

8. Each year, the applicant shall submit to the community development department a copy of a valid current state license for the vacation rental unit.

9. No amplification system, device, or sound system speakers, shall be used outdoors or directed outdoors in a manner that is audible from an adjacent residential property.

(e) Interim Operation of Vacation Rental Unit:

1. Because of the length of time it may take to comply with all of the new requirements on this section, all short term vacation rental owners may lawfully operate but shall have until December 1, 2016 to obtain a license from the County and come into full compliance with the new standards and requirements imposed by this section [911.15(9)].

(f) Claim of Contract Impairment:

1. It is not the intent of this ordinance [section 911.15(9)] to impair any existing contracts, leases, or reservations, that are evidenced by writing. An owner who asserts the enacted ordinance amendment impairs a short term vacation rental contract in effect on or before June 21, 2016 shall submit the contract lease or reservation, evidenced in writing, to the Community Development Director for review and consideration. An owner shall have until December 1, 2016 to submit the claim of impairment to the Community Development Director for determination. Appeal of the decision of the Community Development Director shall follow the appeal procedure set forth in land development regulation section 902.07.

(g) Units Grandfathered-in for a Higher Occupancy Cap

1. A vacation rental unit in existence with a valid state license and operating with more than four (4) bedrooms on June 21, 2016 shall be considered grandfathered-in as a legal non-conformity and not subject to the occupancy limit maximum (cap) of 10 persons as stated in 911.15(9)(d)4c so long as grandfathering is maintained in accordance with section 904.08(1) for legal non-conformities. Overnight maximum sleeping occupancy for grandfathered-in units shall be determined using the criteria of Sections 911.15(9)(d)4a and 911.15(9)(d)4b. For purposes of determining the number of bedrooms in operation for a grandfathered-in unit on June 21, 2016, and for calculating the unit's maximum sleeping occupancy the number of bedrooms shown on the unit's approved building permit drawings of record as of June 21, 2016 shall be used.

SECTION #2: SEVERABILITY

If any clause, section or provision of this Ordinance shall be declared by a court of competent jurisdiction to be unconstitutional or invalid for any cause or reason, the same shall be eliminated from this Ordinance and the remaining portion of this Ordinance shall be in full force and effect and be as valid as if such invalid portion thereof had not been incorporated therein.

SECTION #3: REPEAL OF CONFLICTING ORDINANCES

The provisions of any other Indian River County ordinance that are inconsistent or in conflict with the provisions of this Ordinance are repealed to the extent of such inconsistency or conflict.

SECTION #4: INCLUSION IN THE CODE OF LAWS AND ORDINANCES

The provisions of this Ordinance shall become and be made a part of the Code of Laws and Ordinances of Indian River County, Florida. The sections of the Ordinance may be renumbered or relettered to accomplish such, and the word "ordinance" may be changed to "section", "article", or any other appropriate word.

SECTION #5: EFFECTIVE DATE

This Ordinance shall take effect upon filing with the Department of State.

This ordinance was advertised in the Press-Journal on the 6th day of June, 2016, for a public hearing to be held on the 21st day of June, 2016, at which time it was moved

ORDINANCE 2016- 006

for adoption by Commissioner O'Bryan, seconded by Commissioner Davis, and adopted by the following vote:

Chairman Bob Solari	AYE
Vice Chairman Joseph E. Flescher	AYE
Commissioner Wesley S. Davis	AYE
Commissioner Tim Zorc	AYE
Commissioner Peter D. O'Bryan	AYE

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

The Chairman there upon declared the ordinance duly passed and adopted this 21st day of June, 2016.

BY: _____
Bob Solari, Chairman

COUNTY COMMISSIONERS
INDIAN RIVER COUNTY, FLORIDA

ATTEST: Jeffrey R. Smith, Clerk of Court and Comptroller

BY: _____
Deputy Clerk

This ordinance was filed with the Department of State on the following date: 06/27/2016

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

_____
Dylan Reingold, County Attorney

APPROVED AS TO PLANNING MATTERS

_____
Stan Boling, AICP; Community Development Director

PROJECT NAME:
LOCATION:
CD-PLUS Proj/Appl. #:
PERMIT #:

VACATION RENTAL LICENSE SITE INSPECTION CHECKLIST

Inspection requested by applicant: Date: _____
Inspection made: Date: _____
Re-inspections: Date: _____

GO OVER WITH PLANNER PRIOR TO SITE INSPECTION

[ ] Number of bedrooms per approved building plan? _____
[ ] Is property on public sewer or does it have an on-site septic system? _____
[ ] If on-site septic system, what is the occupancy capacity (per Health Depart.)? _____
[ ] Is the site grandfathered /exempt from the 10 maximum cap occupancy limit? _____
[ ] Is there a guest house on-site? _____
[ ] Is the site east of SR A1A? _____
[ ] Garage/carport or no garage/carport? _____
[ ] Carbon monoxide alarm required/applicable? _____
(i.e., gas appliances or fire place inside, attached garage)

INSPECTION

Parking:

a) Total number of garage and/or carport parking spaces Actual: _____
b) Number of parking spaces on paved or stabilized driveway: Actual: _____

Occupancy / Bedrooms:

a) Number of bedrooms Actual: _____
b) Number of beds Actual: _____

Fire/Life Safety:		**Yes**	**No**
a)	Smoke alarms (*1 per floor, 1 per bedroom area [within 10 feet], 1 per bedroom, all interconnected, may be 10-year battery type*)	[ ]	[ ]
b)	Emergency lighting (*at primary exit, wired*)	[ ]	[ ]
c)	Fire extinguisher (*1 in kitchen area, Class 2-A 10-BC 5 lbs min. with current tag, use 5-point checklist from Fire Prevention)*	[ ]	[ ]
d)	Carbon monoxide (CO) alarm (*if required, within 10 feet of bedroom areas, may be combo with smoke alarm)*	[ ]	[ ]

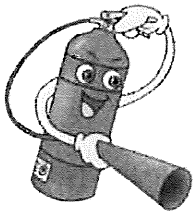
Posted or Displayed Information Inside Rental Unit:

a)	Manager contact information	[ ]	[ ]
b)	Maximum number limit of parked vehicles, boats, and approved parking location	[ ]	[ ]
c)	Trash and recycling pick-up days and protocol for placing/retrieving receptacles	[ ]	[ ]
d)	Noise regulations: no excessive noise disturbance to neighbors; more stringent requirements 10 p.m - 6 a.m.; no excessive noise that would cause annoyance to any reasonable person of normal sensitivity; no outdoor amplification devises audible from adjacent residential property at any time	[ ]	[ ]
e)	Location of smoke alarms, emergency lighting, and fire extinguisher	[ ]	[ ]
f)	Emergency room information	[ ]	[ ]
g)	Sea turtle protection lighting and dune protection requirements (east of SR A1A)	[ ]	[ ]
h)	Maximum sleeping occupancy (number of persons)	[ ]	[ ]

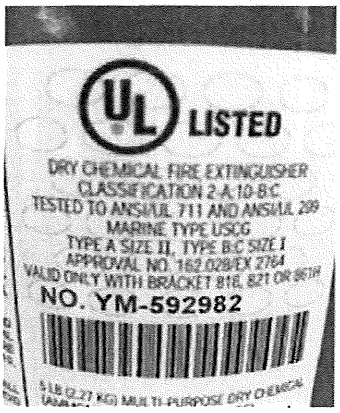
Comments/Problems _____

_____

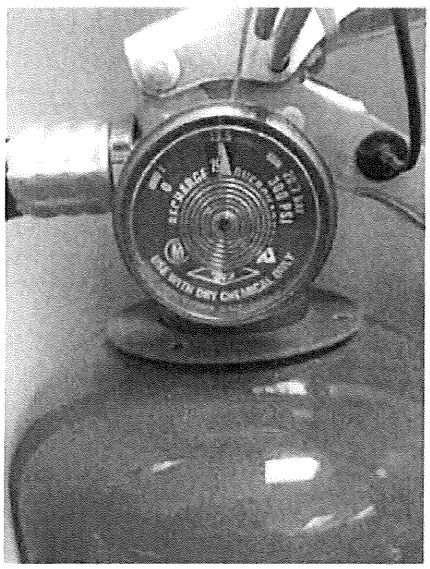
Date problems communicated to applicant: _____
Planner Concurrence: _____ Date: _____
Inspector: _____ Date: _____



5 things to look at during your inspection.



Make sure that the extinguisher is classified as 2-A: 10-BC and minimum of 5 Lbs. (10 lbs. is fine if the owner request one)



Check to make sure the yellow needle is in the green area. This indicates (Proper charge). If the needle is in the recharge or overcharge area, the extinguisher needs to be service by a license Contractor.

Next look at the neck area, under the green collar. The green collar is the indicator of the hydro date. The Contractor will take it out of service a do a 6-12 year hydro inspection on it.

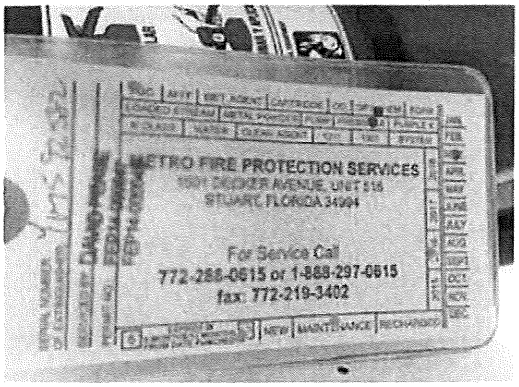
Look at the neck for rust or any compromise of the tank. The rust usually occurs were the extinguisher is expose to the elements.



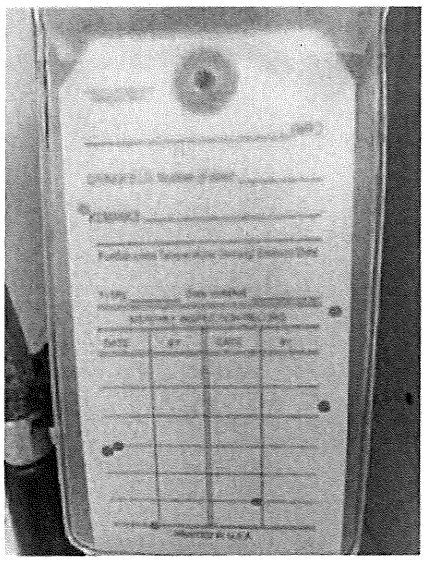
Look inside the nozzle opening for white residue. If you see what appears to be white talcum powder, this means that the extinguisher has been deployed. Advise owner, that servicing of the extinguisher is needed. This also should be noticed by the home owner, when he/she conducts the monthly visual inspection.



NO rust should be at the cylindrical round dome area of the extinguisher. If you notice rust at the outer edge, that is acceptable. However note it on your report. That way when you give it to the owner, this will reiterate what he/she already knows.



This is a service tag that needs to be affix on the extinguisher. This indicated to us when it was serviced. This extinguisher was service in MARCH of 2016. This means that the extinguisher is good until March of 2017. F/E's needs to be serviced annual by a state certified Fire Extinguisher Company.



This is the back of the service tag. It has 12 slots. This is for the home owner to visual check the extinguisher on a monthly bases.

Once the owner does his/her visual inspection, they are required to DATE it. Then INITIAL on the appropriate slot.

The two reasons for this tag is:

I. It makes someone look at the extinguisher, in case it gets deployed

II. It lets us know the service date.

Smoke and Carbon Detector Installation and Required Location Summary

Location

1 **Sleeping Room** - In each sleeping room.

2 **Sleeping Area** - Outside each separate sleeping area in the immediate vicinity (IRC Interpretation within 10') of the bedrooms.

3 **Story or Floor** – One on each additional *story* of the *dwelling*, including *basements* and habitable attics but not including crawl spaces and uninhabitable *attics*, even if there are no sleeping areas on that additional story. A detector located outside a sleeping area, as indicated in item 2 above, on the additional story will meet this requirement.

4 **Peaked Ceilings** - Shall be located within 36 in. horizontally of the peak, but not closer than 4 in. vertically to the peak.

5 **Sloped Ceilings** - having a rise greater than 1 ft in 8 ft horizontally shall be located within 36 in. of the high side of the ceiling, but not closer than 4 in. from the adjacent wall surface.

6 **Wall Mounting** - shall be located not farther than 12 in. from the adjoining ceiling surface.

7 **Ambient Temperature or Humidity** - Shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.

8 **Unfinished Attics, Garages or Other Spaces** - Shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40 Degrees F or exceed 100 Degrees F.

9 **Stationary or Fixed Cooking Appliances** - Shall not be installed within an area of exclusion determined by a 10 ft radial distance along a horizontal flow path from a stationary or fixed cooking appliance, unless listed for that location. Alarms or detectors installed between 10 ft and 20 ft along a horizontal flow path from a stationary or fixed cooking appliance shall be equipped with an alarm-silencing means or use photoelectric detection.

10 **Bathroom Door** - Shall not be installed within 36 in. horizontal path from a door to a bathroom containing a shower or tub.

11 **HVAC Register** - Shall not be installed within a 36 in. horizontal path from the supply register of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.

12 **Ceiling Fan** - Shall not be installed within a 36 in. horizontal path from the tip of the blade of a ceiling –suspended (paddle) fan.

Carbon Monoxide Alarms

1 **Carbon monoxide protection** - Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes.

2 **Combination alarms** - Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

Interconnection

3 **Interconnection** - Where more than one smoke or carbon monoxide alarm is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Power Source

4 **Power source – (120 volt with battery back-up)** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exception

5 Hard wiring of smoke alarms in existing areas shall not be required where the *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an *attic*, crawl space or *basement* available which could provide access for hard wiring without the removal of interior finishes.

6 One-family and two-family dwellings and townhomes undergoing a repair, or a Level 1 alteration as defined in the *Florida Building Code*, may use smoke alarms powered by 10-year nonremovable, nonreplaceable batteries in lieu of retrofitting such dwelling with smoke alarms powered by the dwelling's electrical system.

From: Larry Winter <larry_winter30076@yahoo.com>
Sent: Wednesday, July 08, 2020 2:23 PM
To: Alicia Rosenthal; Jennifer Hofmeister
Subject: Re: Planning Board Workshop-July 14

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Alicia, I was interested in getting some feedback on some short term rental topics.

I reached out to Jennifer about the upcoming Planning Board Workshop on June 14. Jennifer suggested I send you the comments/topics in advance of the June 14 meeting.

Here are a few topics I was hoping could be discussed at the June 14 meeting.

Let me know if you need additonal information.

Thanks,

Larry Winter
770-714-2246 cell

Topic #1). 2014 Florida Senate Bill 356 (Thrasher)

According to the Florida League of Cities (in their 2019 Legistation Action Agenda), there was two pieces of legistation at the State level that directly deal with short term rentals for Florida cities.

The first state legislation was passed in 2011. The second was passed in 2014.

During all the City of Fort Pierce conditional use hearings (for short term rentals) I have seen/heard there are references to the bill in 2011 session when discussing an application for conditional use, but I have never heard any reference to the 2014 Senate Bill 356 (Thrasher).

I feel that if information on 2014 Senate Bill 356 (Thrasher) was shared with the planning board and the public..... that they would beter understand that **"a local law, ordinance, or regulation can not prohibit vacation rentals, or regulate the duration or frequency of rental of vacation rentals"**. Of course per the legistation....this does not apply to any local law, ordinance, or regulation adopted on or before June 1, 2011.

https://www.flsenate.gov/Session/Bill/2014/356/BillText/er/PDF

Is this information on the 2014 Senate Bill 356 (Thrsaher) accurate?

Topic #2). Number of Short Term Rentals in Fort Pierce and Ratio to Permanent Homes

Could the city/planning department provide some data/numbers and discussion about the curent number of conditional use/short term rentals in Fort Pierce?

What is the ratio of short term rentals to permenent homes in Fort Pierce?

How does this compare to other cities/counties in Florida?

Here is a copy of the 2019 Florida League of Cities Legislation Action Agenda. Per the graph on page 18 it appears Fort Pierce is well below the State average for short term rentals (as a per centage of permanent homes). The information is from the Florida Department of Business and Professional Regulation.

https://www.floridaleagueofcities.com/docs/default-source/advocacy/2019-action-agenda.pdf?sfvrsn=3beddad5_4

Is this information from the Florida Dept of Business and Professional Regulation accurate and the most current?

Topic #3). Typical Fort Pierce Short Term Renter

I have heard when discussing short term rentals at several planning board meetings that the "type of renter" that comes for a short term visit has been a major concern to the planning board.

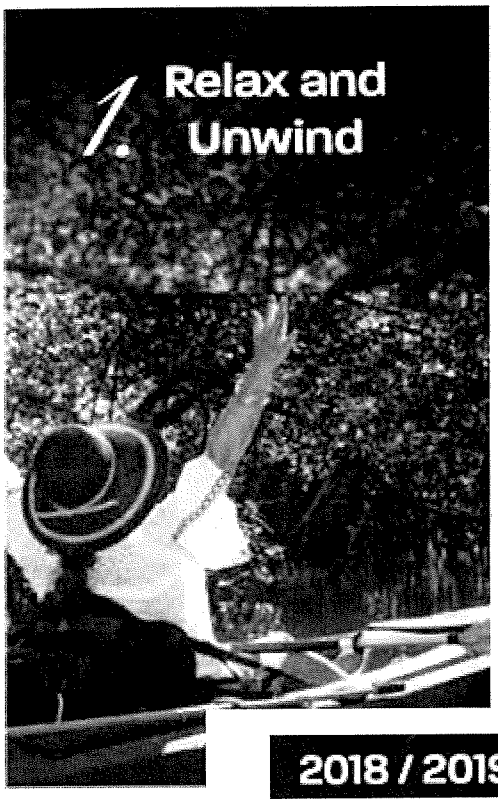
Some planning board members paint the picture of large groups of college spring breakers, staying up late, having parties, etc as the typical short term renter in Fort Pierce.

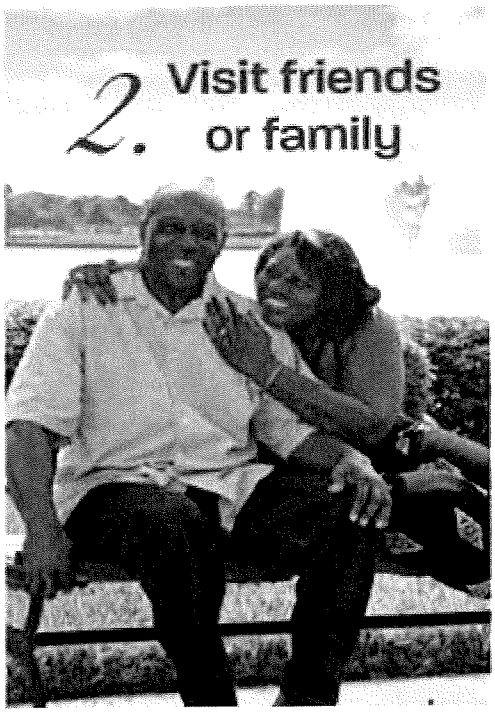
According to the 2018-2019 St Lucie County Tourism Annual Strategic Marketing plan.... the typical visitor to St Lucie County is : (1)53 years old, (2) has a median household income of $72,700, (3)traveled in a party composed of 2.9 people, (4)and 65% of visitors traveled as a couple or a family.

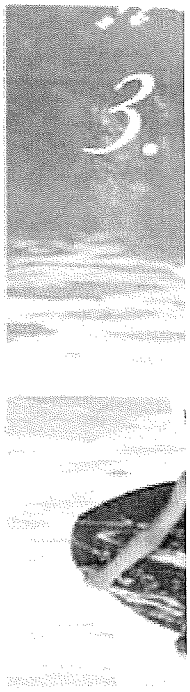
The typical visitor is female, but just slightly with females at 52% and males at 48%.

If fact according to the St Lucie County Tourism survey, the top 3 reasons they visit are: (1) relax and unwind, (2) visit friends and family, (3) the beach.

Top 3 Reasons for Visiting







2018 / 2019 Annual Marketing Plan

Demographics

The 2017 Visitor Tracking and Economic Impact Study revealed that typical visitor to St. Lucie is 53 years old, caucasian, and has a dian household income of $72,700. The typical visitor is female, just slightly with females at 52% and males at 48%.

Psychographic / Behavioral

- The typical visitor traveled in a party composed of 2.9 people
- 47% of visitors traveled with at least one person under the a of 20 in their travel party
- 65% of visitors traveled as a couple or a family

These typical visitors as described by the St Lucie County Tourism Board do not seem to be the "party animals" that some planning board members have described when talking about short term rentals and conditional use permits.

Has the city/planning board ever had conversations with the St Lucie Tourism Board about the typical visitor to St Lucie County?

Does the city/planning board have data that is different than the St Lucie Tourism Board data?

Topic #4). Conditional Use/Short Term Rentals in Ocean Village

Per the Fort Pierce Planning Department, it appears Ocean Village has been "grandfathered" in by the city to allow short term rentals.

Could the city/planning board confirm the exact steps to get a conditional use permit to do short term rentals in Ocean Village?

Could the city/planning board provide the history to address short term rentals in Ocean Village (ex: when the the grandfather clause started, where is information on it)?

Topic #5). Comparison of Fort Pierce Short Term Rentals to Other Treasure Coast Cities

Could the city/planning board provide a comparison of other Treasure Coast cities and their short term rental policies/ordinances?

Example: what are the permitting costs, the steps, the ordinances, and the timing involved to do short term rentals in other close by Treasure Coast cities (ex: Vero Beach, Stuart, Port St Lucie, Jensen Beach, etc).

Topic #6). Fort Pierce Short Term Rentals Advisory Committee

Would the city/planning board be interested in starting a conditional use/short term rental advisory committee (to allow input and discussion from short term rental owners)?

From: MARCIA BAKER <ms.marciabaker@att.net>
Sent: Thursday, July 9, 2020 12:09 PM
To: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Subject: Vacation Rental meetings

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Dear Friends,

Because of the pandemic I am avoiding personal appearances at any venue where EVERYONE is not wearing a mask.

The vacation rental workshop and the Planning Board meeting scheduled for July 14 are the subject of this letter.

The City Code clearly states the requirements and considerations for approval of a conditional use;

Sec. 22-74. - Purpose.
The purpose of the conditional use process is to allow,when desirable, uses that would not be appropriate generally or without restriction throughout the particular zoning district, but which, if controlled as to number, area, location or relation to the neighborhood, **would not adversely affect the public health, safety, comfort, good order, appearance, convenience and the general welfare.**

To date, the Planning Dept. in it's staff reports has not provided the basis or explanation for it's claim that any conditional use would not adversely affect the neighborhood, nor has it included any reasonable explanation for the lack of an adverse consideration of a commercial use in the midst of a purely residential zone

Sec. 22-76. - Procedure for the review and approval of conditional uses.
In permitting a conditional use or the modification of an existing conditional use, the city commission may impose, in addition to those standards and requirements expressly specified in this chapter, **any condition which it finds to be necessary to protect the best interest of the surrounding property of the city.**

To date, the Planning Department has not provided the proper safeguards to implement any such standards or requirements.To correct this lack of compliance I suggest that the following provision be included in any approval of any conditional use.

Sec. 22-77. - Performance bond.
The city commission may require that the applicant for a conditional use furnish to the city a performance bond up to, and not to exceed, the value of the cost of the required improvements in order to assure that the conditions imposed are completed in accordance with the plans and specifications as approved by the city commission and that the standards established in granting the conditional use are observed.

Management requirements for vacation rentals in the South Beach Overlay District;

Sec. 22-16. - Designation of overlay districts
South Beach Overlay District.
Overnight accommodations and bed and breakfast.
c.Overnight accommodations, **vacation rental: A detached dwelling or apartment within a building of residential building typology which is rented out for the purposes of providing accommodations for less than six (6) months to tourists.**d.Use standards.1.A separate entrance shall be provided for each unit to the exterior or to an interior, secure common area.2.A business license shall be required for each vacation rental unit.**3.Such units shall be managed by either 1) a Florida-licensed property management agent or 2) the owner-occupant residing in another unit,** and shall collect and pay all applicable taxes.4.Current contact information for the management agency or owner-occupant shall be displayed in an accessible location outside the vacation rental.

Heretofore, this requirement has not been enforced for conditional use applications for vacation rentals contained within the South Beach Overlay District. I request that going forward the City Code be followed for any future applications.

Representation of applicants before the Planning Board;
A representative authorized to present an application before the NON judicial hearings of the planning board who is NOT a legal representative may not continue such representation before the City Commission as the proceedings before the City Commission are quasi-judicial and as such are barred as they would be practicing law without a license.

Thank you for your consideration of the above and I request that this letter be entered into the records of both the workshop and the Planning Board meetings of July 14.

Marcia Baker

Planning Board - 2 PM **5. b.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Minutes from the July 14, 2020 Planning Board meeting

LOCATION

N/A

RESPONSIBLE STAFF

N/A

RECOMMENDATION

N/A

Attachments

Planning Board Minutes 7/14/20

Form Review

Form Started By: Alicia Rosenthal Started On: 07/17/2020 09:05 AM

Final Approval Date: 07/23/2020

D R A F T

CITY OF FORT PIERCE

PLANNING BOARD

Planning Board Minutes

OF THE REGULAR MEETING OF THE FORT PIERCE CITY PLANNING BOARD HELD ON TUESDAY, JULY 14, 2020, IN FORT PIERCE CITY HALL, COMMISSION CHAMBERS, 100 NORTH US HIGHWAY 1, FORT PIERCE, FLORIDA.

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

Present: **Solomon Lee**; **Tim O'Connell**; **Michael Broderick**; **Bob Burdge**; **Patricia Diaz**; **Gloria Johnson-Scott**; **Frank Creyaufmiller**, **Chairman**

Staff Present: **Jennifer Hofmeister**, **Planning Director**
Tanya Earley, **Assistant City Attorney**
Brandon Creagan, **Planner**
Alicia Rosenthal, **Executive Assistant**

4. CONSIDERATION OF ABSENCES

All Board members were in attendance.

5. APPROVAL OF MINUTES

a. Minutes from the June 9, 2020 meeting

Motion was made by Michael Broderick, and seconded by Gloria Johnson-Scott to approve the minutes from the June 9, 2020 meeting.

AYE: **Michael Broderick**, **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Chairman Frank Creyaufmiller**

Passed

6. **NEW BUSINESS**

a. **Annexation - Sunrise Tabernacle Church - 2428-232-0002-020-3**

Mr. Creagan gave an overview of the annexation. No one spoke for or against the application.

Motion was made by Michael Broderick, and seconded by Solomon Lee to forward a recommendation of approval to the City Commission.

AYE: **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Michael Broderick**, **Chairman Frank Creyaufmiller**

Passed

b. **Conditional Use CCCL - Iannotti Dune Crossover - 618 South Ocean Drive**

Ms. Hofmeister gave an overview of the application and answered a question from the Board regarding a joint common dune crossover for the townhouse complex instead of individual unit dune crossovers. Ms. Hofmeister highlighted that the dune crossover requires state approval from the Florida Department of Environmental Protection (FDEP) for design guidelines.

Lois Edwards, applicant representative from Ardea Environmental Consultants, provided additional information and explained that the dune crossover will have minor impact to the beach dune and beach side. She also stated that the FDEP would permit five dune crossovers for the townhouse building.

Motion was made by Michael Broderick, and seconded by Gloria Johnson-Scott to forward a recommendation of approval to the City Commission with the following condition:

1. **Obtain the approval of the Florida Department of Environmental Protection for construction activities seaward of the Coastal Construction Control Line before construction activities can commence.**

AYE: **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Michael Broderick**, **Bob Burdge**, **Chairman Frank Creyaufmiller**

Passed

c. **Conditional Use - France Vacation Rental - 1361 Binney Drive**

Ms. Hofmeister gave an overview of the application.

Michelle Longarzo, applicant representative, stated she will be assisting the owner with the licensing and property management. Ms. Longarzo disagreed with the conditions regarding the sidewalk and limitation of vehicles. Ms. Longarzo answered questions from the Board.

Board discussion ensued on allowing two parking spots per unit.

Paul Schall and Shawn Dufault spoke in favor of the application.

Motion was made by Michael Broderick, and seconded by Solomon Lee to forward a recommendation of approval to the City Commission with the following six (6) conditions:

1. The property manager for the vacation rental shall be available at all times to resolve complaints or violations of city code. Said manager shall reside in St. Lucie County and shall be registered with the City of Fort Pierce.

2. Guide booklets (available from Code Enforcement) shall be provided to renters regarding local rules and public service resources, to minimize conflicts.
3. The applicant shall file for and obtain St. Lucie County and City of Fort Pierce Business Tax Licenses within thirty (30) days of issuance of a license from the Florida Department of Business & Professional Regulation.
4. There shall be a limitation of no more than no two (2) vehicles per unit at the site.
5. The City of Fort Pierce Business Tax License number shall be included on all advertising.
6. Pursuant to City Code Section 22-62(b)(4) Sidewalks. In order to provide continual access for pedestrians, sidewalks and sidewalk linkages shall be required to be provided by the property owner or permit applicant, when plans are submitted for condition use applications or pay a payment into the city sidewalk fund pursuant to City Code Section 22-62(g).

AYE: **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Michael Broderick**, **Bob Burdge**, **Patricia Diaz**, **Chairman Frank Creyaufmiller**

Passed

d. **Conditional Use - Arenas Vacation Rental - 1218 S. 11th Street**

Ms. Hofmeister gave an overview of the application and answered questions from the Board. Ms. Hofmeister noted that the item was denied by City Commission in February 2018 and the property has been in compliance since January 2019.

Chairman Creyaufmiller provided the history of the previous application and he stated the property was cited for operating as a short term rental without a license.

Michelle Longarzo, applicant representative, stated she will be the onsite property manager and she recommended the owner to landscape and beautify the yard. Ms. Longarzo objected to the condition limiting the two vehicles at the site.

Paul Schall spoke in favor of the application.

Motion was made by Gloria Johnson-Scott, and seconded by Solomon Lee to forward a recommendation of approval to the City Commission with the following five (5) conditions:

1. **The property manager for the vacation rental shall be available at all times to resolve complaints or violations of city code. Said manager shall reside in St. Lucie County and shall be registered with the City of Fort Pierce.**
2. **Guide booklets (available from Code Enforcement) shall be provided to renters regarding local rules and public service resources, to minimize conflicts.**
3. **The applicant shall file for and obtain St. Lucie County and City of Fort Pierce Business Tax Licenses within thirty (30) days of issuance of a license from the Florida Department of Business & Professional Regulation.**
4. **There shall be a limitation of no more than no two (2) vehicles at the site.**
5. **The City of Fort Pierce Business Tax License number shall be included on all advertising.**

AYE: **Solomon Lee**, **Tim O'Connell**, **Michael Broderick**, **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Chairman Frank Creyaufmiller**

Passed

e. **Subdivision - Replat of Magnolia Square Townhouse Tract**

Ms. Hofmeister gave an overview of the application. No one spoke for or against the application.

Motion was made by Michael Broderick, and seconded by Patricia Diaz to forward a recommendation of approval to the City Commission of the standard request with the following one (1) Condition of Approval:

1. The applicant will supply two (2) Mylars for appropriate signatures and then the plat is recorded with St. Lucie County Clerk of Courts in accordance with Florida State Statute 177.111.

AYE: **Tim O'Connell**, **Michael Broderick**, **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Chairman Frank Creyaufmiller**

Passed

f. **City Initiated Abandonment - A Portion of Avenue B**

Mr. Creagan presented item 6f and 6g together. He noted the applicant will have a 90 day timeline to record the abandonment with the Clerk of Courts. Mr. Creagan answered questions from the Board on the easement and if the abandonment would be interfering with the possible train landing.

Paul Schall, resident, asked who the abandonment was being rewarded to.

Motion was made by Patricia Diaz, and seconded by Gloria Johnson-Scott to forward a recommendation of approval to the City Commission of the proposed abandonment with one condition concerning the abandonment of the portion of Avenue B that is bound by A. E. Backus Avenue to the north, North 2nd Street to the east, Avenue to the south, and the FEC Railroad to the west.

1. The recording of a 65 foot by 55 foot utility easement with the St. Lucie County Clerk of Courts thirty (30) days after the adoption of the abandonment by the City Commission of the City of Fort Pierce, Florida.

AYE: **Michael Broderick**, **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Chairman Frank Creyaufmiller**

Passed

g. **City Initiated Abandonment - Parcel IDs 2410-503-0041-020-4 and 2410-503-0012-010-9**

This item was presented with 6f.

Motion was made by Patricia Diaz, and seconded by Michael Broderick to forward a recommendation of approval to the City Commission of the proposed abandonment.

AYE: **Bob Burdge**, **Patricia Diaz**, **Gloria Johnson-Scott**, **Solomon Lee**, **Tim O'Connell**, **Michael Broderick**, **Chairman Frank Creyaufmiller**

Passed

h. **Amend Planning Board Procedures**

Ms. Hofmeister explained to the Board that the Planning Board procedures are not codified. Ms. Hofmeister suggested revisions due to the new meeting time and the Board suggested adjusting the order of business and removing the portions about the secretary and alternates. Ms. Hofmeister stated the changes will be made and brought to the Board for a vote at the next meeting.

7. **COMMENTS FROM THE PUBLIC**

Any person who wishes to comment on any subject may be heard at this time. Please limit your comments to three (3) minutes or less, as directed by the Chair, as this section of the Agenda is limited to thirty minutes. The Planning Board will not be able to take any official actions under Comments from the Public. Speakers will address the Board and the Public with respect. Inappropriate language will not be tolerated.

There we no comments from the public.

8. **DIRECTOR'S REPORT**

There was no director's report.

9. BOARD COMMENTS

Chairman Creyaufmiller reminded the Board to vote on August 18, 2020 and November 4, 2020 for city and county elections.

Chairman Creyaufmiller thanked the City Commission for their continued support.

Mr. Burdge asked if the modification of the code included the Boards receiving a stipend.

Mr. Broderick suggested another meeting to discuss the short term rental recommendations.

Ms. Johnson Scott provided dates of the upcoming virtual town hall meetings for the different elections.

10. ADJOURNMENT

Planning Board - 2 PM **6. a.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Future Land Use Map Amendment - Aria Apartments - 3000 Okeechobee Road

LOCATION

3000 Okeechobee Road

RESPONSIBLE STAFF

Vennis Gilmore, Planner
Technical Review Committee

RECOMMENDATION

The requested Application for Future Land Use Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience, and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Future Land Use Designation from General Commercial (GC) to Medium Density Residential (RM).

Attachments

Staff Report
Aerial Map
FLU Maps
Zoning Maps
Application & Supporting Documents
Draft Ordinance
TRC Comments

Form Review

Form Started By: Vennis Gilmore Started On: 08/03/2020 08:20 PM
Final Approval Date: 08/05/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director for JH
FROM:	Vennis Gilmore, Planner VG
RE:	**Application for Future Land Use Map Amendment** **Application for Zoning Atlas Map Amendment** **Aria Apartments**
BOARD DATE:	August 11, 2020

STAFF REPORT

Property Owner/Applicant:	Arrow Investment Group, LLC 4512 N. Flagler Drive, Suite 2056 West Palm Beach, FL 33407
Requested Action:	Approval to amend the Future Land Use Map designation for one (1) parcel from General Commercial (GC) to Medium Density Residential (RM) Approval to Rezone one (1) parcel from General Commercial (C-3) to Medium Density Residential (R-4).
Site Location:	3000 Okeechobee Road
Parcel IDs:	2417-504-0020-001-6
Existing Use:	Vacant
Parcel Size:	6.796 +/- Acres
Current Future Land Use:	General Commercial (GC)
Current Zoning:	General Commercial (C-3)
Proposed Future Land Use:	Medium Density Residential (RM)
Proposed Zoning:	Medium Density Residential (R-4)

	North	East	South	West
Surrounding FLU:	Low Density Residential (RL)	General Commercial (GC)	General Commercial (GC)	(GC) and Medium Density Residential (RM)
Surrounding Zoning:	Single-Family Intermediate (R-2)	General Commercial (C-3)	General Commercial (C-3)	(C-3) and Medium Density Residential (R-4)

Staff Analysis

Request

The subject Future Land Use Map Amendment from General Commercial (GC) to Medium Density Residential (RM) will provide for a land use that is consistent with the applicant's proposed vision of an Innovative Residential Multi-Family Development and the City's desired development pattern for the subject site and surrounding area. The RM Future Land Use Category, as defined in the Future Land Use Element of the City's Comprehensive Plan, calls for parcels that are best suited for multi-family residential uses. As the City's Zoning Map and Land Development Regulations must be consistent with the Future Land Use and accompanying land use category specifications contained in the Future Land Use Element, the subject application also includes a rezoning for the same subject parcel from General Commercial (C-3) to Medium Density Residential (R-4).

Subsequent to the subject map amendments, separate applications for Development Review, Design Review, and Conditional Use (Innovative Residential Development) will be submitted for review and approval that will include a request for density bonuses specific to the subject property.

Future Land Use and Zoning Designation Comparison

The subject property currently has a Future Land Use and Zoning designation of Commercial, which was, at a point in time, an appropriate designation as the site abuts Okeechobee Road, a major east/west corridor in the City. More recently, however, the development pattern has shifted to a horizontal mix of both residential and commercial uses as this corridor transitions into Delaware Avenue, a corridor that transverses the Peacock District. The Peacock Overlay District is envisioned as a destination for neighborhood serving uses. The proposed land use and zoning map amendments will promote the City's vision for this corridor and the surrounding area.

As the development of the subject parcel is a vital component to the redevelopment effort of this targeted area, it is staff's professional opinion that the proposed land use and zoning for the

subject property of Residential Medium (RM) and Medium Density Residential (R-4), respectfully, is appropriate and supported.

Standards for Review

Pursuant to Chapter 163.3187, F.S., a small-scale development amendment may be adopted under the following conditions:

a) The proposed amendment involves a use of 10 acres or fewer; and
b) The proposed amendment does not involve a text change to the goals, policies, and objectives of the local government's comprehensive plan, but only proposes a land use change to the future land use map for a site-specific small-scale development activity. However, text changes that relate directly to, and are adopted simultaneously with, the small-scale future land use map amendment shall be permissible under this section.

Small scale development amendments adopted pursuant to this section require only one public hearing before the governing board, which shall be the adoption hearing.

Regarding the requested rezoning, pursuant to Article IX, City Code of Ordinances, a proposed change of district or text may be initiated by the City Commission, the City Planning Board or by petition of one or more of the property owners or affected residents within the area proposed to be changed or affected by a change in the district map or text.

The following standards must be satisfied per Section 125-136 of the City Code prior to the approval of the requested amendment:

(1) The amendment is consistent with the Comprehensive Plan.
(2) The amendment will not have an adverse effect on the ability of the City to:

    a. Satisfy land and water use needs; and
    b. Meet transportation demands and provide community facilities and services.

(3) The amendment will promote and protect the public health, safety, and general welfare.

The proposed amendment is consistent with and furthers the Goals, Objectives, and Policies of the City's Comprehensive Plan. The Zoning Atlas Map Amendment promotes and protects the public health, safety, and general welfare as the request as proposed is in character and similar with the surrounding area, land uses and zoning designations.

Technical Review Committee (TRC)

All affected City and County Departments have reviewed the proposed Future Land Use Map and Zoning Atlas Map Amendments and there were no comments from the TRC.

Staff Recommendation Future Land Use Map Amendment

The requested Application for Future Land Use Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience, and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Future Land Use Designation from General Commercial (GC) to Medium Density Residential (RM).

Staff Recommendation Zoning Atlas Map Amendment

The requested Application for Zoning Atlas Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Zoning Designation from General Commercial (C-3) to Medium Density Residential (R-4).



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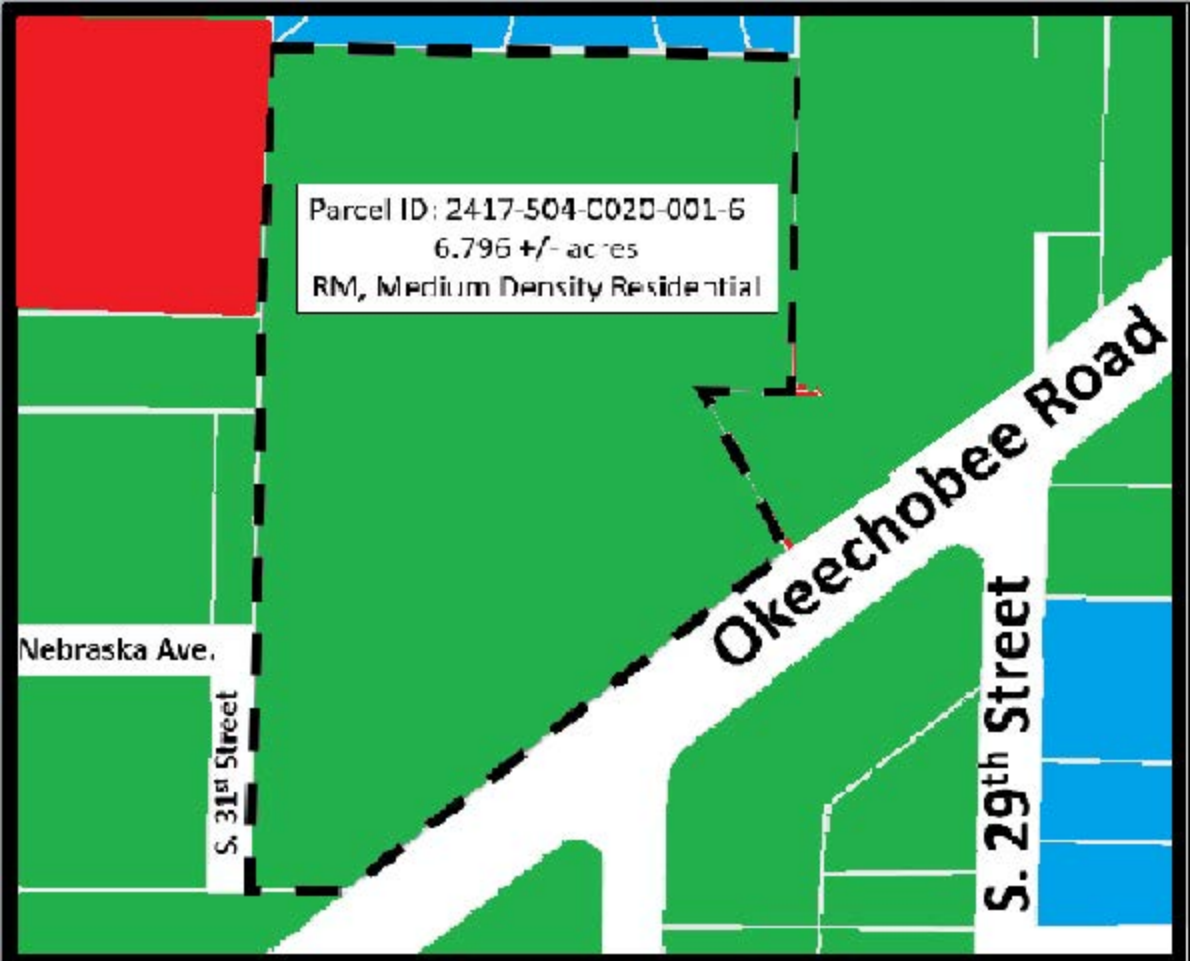
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY
FORT PIERCE
Florida

Aerial Map



N
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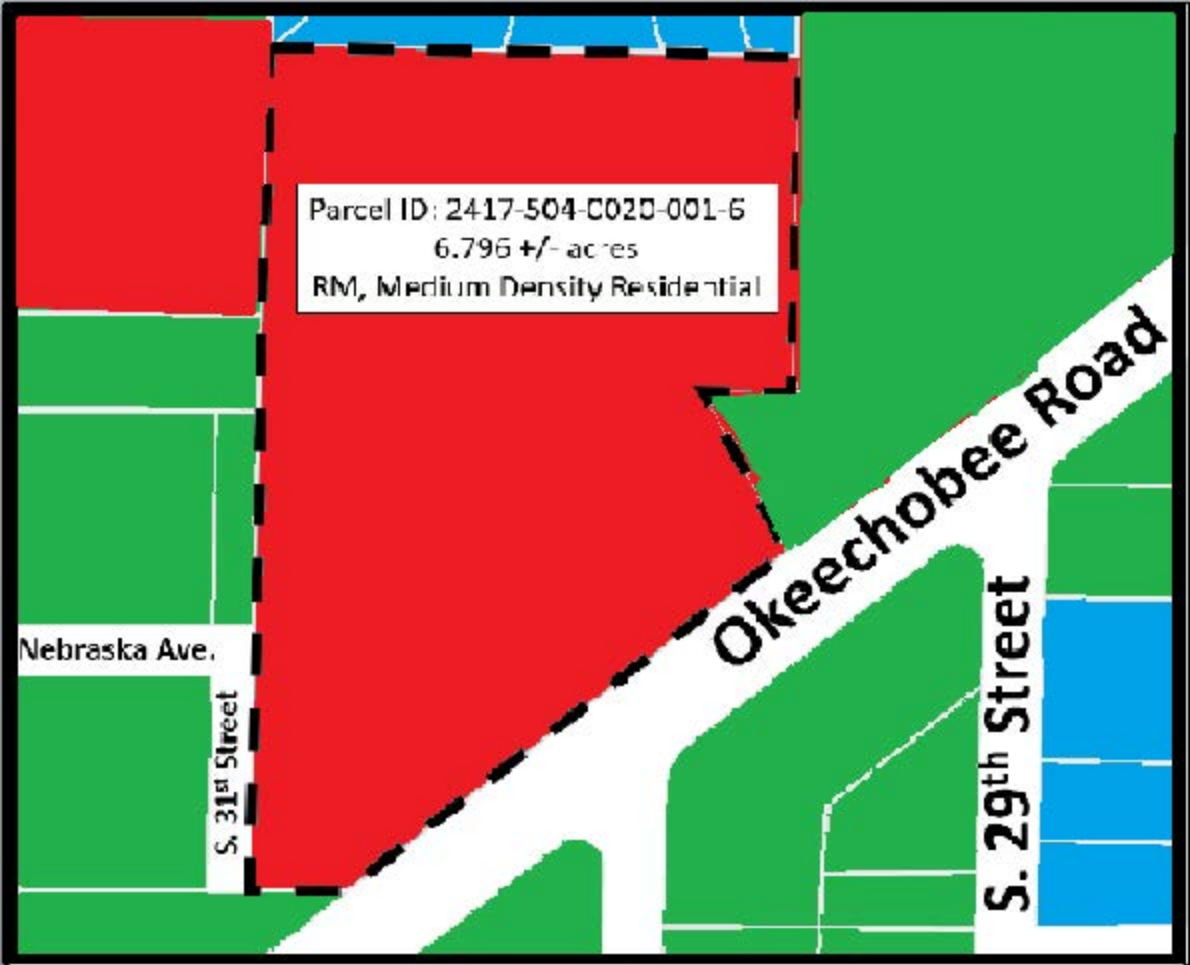
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Existing FLU Map



N
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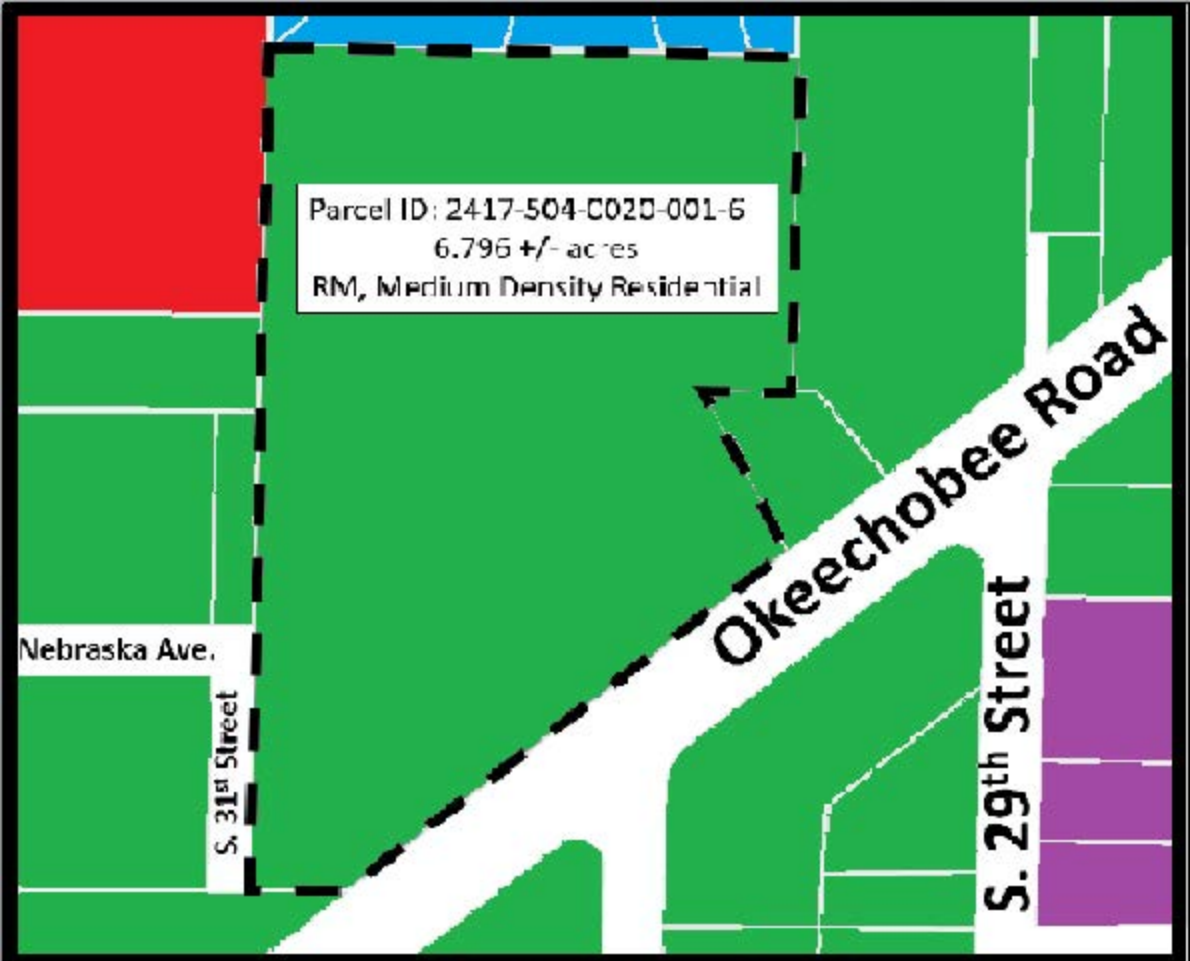
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Proposed FLU Map



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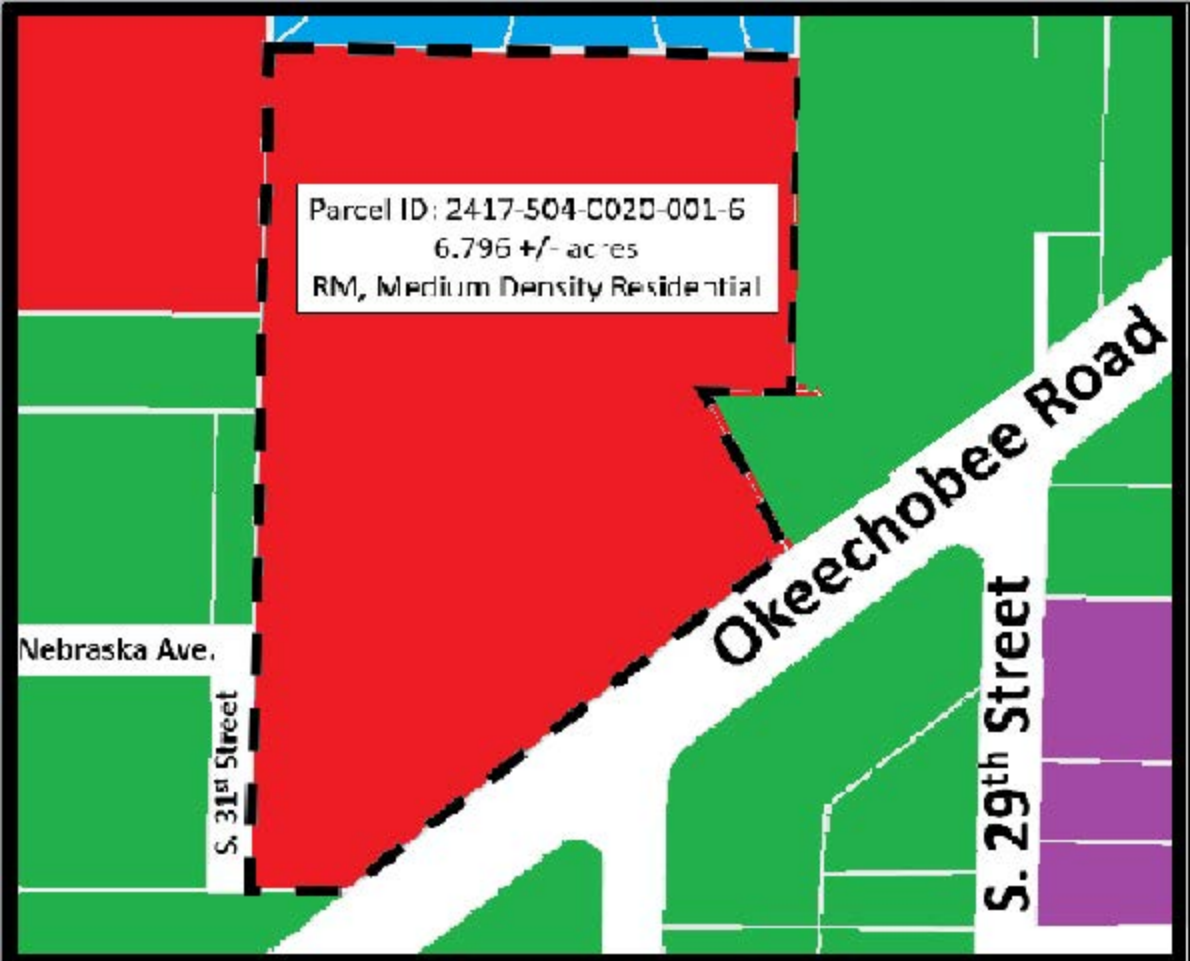
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: :

Existing Zoning Map



N
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Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: : Proposed Zoning Map

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

DEVELOPMENT REVIEW

Property address or Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street

Parcel ID #(s): 2417-504-0020-001-6

Project description: Aria Apartments

Arrow Investment Group, LLC	Michael Sanchez/Managed Land Entitlements
Property Owner(s)	**Applicant/Representative, Title, Company**
4512 N. Flagler Drive, Suite 2056	3710 Buckeye Street, Suite 100
Street Address	Street Address
West Palm Beach, FL 33407	Palm Beach Gardens, FL 33410
City State Zip	City State Zip
(561) 324-4439	561-568-8045
Phone Number	Phone Number
capitalinvestments@usa.com	michael@mylandentitlements.com
Email Address	Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below sholl also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Alnok who is personally known to me or has produced FLDL as identification.

Signature of Notary (seal)

NOTARY PUBLIC
MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____ Fees_____ Control #_____ B. Permit #_____

Intake Planner_____

Planner Assigned_____

Approved By_____ Date _____

Comments_____

Intake Date Stamp

❑ DEVELOPMENT REVIEW

General Information

- ❑ Incomplete application packets cannot be accepted.
- ❑ Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type		
☒ Site Plan	☒ Conditional Use with New Const.	❑ Major Amendment
❑ Conceptual Development Plan		❑ Minor Amendment

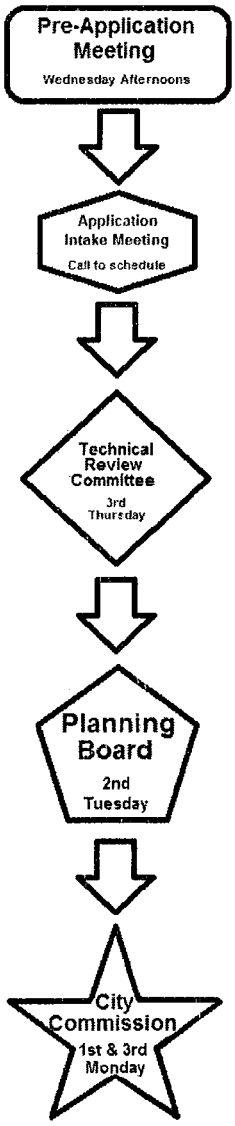
Site Information:

Non-Residential: Proposed Sq. Ft.: _____ Residential: Proposed Units: 112 Units

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West
Single Family	Commercial	Commercial	Multifamily/Commercial

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- ❑ Complete notarized application
- ❑ Warranty Deed
- ❑ SLC Property Record Card
- ❑ Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- ❑ General location map (see Section 22-58.d.2)
- ❑ Survey (see Section 22-58.d.3)
- ❑ Site Plan (see Section 22-58.d.4)
- ❑ Landscaping Plan (see Section 22-187)
- ❑ Storm Drainage Plan (see Section 22-58.d.6)
- ❑ Environmental Impact Report
- ❑ Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- ❑ Lighting Plan (see Section 22-58.d.8)
- ❑ Design Review submittals (see Design Review application)
- ❑ Traffic Impact Report
- ❑ Concurrency Review submittals (see Concurrency Review application)

ARIA APARTMENTS

CITY OF FORT PIERCE

FUTURE LAND USE MAP AMENDMENT, REZONING, CONDITIONAL USE AND SITE PLAN APPROVAL

PROJECT NARRATIVE/JUSTIFICATION STATEMENT

JUNE 26, 2020

REQUEST SUMMARY

Arrow Investments Group, LLC (the "Applicant"), hereby respectfully requests approval from the City of Fort Pierce (the "City") of the following applications related to the Aria Apartments project proposed on a 6.796-acre property located on the north side of Okeechobee Road approximately ¼ mile east of S. 33rd Street (the "Property"):

- Future Land Use Map Amendment to change the land use designation of the Property from General Commercial (GC) to Medium Density Residential (RM);
- Zoning Map Amendment to change the zoning designation of the Property from General Commercial (C3) to Medium Density Residential (R-4);
- Site Plan Approval to allow the construction of a 112-unit luxury rental apartment project on the Property to be referred to as the "Aria" apartment complex (the "Project"); and
- Conditional Use Approval to allow for an "Innovative Residential Development" for the Project.

PROPERTY DETAILS

The Property is currently vacant and, to the best knowledge of the Applicant, has never been developed. Limited clearing had previously occurred on the Property, and the Property is currently dominated by cleared land with some remnant forest communities consisting of Cabbage Palm and Brazilian Pepper (please see "Environmental" section of this narrative for additional information regarding existing vegetation and a small, isolated wetland). A drainage ditch exists along the west perimeter of the Property.

The Property contains a General Commercial (CG) Future Land Use Designation and a General Commercial (C3) zoning designation.

ADJACENT PROPERTIES DETAILS

Details regarding the land use, zoning and existing uses of the properties adjacent to the Property are noted below:

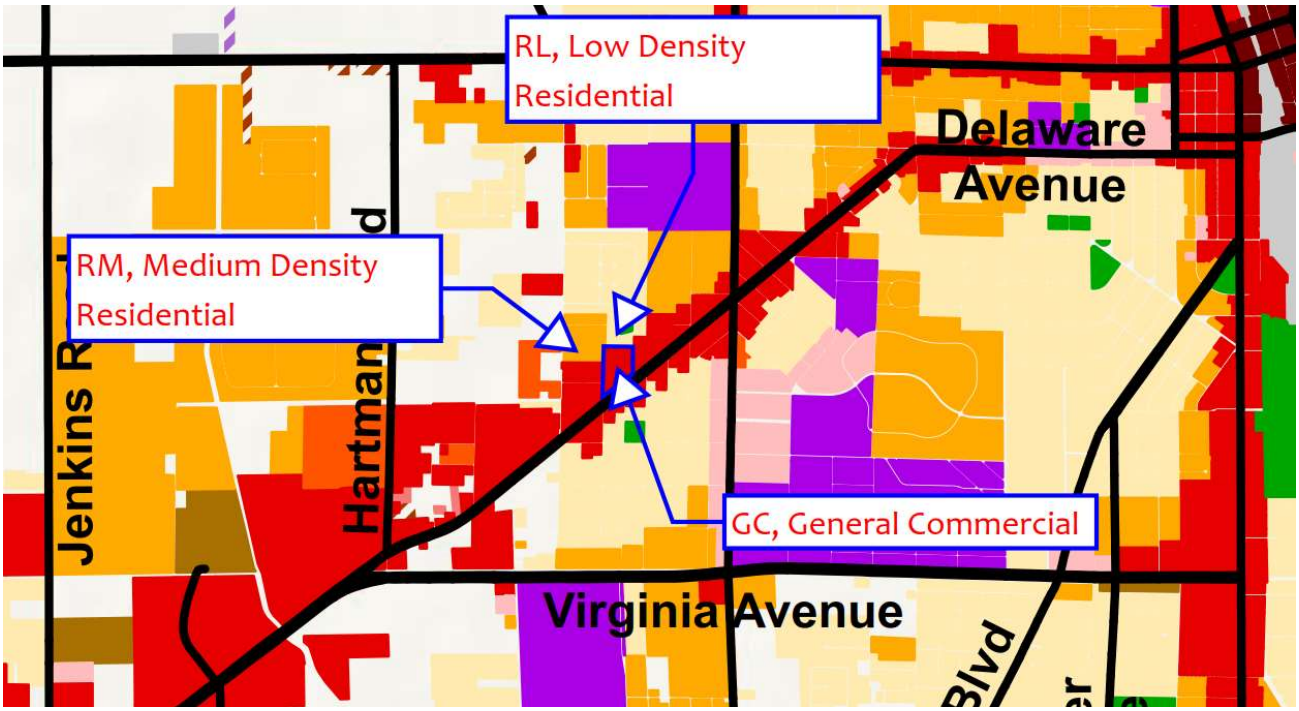
	Current FLU	Current Zoning	Existing Uses
North	RL, Residential Low Density	R2, Single Family Intermediate Residential	Vacant single family
South	GC, General Commercial	C3, General Commercial	Funeral home; grocery store
East	GC, General Commercial	C3, General Commercial	Used car sales; Habitat for Humanity
West	GC, General Commercial; RM, Medium Density Residential	C3, General Commercial; R4, Medium Density Residential	Contractor's Office; Religious Institutions

The graphic below identifies the Property in red and identifies the existing uses of the adjacent properties:

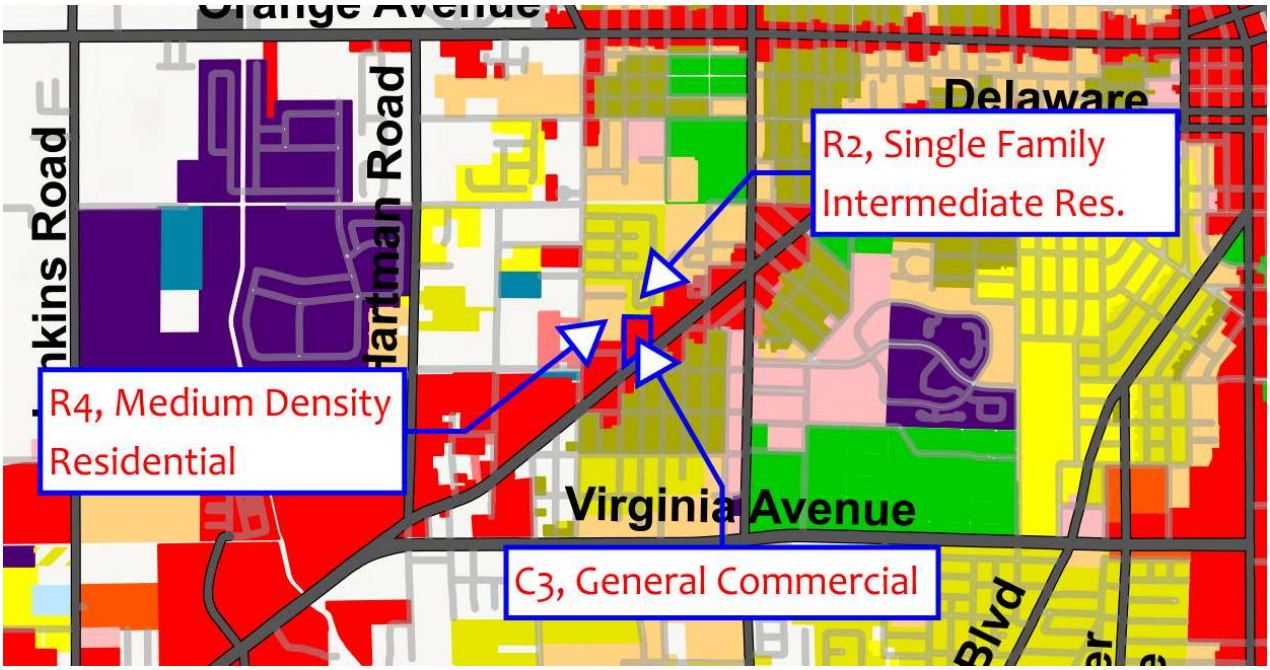


The graphics below identify the Future Land Use and Zoning of the subject property and adjacent properties:

FUTURE LAND USE



ZONING



GENERAL DESCRIPTION OF SUBJECT REQUEST AND NARRATIVE FORMAT

The Applicant is proposing to change the future land use designation of the Property to Medium Density Residential (RM) and rezone the Property to Medium Density Residential (R4) in order to allow for the development of a 112-unit residential apartment project consisting of five (5) residential buildings of between two (2) and three (3) stories in height, a clubhouse, a pool and other amentities.

The balance of this Narrative will provide (1) discussion regarding the proposed change from commercial to residential future land use and zoning designations; (2) discussion regarding the proposed density within the Project; (3) descriptions of the physical improvements proposed for the Project and related issues; and (4) demonstration of compliance with the Innovative Residential Development criteria.

FUTURE LAND USE MAP AMENDMENT AND REZONING FROM COMMERCIAL TO RESIDENTIAL

The Property currently has commercial land use and zoning designations similar to other properties that front along the north and south sides of Okeechobee Road. The portion of Okeechobee Road extending from Virginia Avenue to Delaware Avenue is developed on both sides of the road with an eclectic mix of uses including, but not limited to, smaller retail strip centers, automobile repair, used auto sales, small restaurants, small personal service uses, small office uses, day care, convenience stores, gas stations, bank, religious institutions and other uses. There are no large-scale commercial developments within said stretch of Okeechobee Road since those developments would typically locate on a road with a higher traffic volume such as Virginia Avenue.

It is the Applicant's opinion that (1) an approximately 6.8-acre property such as the Property is not suitable for large scale commercial development given its location along a lesser traveled roadway, and (2) a much more suitable and feasible use for the Property would be medium-scale multifamily development that would be appropriate along a four-lane divided roadway such as the section of Okeechobee Road in front of the Property and which would provide a logical transition from the single family and multi-family residential uses to the north to Okeechobee Road.

The requested Medium Density Residential (RM) future land use designation is consistent with the land use designation of properties to the west and northwest of the Property, provides for a logical transition from the Low Density Residential (RL) land use designation of the properties to the north to Okeechobee Road and is compatible with the General Commercial (GC) land use designations to the west, east and south.

The same logic as above applies to the requested Medium Density Residential (R4) zoning district as it relates to the zoning designations of surrounding properties.

Consistency with Comprehensive Plan

The following are excerpts from the Future Land Use Element of the County's Comprehensive Plan as it relates to the requested Medium Density Residential (RM) designation, each followed by the Applicant's demonstration of the proposed Project's compliance with the referenced provisions of the Comprehensive Plan:

- Section A: *The Medium Density Residential designation is intended for parcels that are best suited for multifamily residential uses ranging in density from 6.5 to 12 du/ac. This category allows small-lot single family units and multifamily dwellings including duplexes, condominiums and townhouses. Limited*

commercial uses intended to serve the residential uses shall be allowed. Compatible public, quasi-public, and special uses including parks, churches, non-profit clubs, schools, and daycare facilities shall be allowed.

Demonstration of compliance: *The proposed land use designation is consistent with the intended use of the property as multi-family apartments, and uses allowed with the RM future land use designation are consistent with other uses existing along Okeechobee Road based on the allowable uses within the RM designation noted above.*

- Objective 1.2: *The City shall use innovative Land Development Regulations to encourage flexibility in development to support compact, mixed-uses compatible with local context and character.*

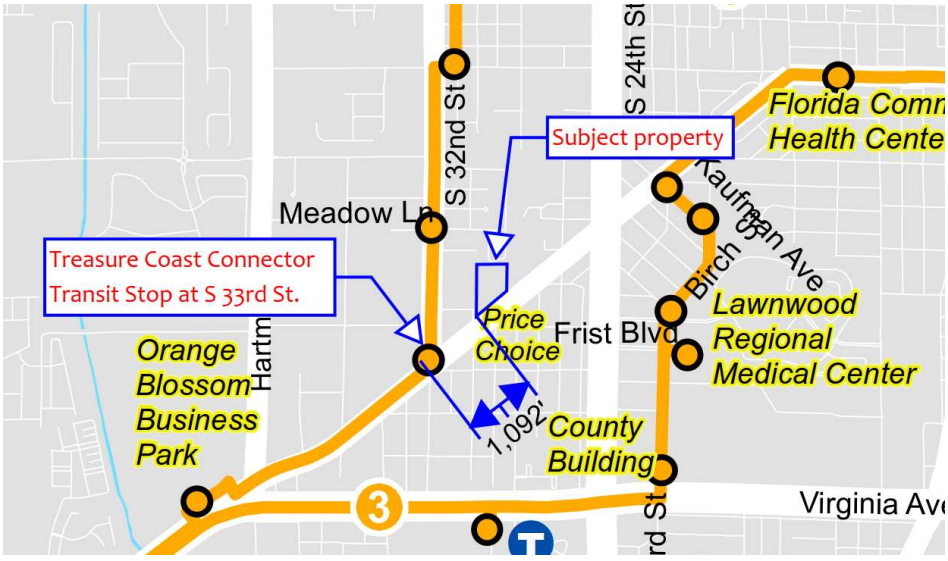
  Demonstration of compliance: *The proposed Project will be a compact development providing new, high-quality apartment housing for residents of the City which is compatible with the local context and character of the area. The increased residential density in the area will help to support the neighboring commercial uses along Okeechobee Road, and the Project's compact, walkable design will help to further the interrelationship between the residential and commercial uses in the area.*

Density

The proposed Project provides for a density of 16.48 du/ac.

The County's Comprehensive Plan provides that the Medium Density Residential (RM) future land use designation allows for between 6.5-12 du/ac. However, Policy 1.1.5 states "The City will allow a density bonus of 5 dwelling units per acre above the maximum density for developments within ¼ mile of a rail station, multimodal transit center or transit stop."

As demonstrated the map below, the Property is located less than ¼ mile from a transit stop for the County's Treasure Coast Connector bus system that is located at the northwest corner of the intersection of Okeechobee Road and S. 33rd Avenue. Accordingly, the Applicant intends to utilize the additional five (5) du/ac authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan bringing the total density permitted under the RM future land use designation to 17 du/ac.



With respect to zoning, the Medium Density Residential Zone (R-4) allow for a maximum density of ten (10) du/ac for conventional developments and twelve (12) du/ac for innovative developments. The Applicant is requesting approval of a Conditional Use to allow an "Innovative Residential Development" as demonstrated in the "Innovative Residential Development/Conditional Use Approval" section of this narrative and, thus, will be utilizing the additional density allowed for such developments (12 du/ac) for the purposes of this application. The maximum density for the Project with respect to zoning has been calculated at 17 du/ac based on the 12 du/ac allowed with an innovative development + the additional five (5) du/ac density bonus authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan for developments within a ¼ mile of a transit stop.

The proposed density of 16.48 du/ac per acre complies with the 17 du/ac maximum allowed by the future land use and zoning designations noted above.

PROJECT DETAILS

General Project Improvements

A summary of proposed Project improvements depicted in the development plans provided with this submittal is contained below:

- Development program: The Project comprises a multifamily apartment project consisting of 112 dwelling units ranging from one (1) to three (3) bedrooms in five (5) buildings. Four (4) of the buildings will be three (3) stories in height; and the fifth building will be two (2) stories in height. A clubhouse, pool area and other amenities listed below are also proposed.

- General design intent/summary: The design intent of the Project was to create an innovative, walkable and compact apartment project with high quality architecture, landscaping and amenities that raise the bar for new development in the area, increase property values and create an inviting sense of place for its residents. Four (4) of the residential building are placed around a central retention lake which has been provided an amenity for the Project. The lake will have a fountain and littoral plantings to enhance the amenity, and a sidewalk has been provided around the entire lake with benches so that residents can enjoy the lake views and recreate/exercise around the lake. A palm tree-lined roundabout is proposed at the entrance into the Project which will have a specimen tree as a focal point and will provide for an aesthetically pleasing entry into the Project. Parking and dumpsters are evenly and conveniently distributed throughout the Project. Other amenities include a clubhouse with a fitness center, kitchen, multipurpose room, restrooms and a covered area over the pool deck for shade lounging; a passive park with picnic tables, benches and shade trees; a large pool with seating areas and planters; a tot lot with playground equipment and fenced dog park. Additionally, Building 1 and the clubhouse have been placed against the street to add visual interest and to help screen the parking area from the adjacent roadway.

- Parking: Parking is provided within the Project based on a rate of 1.5 spaces/unit. 168 spaces are required, and 172 spaces are provided.

- Open Space/Outdoor Amenities: Section 22-27(b)(3) of the City's Land Development Code requires that buildings within multi-family housing developments in the Medium Density Residential (R-4) zoning district not cover more than 50% of the lot area. The Project proposes a building coverage of only 18.0% and a total open space of 127,934 square feet or 43.2% of the project site. Outdoor amenities include

walking paths throughout the site including around the retention lake, seating areas around the lake; a passive park with benches, tables and shade trees; a large pool; a fenced dog park and a tot lot.

Architecture

Both the two story and three buildings are designed in a contemporary style that mirrors current trends in many residential projects. The building footprints allow the building mass to be broken up reducing overall scale and creating a more visually interesting facade. The fenestration utilizes contemporary features and materials including cantilevered balconies, horizontal railing, variations in roof types and heights, metal eyebrow shades, faux horizontal wood siding, and smooth stucco broken into different wall panels by the building mass and vinyl stucco joints. The color and material palette is contemporary and brings good contrast for visual interest using white for trim, window frames, walls, sun shades and railings; light grey for wall panels, medium grey for the faux wood siding and dark grey for the flat concrete roof tiles.

The maximum height allowed in the Medium Density Residential (R-4) zoning district is 45'-0". The maximum height of the tallest building is 39'-0".

Mechanical equipment will be located on the roof and screened from view.

A monument sign is proposed on the south side of the Project entrance, and details regarding said sign are provided with this submittal on the "Sheet A-1 – Entry Monument" plan. The design of the monument sign incorporates the same colors and materials as the buildings on site and has been sized in accordance with the City's requirements for residential development signage.

Landscaping/Tree Mitigation

The Applicant has gone to every effort to save and/or relocate existing native trees on site which include Pine, Live Oak and Cabbage Palm. The Tree Mitigation Plans provided with this submittal provide that (1) 155 cabbage palms will be relocated on site; (2) 552" of trees will be removed in order to allow for the Project; and (3) 316" of trees will be preserved in place. The total mitigation requirement is 236".

The Applicant is proposing an very dense landscape design in order to satisfy the minimum landscape requirements of the City, provide additional trees to satisfy the mitigation requirement and provide additional landscaping to satisfy the "Innovative Residential Development" requirements as further discussed in the "Innovative Residential Development/Conditional Use Approval" section of this narrative.

The Project requires 56 interior trees, where 166 interior trees are being provided (110 additional trees or 196% additional). The project requires 112 buffer trees, where 137 trees are being provided (25 additional trees or 22.3% additional). A total of 137 additional trees are proposed on the Project. Additionally, the height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.

The Applicant has increased the landscape buffers along the west, north and east sides beyond the minimum 10-foot requirement to 20', 15' and 15', respectively in order to further justify the Project and provide additional buffering for adjacent properties.

The proposed landscape palette provides native vegetation and careful placement of trees to provide shade in open spaces areas, screening where required, planting of the littoral areas of the retention pond for aesthetics and enhanced aesthetics at the Project entrance, residential buildings, clubhouse and other areas.

A cabbage palm hammock is proposed at the southwest corner of the Project, and a "Range Live Oak" is proposed at the roundabout at the Project entrance to serve as a focal point and enhance the Project.

Site Lighting

A photometric plan has been provided with this submittal which depicts the proposed exterior lighting within the Project. Pole mounted lights and building lights are proposed to provide lighting within the parking areas and pedestrian walks, bollard lighting is provided at the passive park and pedestrian scale pole-mounted lights are provided within the pool area. All lighting will be high efficiency LED lighting.

Drainage

The proposed surface water management system will collect stormwater runoff and direct it to the on-site detention area via a network of underground pipes. Stormwater will be stored in the detention area and on surface for large, infrequent storm events. A small exfiltration system is provided to assist with pre-treatment prior to discharge. Finished floors will be protected from the 100-year 3-day storm event. Roadways will be protected from the 10-year 1-day storm event. A perimeter berm will be established and retain the 25-year 3-day storm event on-site.

The drainage ditch along the west side of the property will lie outside the storage basin and act as the receiving body for controlled discharge. Water from the ditch will exit to the west via a culvert under South 31st Street into a City of Fort Pierce drainage ditch that runs west to and under South 33rd Street. At that point, the drainage system becomes part of North St. Lucie River Water Control District Canal 6 and stormwater flows west to Five Mile Creek.

Utilities

Domestic and Fire Water supply will be provided through an 8" water main loop through the project with two connection points to the existing water main located within Okeechobee Road right-of-way. This system will be constructed to Fort Pierce Utility Authority standards and be turned over to the utility for operation and maintenance.

Sanitary sewage will be collected via a service from each building that connects to a sanitary main. The main directs flow to an on-site private lift station located near Building 1 at the southwest corner of the site. The lift station will pump flow to an existing manhole operated and maintained by Fort Pierce Utility Authority. The on-site sanitary system is proposed to be privately operated and maintained.

Traffic Concurrency and Capacity Analysis

Included with this submittal are (1) a future land use amendment traffic analysis (the "FLUA Analysis"), and (2) a traffic impact analysis for the Project (the "TIA").

The FLUA Analysis concludes that the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project and, therefore, the proposed change in future land use for the Project meets applicable criteria for an amendment to the City's Comprehensive Plan.

The TIA concludes that (1) the roadway links are sufficient to accommodate the Project traffic in the AM and PM peak hours; (2) the existing geometry at the intersections of S 25th Street & Okeechobee Road and Okeechobee Road and Virginia Avenue are expected to operate acceptably under existing, background and future total conditions; and (3) an eastbound left turn lane is required. The Project plans provided with this submittal include the required eastbound left turn lane.

INNOVATIVE RESIDENTIAL DEVELOPMENT/CONDITIONAL USE APPROVAL

Section 22-82 of the City's Land Development Code contains the following standards applicable to a multifamily residential developments that shall be satisfied in order to qualify for the two (2) additional dwelling units per acre and the related Conditional Use approval by the City. The Applicant's demonstration of compliance with said criteria is contained below in *italics* typeface:

(a) Purpose. Innovative residential developments are developments which achieve a more creative and imaginative housing environment than normally occurs by use of the clustering technique, by employing various other methods to achieve distinctiveness and excellence in siting, design and/or landscaping. Density bonuses and reductions in various building restrictions are used to encourage these developments.

Demonstration of Compliance: *The Project has been thoughtfully and carefully designed to create a more innovative project than normally occurs. Factors that, in the opinion of the Applicant, qualify the Project as an innovative residential development that are above-and-beyond a "normal" apartment building project and the minimum requirements of the City are listed below:*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*
- *The central lake will have a fountain and a walking trail with sitting areas.*
- *A passive park is proposed as a project amenity with picnic tables, benches and shade trees.*
- *A luxurious clubhouse with a multipurpose room, kitchen, fitness center, etc. is proposed.*
- *A large pool with a large pool deck area decorated with planters is proposed.*
- *A fenced dog park is being provided as an extra amenity.*
- *A fenced tot lot is provided as an extra amenity.*
- *Pedestrian paths are provided throughout the Project.*
- *A central roundabout with a large Oak Tree will serve as a focal point upon entry into the Project.*
- *A high quality of architecture is proposed as discussed in the "Architecture" section of this narrative.*
- *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- *A large number of trees and palms are either being preserved or relocated on site.*
- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*

- *Significant enhancements to landscaping beyond the minimum requirements are provided as further discussed in the "Landscaping" section below.*

(e)(1) Landscaping. Landscaping. The gross density may be increased up to one unit per acre for landscaping plans which provide for effective use of existing vegetation and/or for approved landscape plans for streetscapes, pedestrian ways, bicycle paths, areas near buildings, open spaces and/or recreation areas. This increased density may only be awarded if the landscaping of the innovative residential development will exceed the requirements in section for landscaped area by ten (10) per cent, for amount of trees by ten (10) per cent and/or in terms of qualitative characteristics of the landscaping.

Demonstration of Compliance: *As depicted on the landscape plans provided with this submittal, the Applicant is proposing a carefully designed, very dense landscape design and substantial additional landscaping in order to create an aesthetically pleasing project and to satisfy the innovative residential development criteria. Details regarding the "extra" landscaping proposed are noted below:*

- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*
- *The passive park has been densely landscaped to create an inviting and shaded sitting area for enjoyment of the tenants.*
- *The Project entry and roundabout are lined with palms typical of a luxury development.*
- *The residential buildings, clubhouse and pool are densely landscaped typical of a luxury development.*
- *43.2% open space is provided where only 40% is required.*
- *166 interior trees are provided where only 56 are required (196% additional).*
- *137 buffer trees are provided where only 112 trees are required (25 additional trees = 22.3% additional).*
- *Littoral plantings are proposed around the lake as an added aesthetic enhancement for the Project.*
- *The height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.*

(e)(2) Siting. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-5 zone) for creative placement of buildings and/or other facilities in terms of visual focal points, use of existing physical features such as topography, views, sun and wind orientation, the circulation pattern, variation in building setbacks and/or building and facility groupings.

Demonstration of Compliance: *As demonstrated below, the site design and placement of buildings have been creatively designed in order to establish an innovative residential development by use of visual focal points and physical features as much as possible on a 6.796-acre property.*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*

The placement of the buildings around the lake will enhance views from both the residential units and from tenants recreating/exercising/sitting around the lake.

- ❖ *A central roundabout lined with palm trees and with a large Oak Tree in the center will serve as a focal point upon entry into the Project.*
- ❖ *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- ❖ *Pedestrian pathways are provided throughout the development to create a walkable community.*

(e)(3) Design. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-S zone) for imaginative design features including architectural styles, harmonious use of building materials, varied use of housing types and/or other design elements of the innovative residential development.

Demonstration of Compliance: *The Applicant is proposing enhanced architectural features beyond a standard multi-family housing project as demonstrated in the "Architecture" section of this narrative.*

(g) Open Spaces. Innovative residential developments which receive density bonuses in accordance with subsection (e) of this section shall comply with the following provisions: (1) In all such innovative residential developments, at least forty (40) percent of the site, exclusive of aquatic areas, shall be devoted to open space. Of this required open space area, no more than twenty-five (25) percent may be utilized privately by individuals or users of the innovated residential development. At least seventy-five (75) per cent of the required open space area must be common open space.

Demonstration of Compliance: *Open space is provided at 43.2% of the site where only 40 is required. Additionally, all open space on site will be for the enjoyment of all residents of the community.*

CLOSING

The Applicant respectfully requests the City's consideration and approval of the subject application based on the justification provided herein. The Applicant believes that the Project will provide a substantial enhancement to the area and help to spur other redevelopment in the area. The Applicant looks forward to working with the City to bring a high-quality project to the City.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Future Land Use Map Amendment

☐ Future Land Use Map Amendment – Large Scale (>10 acres)

☒ Future Land Use Map Amendment – Small Scale (<10 acres)

In accordance with Chapter 163.3187, Florida Statutes, The City of Fort Pierce will consider applications for land use changes on parcels in excess of 10 aces ("Large Scale Amendments") only twice each calendar year. The City Commission will consider applications for land use changes on parcels less than or equal to 10 acres with a maximum density of 10 units per acres or less at any time during the calendar year. You are encouraged to schedule a pre-application meeting with the planning staff and to submit your application up to three months in advance of the application deadline.

Application submission shall include the following:

•**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**Planning Board**: One (1) original and (13) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**City Commission**: One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

In addition to a complete application, packets shall include:

- ☐ Warranty Deed & Legal Description
- ☐ St. Lucie County Property Record Card
- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (FLU) RM - Medium Density Residential (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: Zoning Map Amendment, Design Review
8. Describe the existing uses, improvements and structures on the amendment lands: Vacant
9. Are there any identified or possible historical structures on the amendment lands? No
10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. **Capacity Analysis:**

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
South	Commercial	GC - General Commercial	C3 - General Commercial
East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 37,004
Change in Demand	**Total gallons per day** -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 29,603
Change in Demand	**Total gallons per day** +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning Enrollment Demand	N/A	N/A
Proposed Zoning Enrollment Demand	34.01	79.35
Change in Demand	+34.01	+79.35

E. Solid Waste:
2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units

Demand Analysis	Maximum
Current Zoning	Demand for commercial not listed above.
Proposed Zoning	16 yards
Change in Demand	Need demand for commercial

F. Stormwater: Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)	
Impact	See drainage report provided with submittal.

G. Transportation Analysis: Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. Applicant Acknowledgements (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

_____

Same as Owner

Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature(s) below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC

by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by MUSTAFA ACUNOK who is personally known to me or has produced FL DL as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:		
DATE RECEIVED:	Signed:	
File Number:	Check No:	Receipt No:
TRC Review:	Planning Board Review:	City Commission:
Ordinance No:	Date Approved:	

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
South	Commercial	GC - General Commercial	C3 - General Commercial
East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 29,900
**Proposed Zoning/FLU	Total gallons per day 37,004
**Change in Demand	Total gallons per day -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 29,900
**Proposed Zoning/FLU	Total gallons per day 29,603
**Change in Demand	Total gallons per day +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning/FLU Enrollment Demand	N/A	N/A
****Proposed Zoning/FLU Enrollment Demand**	34.01	79.35
****Change in Demand**	+34.01	+79.35

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	Demand for commercial not listed above.
****Proposed Zoning/FLU**	16 yards
***Change in Demand**	Need demand for commercial

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See drainage report provided with submittal.

III. Transportation Analysis: *Complete ITE Trip Generation Form (Attached)*

G. Transportation Analysis: Complete ITE Trip Generation Data Form Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning/FLU	8,300	65/83
****Proposed Zoning/FLU**	609	38/49
***Change in Demand**	Trips	Trips
Impact to Capacity	-7,691	-27/-34

IV. Project Description

PHASING
Is this project (phase) part of a larger project? [ ] Yes [X] No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: 112 Single Family: Multifamily: 112
Non-residential (square footage):
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total)

RESIDENTIAL DATA					
Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached					
Single-family, attached					
Multi-family		112	6.796	03/21	03/22
Other (specify)					

NON-RESIDENTIAL DATA					
Type(s) specify	**Phase**	**Square footage**	**Acres**	**Expecting beginning date**	**Expected completion date**

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. [ ] Yes [X] No

B. 1. Does this application involve demolition or re-use of any structure(s)? [ ] Yes [X] No
If yes, what is the size of the structure(s) to be demolished or re-used? _____
2. What is the current use of the structure to be demolished or re-used? _____
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? [ ] Yes [ ] No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Zoning Atlas Map Amendment

Application submission shall include the following:

•**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**Planning Board**: One (1) original and (16) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

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In addition to a complete application, packets shall include:

- ☐ Warranty Deed & Legal Description
- ☐ St. Lucie County Property Record Card
- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: FLU Amendment, Design Review

8. Describe the existing uses, improvements and structures on the amendment lands: Vacant

9. Are there any identified or possible historical structures on the amendment lands? No

10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
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	Future Land Use	Zoning Classification	Maximum Intensity **Residential: Dwelling Units per Acre** **Other: Square Footage**	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

A. Potable Water:	
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Demand Analysis	Maximum
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Change in Demand	**Total gallons per day** -7,104

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Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
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C. Parks and Recreation (Residential Classifications Only):
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Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
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Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

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Single Family: (du x 0.405 = students/70% K-8/30% High)
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School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
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Change in Demand	Need demand for commercial

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Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See drainage report provided with submittal.

III. Transportation Analysis

G. Traffic Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. **Applicant Acknowledgements** (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

Same as Owner
Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC
by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

6/24/20

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Altinok who is personally known to me or has produced _____ as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:

DATE RECEIVED:_____ Signed:_____

File Number:_____ Check No: _____ Receipt No: _____

TRC Review:_____ Planning Board Review: _____ City Commission: _____

Ordinance No:_____ Date Approved: _____

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

GENERAL ADDRESS REQUEST

[X] Assigned [ ] Corrected [ ] Changed

Property Owner(s): Arrow Investment Group, LLC

Parcel Identification(s): 2417-504-0020-001-6

Legal Description: See attached survey

Current Address: No address assigned

Use of Property: Proposed 112 unit multifamily apartment project

Reason for Request: New development.

Applicants Signature: _____ **Date:** 6/24/20

Arrow Investment Group, LLC

Printed Name: by: MUSTAFA ALTINOK

_____I am not the owner of the described property; however, the owner(s) authorizes me to act as agent for the owner(s) of record. (Provide copy of authorization).

Contact Information: Phone: (561) 324-4439 Email: capitalinvestments@usa.com

Office Use Only

PROPOSED NEW ADDRESS: _____

Signature of City Representative: _____

LOCATION MAP



Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	OKEECHOBEE RD
Parcel ID:	2417-504-0020-001-6
Account #:	26668
Map ID:	24/17N
Use Type:	1000
Zoning:	General Co
City/County:	Fort Pierce

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)



Current Values

Just/Market Value:	$732,700
Assessed Value:	$732,700
Exemptions:	$0
Taxable Value:	$732,700

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this parcel: Download PDF

Sale History

Date:	Sep 26, 2019
Book/Page:	4327 / 0333
Sale Code:	0002
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$450,000
Date:	May 27, 2010
Book/Page:	3204 / 0743
Sale Code:	0112
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$100
Date:	Dec 17, 2008
Book/Page:	3049 / 2156

Sale Code:	XX01
Deed:	CT
Grantor:	Mid South Acquisitions LLC
Price:	$299,000
Date:	Mar 9, 2006
Book/Page:	2511 / 0830
Sale Code:	XX00
Deed:	WD
Grantor:	Zog Limited Partnership
Price:	$1,728,800
Date:	Mar 25, 2004
Book/Page:	1936 / 0579
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$448,500
Date:	Sep 16, 1999
Book/Page:	1251 / 1882
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$260,000
Date:	Sep 14, 1998
Book/Page:	1171 / 1672
Sale Code:	XX01
Deed:	WD
Grantor:	SCOTTY`S INC
Price:	$95,700
Date:	Jan 1, 1986
Book/Page:	0489 / 2883
Sale Code:	XX00
Deed:	CV
Grantor:	
Price:	$725,000

Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	Sprinkled %: 0%



Image or Sketch unavailable for display

Special Features and Yard Items

Current Year Values

Current Values Breakdown

Building:	$0
Land:	$732,700
Just/Market:	$732,700
Ag Credit:	$0
Save Our Homes or 10% Cap:	$0
Assessed:	$732,700
Exemption(s):	$0
Taxable:	$732,700

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2006	0041	18.1	Fort Pierce Stormwater Charge	$1,248.90

This does not necessarily represent the total Special Assessements that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

Historical Values

Permits

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in Fort Pierce

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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/

LEGAL DESCRIPTION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4623280 OR BOOK 4327 PAGE 333, Recorded 10/01/2019 12:37:51 PM Doc Tax: $3150.00

Prepared by and return to:
James H. Ryan
Attorney at Law
Gary, Dytrych & Ryan, P.A.
701 U. S. Highway One Suite 402
North Palm Beach, FL 33408
561-844-3700
File Number: **84101**

[Space Above This Line For Recording Data]

Special Warranty Deed

This Special Warranty Deed made this **30th** day of **September, 2019** between **Cypress Trust Company, a Florida corporation**, as Trustee under Special Purpose Revocable Trust Agreement dated November 22, 2013, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated May 18, 2004, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 8, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 2, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated October 17, 2003; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated March 23, 2005; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated February 21, 2006; and Cypress Trust Company, as Trustee under IRA Self-directed Trust Agreement dated February 13, 2005, whose post office address is **251 Royal Palm Way, Suite 500, Palm Beach, FL 33480**, grantor, and **Arrow Investment Group LLC, a Florida limited liability company**, whose post office address is **4512 North Flagler Dr., #2056, West Palm Beach, FL 33407**, grantee:

(Whenever used herein the terms grantor and grantee include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Saint Lucie County, Florida**, to-wit:

Block "D", Less rights-of-way, COLLIER'S SUBDIVISION, according to the Plat thereof, recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida, being more particularly described as follows:
Commence at a railroad spike at the Southwest corner of the Northeast 1/4 of Section 17, Township 35 South, Range 40 East, St, Lucie County, Florida; thence run N 88°42'30"E, along the South line of the said Northeast 1/4, a distance of 661.40 feet to the West line of Block "D" of Collier's Subdivision, as recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida; thence run N 00°00'18" W, along the West line of said Block D, a distance of 27.01 feet, to the POINT OF BEGINNING; thence continue N 00°00'18" W, a distance of 796.62 feet, to the Northwest corner of said Block D; thence run N 88°43'25" E, along the North line of said Block D, a distance of 460.00 feet; thence run S 00°04'02" W, a distance of 470.52 Feet, to the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence run S 49°35'30" W, along the said Northerly right-of-way line, a distance of 516.56 feet; thence run S 88°42'30" W, a distance of 65.96 feet, to the POINT OF BEGINNING, all lying and being in Section 17, Township 35 South, Range 40 East, St. Lucie County, Florida.
Less and excepting the following:
A portion of Block "D", COLLIER'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 4, Page 63, of the Public Records of St. Lucie County, Florida.
Being more particularly described as follows:

Begin at the Southeast corner of said Block "D", said corner being situated on the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence, North 28°00'23" W, a distance of 167.87 feet; thence, North 89°51'15" E, a distance of 79.00 feet to the East line of said Block D; thence,
South 00°04'02" W, along said East line, a distance of 148.41 feet to the Point of Beginning of the herein described parcel of land.
Said lands situate, lying and being in Section 17, Township 35 South, Range 40 East, City of Fort Pierce, St. Lucie County, Florida.

Parcel Identification Number: 2417-504-0020-001-6

Subject to taxes for 2019 and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

Grantor is an institutional lender and is acting solely in a fiduciary capacity.

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

To Have and to Hold, the same in fee simple forever.

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

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Witness Name: Donna Pfister

Witness Name: Jamie Reid

Cypress Trust Company, a Florida corporation, as Trustee

By: _____
Roxanne Ertle, Vice President

(Corporate Seal)

State of Florida
County of Palm Beach

The foregoing instrument was acknowledged before me this 26 day of September, 2019 by Roxanne Ertle, Vice President of Cypress Trust Company, a Florida corporation, as Trustee, on behalf of the corporation. He/she [ ] is personally known to me or [ ] has produced a driver's license as identification.

[Notary Seal]

JAMIE REID
Notary Public - State of Florida
Commission # FF 936732
My Comm. Expires Jan 21, 2020
Bonded through National Notary Assn.

Notary Public

Printed Name: Jamie Reid

My Commission Expires: 01 | 21 | 2020

DoubleTime®

CONCEPTUAL SURFACE WATER MANAGEMENT REPORT AND CALCULATIONS

For

ARIA APARTMENTS

June 2020

SINCE 1979

Prepared by:

Michael B. Schorah and Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
(561) 968-0080
EB#2438

MICHAEL J. LACOURSIERE LICENSE No. 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Michael J. LaCoursiere, P.E.
Florida Registration No. 41071
for Michael B. Schorah and Associates, Inc.

Date

MICHAEL J. LaCOURSIERE LICENSE 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER 6/16/2020

INTRODUCTION

This drainage report is prepared and presented as a support document for an application being submitted to City of Fort Pierce Technical Review Committee. The application proposes development of 112 multi-family residential units located in five (5) two- and three-story buildings on approximately 6.8 acres. The site is located on Okeechobee Road at the intersection with South 30th Street. A clubhouse and pool amenity are also proposed. The site is currently undeveloped. An existing ditch runs along the west side of the property. This on-stie ditch appears to provide conveyance of off-site water south to an existing culvert located off-site near the southwest corner of property. Water from the ditch passes through the culvert, under South 31st Street, and into a City of Fort Pierce (CFP) drainage ditch. Flow from the CFP ditch continues westward under South 33rd Avenue and into the North St. Lucie River Water Control District (NSLRWCD) Canal 6 and ultimately to Five Mile Creek (NSLRWCD Canal 29). Therefore, the subject parcel has legal positive outfall.

PROPOSED SURFACE WATER MANAGEMENT SYSTEM

The proposed surface water management design considers the existing on-site ditch as the receiving body (receiving ditch) for stormwater discharge. Discharge from the receiving ditch into the CFP ditch is controlled by an existing 36" RCP pipe with a west invert elevation of 13.4. Therefore, we can assume that water elevations in the receiving ditch can rise to this elevation and artificially control the new system at the same elevation. Conservatively, the following surface water management calculations assume an on-site control elevation of 13.4. The calculations demonstrate the proposed development can meet regulatory criteria for finished floors (100-year 3-day stage), perimeter grades (25-year 3-day stage), and minimum pavement (10-year 1-day stage). We expect, however, that the on-site detention area water level will

fluctuate between elevation 13.4 and 10.5 (expected groundwater elevation). Elevation 10.5 is also the control elevation of NSLRWCD Canal 6. Accordingly, on-site storm stages will only rise as high as presented in the summary shown below during instances where the receiving ditch is full.

The site plan shows modifications to the receiving ditch. More specifically, as shown on the Conceptual Engineering Plan, a portion of the receiving ditch will be piped within the property limits. Sizing of the pipe will be determined based upon expected off-site flows. The site plan also considers re-grading the east bank of the receiving ditch.

We also note that the water surface of the proposed on-site detention area is less than 0.5 acres. This falls short of the minimum dimensional criteria established by South Florida Water Management District for water quality credit. Therefore, an exfiltration trench system is being established to provide necessary water quality treatment prior to off-site discharge.

WATER MANAGEMENT CALCULATIONS

Land Use Assumptions:

Total Site Area	=	6.50 ac.	(area within perimeter berm)	
Lake Area (Water)	=	0.36 ac.	el. 13.4	(100% imp.)
Lake Bank Area	=	0.23 ac.	el. 13.4→17.5	(0% imp.)
Building Area	=	1.39 ac.	el. 19.5 min.	(100% imp.)
Pavement Area	=	1.97 ac.	el. 17.25→18.5	(100% imp.)
Walk Area	=	0.29 ac.	el. 17.5→19.0	(100% imp.)
Remainder	=	2.26 ac.	el. 17.5→19.0	(0% imp.)

Soil Storage:

Wet Season Groundwater elevation is 13.4 NAVD.
Using Flatwoods Soil Storage:
Lake Bank (avg. 2.05' above GWT) = 0.23 ac. x 2.64 in. x 0.75= 0.46 ac.-in.

Remainder (avg. 4'+ above GWT) = 2.26 ac. x 9 in. x 0.75 = 15.26 ac.-in.

Total Soil Storage = 15.26 + 0.46 = 15.72 ac.-in. or 2.42 inches

Water Quality Retention Required:

Drainage Area= 6.5 ac.
1" over site:
V = 1" x 6.5 ac. x 1'/12" = 0.54 ac.-ft.`

2.5" x % impervious:
Site area for water quality = 6.5 – 1.39 – 0.36 = 4.75 ac.
Imp. area for water quality = 4.75 – 2.26– 0.23 = 2.26 ac.
% Impervious = 2.26 / 4.75 = 47.58%
2.5" x % impervious = 2.5" x 0.4758 = 1.19"
V = 1.19" x (6.5 – 0.36) ac. x 1'/12" = 0.61 ac.-ft.

Maximum controls, therefore, V = 0.61 ac.-ft.

Note: Detention area does not meet SFWMD dimensional criteria. Therefore, water quality will be provided by other means, see following exfiltration design.

Bleeder Criteria:

Type: Circular
Invert Elevation: 13.40'
Diameter: 3.75 in.
Weir Flow: 0.6
Orifice Flow: 0.6

Allowable Discharge:

Allowable Discharge = 0.216/24 x 6.5 x (43560 S.F. /3600 sec.) = 0.71 cfs*
Weir Top Elevation has been set above the 25-year 3-day flood stage.

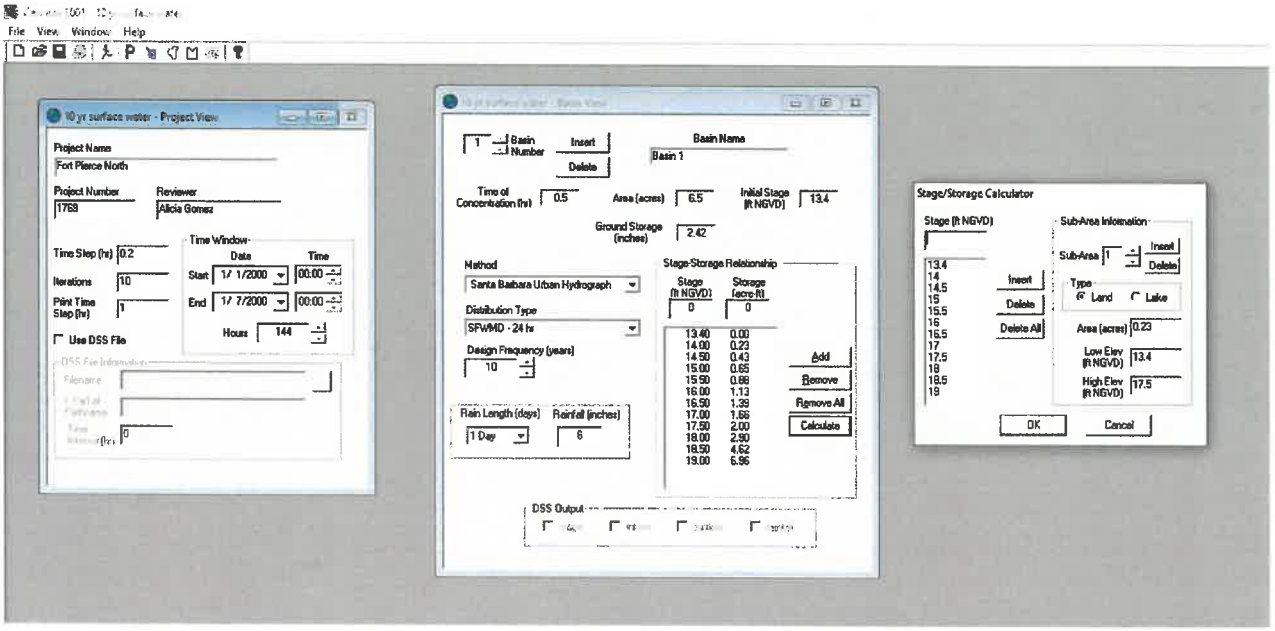
*Based on NSLRWCD criteria which is more restrictive than City of Fort Pierce pre vs. post analysis. NSLRWCD criteria = 2.6" in 24 hours.

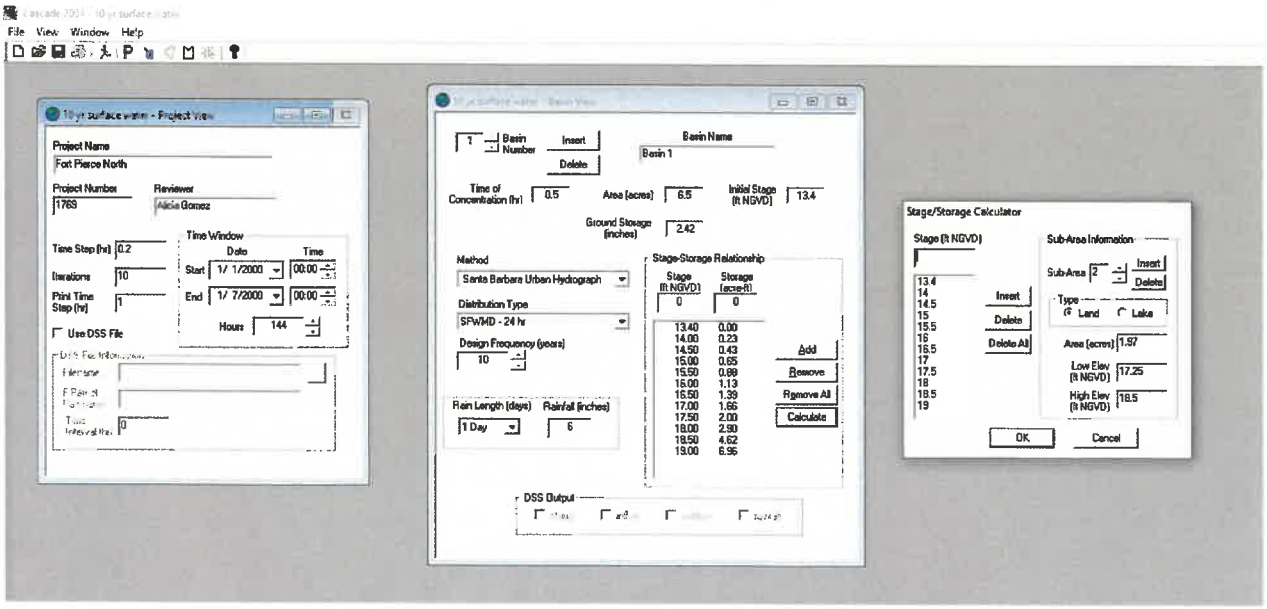
SUMMARY OF CONCEPTUAL DESIGN CRITERIA:

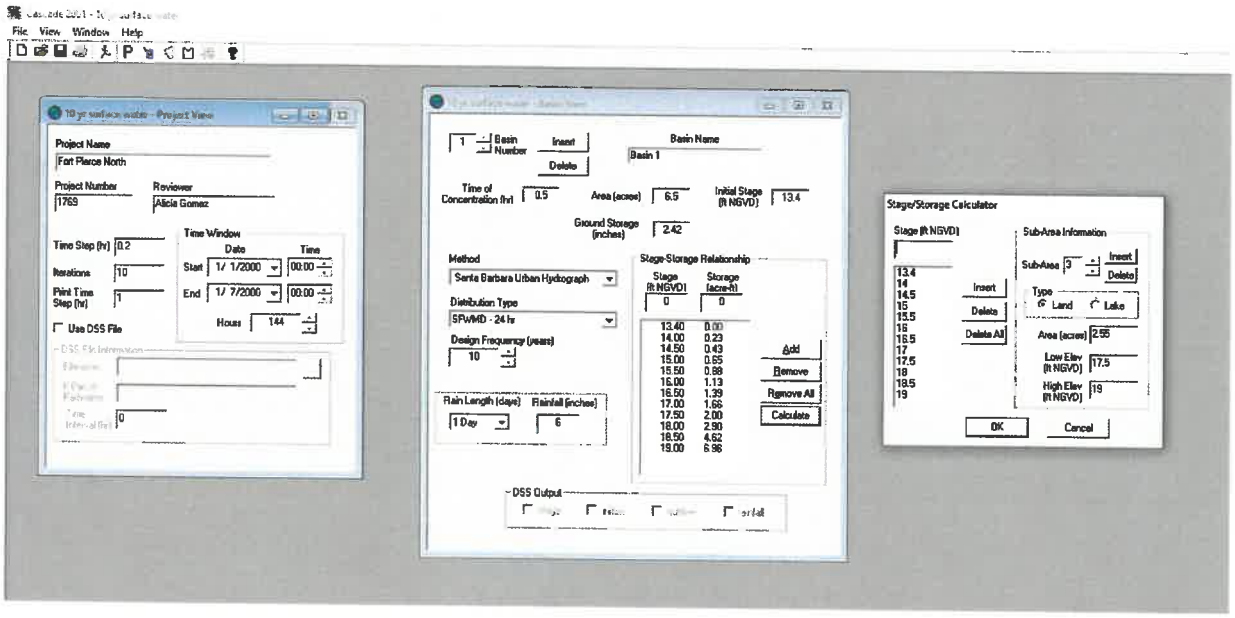
100 year –3 day Rainfall	12.23 inches
100 year - 3 day Flood Elevation	18.58' NAVD (zero discharge)
Minimum Finished Floor Elevation	19.50' NAVD
25 year – 3 day Rainfall	9.5 inches
25 year - 3 day Flood Elevation	17.76' NAVD
Minimum Perimeter Elevation	17.90' NAVD
Weir Elevation	17.90' NAVD
10 year - 1 day Rainfall	6 inches
10 year - 1 day Flood Elevation	16.16' NAVD
Minimum Pavement Elevation	17.25' NAVD

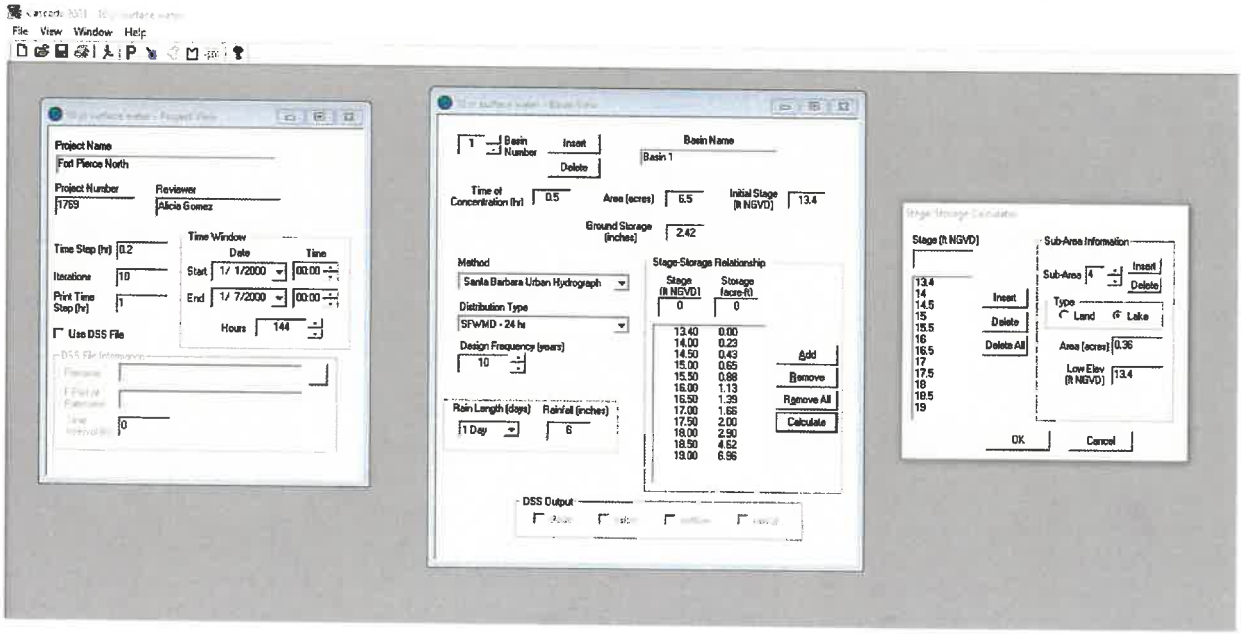
Stage/Storage Calculations on Cascade (Screenshots)

The following screenshots are presented to show the stage-storage table generated by the Cascade/SBWW program prior to hand entering storage associated with the proposed exfiltration trench.






File View Window Help
Project Name
Fort Pierce North
Project Number
1769
Reviewer
Alicia Gomez
Time Window
Time Step (hr) 0.2
Iterations 10
Print Time Step (hr) 1
Use DSS File
Start 1/ 1/2000
End 1/ 7/2000
Hours 144
Basin Number
Insert
Delete
Basin Name
Basin 1
Time of Concentration (hr) 0.5
Area (acres) 6.5
Initial Stage (ft NGVD) 13.4
Ground Storage (inches) 2.42
Method
Santa Barbara Urban Hydrograph
Distribution Type
SFWMD - 24 hr
Design Frequency (years) 10
Rain Length (days) 1 Day
Rainfall (inches) 6
Stage-Storage Relationship
Stage (ft NGVD) Storage (acre-ft)
13.40 0.00
14.00 0.23
14.50 0.43
15.00 0.65
15.50 0.88
16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage/Storage Calculator
Stage (ft NGVD)
Sub-Area Information
Sub-Area 3
Type Land Lake
Area (acres) 2.55
Low Elev (ft NGVD) 17.5
High Elev (ft NGVD) 19
Delete All
OK
Cancel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Santa Barbara Urban Hydrograph
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14.50 0.43
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15.50 0.88
16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage (ft NGVD)
Sub-Area Information
Sub-Area 4
Type Land Lake
Area (acres) 0.36
Low Elev (ft NGVD) 13.4
Delete All
OK
Cancel

EXFILTRATION TRENCH DATA:

18" PERFORATED H.D.P.E PIPE
TRENCH DEPTH 3.5', TRENCH WIDTH 6'
OVERFLOW ELEVATION = 13.40 NAVD
PIPE INVERT ELEVATION = 12.75 NAVD
12" MINIMUM COVER OF COARSE ROCK OVER PIPE
TOP OF TRENCH ELEVATION = 15.25 NAVD
BOTTOM OF TRENCH ELEVATION = 11.75 NAVD
WATER TABLE ELEVATION = 13.40 NAVD

k = HYDRAULIC CONDUCTIVITY *	6.32E-05 cfs/sq.ft-ft-head	
V = VOLUME TO BE TREATED	0.61 Ac-in	Max. Allowed Volume
W = TRENCH WIDTH	6.00 feet	
Ds = SATURATED TRENCH DEPTH	1.65 feet	
Du = NON-SATURATED TRENCH DEPTH	1.85 feet	
H2 = DEPTH OF WT FROM CONTROL ELEV.	3.85 feet	(17.25-13.40)

EXFILTRATION TRENCH LENGTH

L = V / K(H2xW+2xH2xDu-Du^2+2xH2xDs) +(1.39x10-4)WxDu

L = 135.86 feet

*HYDRAULIC CONDUCTIVITY FROM SOIL REPORT. SEE ATTACHED EXHIBIT.

STAGE-STORAGE TABLE:

Stage (Ft NAVD)	Storage (acre-ft)	+	Exfiltration Trench (acre-ft)	=	Total Storage (acre-ft)
13.40	0	+	0.31	=	0.31
14.00	0.23	+	0.41	=	0.64
14.50	0.43	+	0.49	=	0.92
15.00	0.65	+	0.57	=	1.22
15.50	0.88	+	0.61	=	1.49
16.00	1.13	+	0.61	=	1.74
16.50	1.39	+	0.61	=	2.00
17.00	1.66	+	0.61	=	2.27
17.50	2.00	+	0.61	=	2.61
18.00	2.90	+	0.61	=	3.51
18.50	4.62	+	0.61	=	5.23
19.00	6.96	+	0.61	=	7.57
	Generated from Cascade				

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 100 year
  3 Day Rainfall: 12.23 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: None
    Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.05	0.00	0.00	0.00	13.40	13.40
2.00	0.11	0.00	0.00	0.00	13.40	13.40
3.00	0.16	0.00	0.00	0.00	13.40	13.40
4.00	0.22	0.00	0.00	0.00	13.40	13.40
5.00	0.27	0.00	0.00	0.00	13.40	13.40
6.00	0.33	0.00	0.00	0.00	13.40	13.40
7.00	0.38	0.00	0.00	0.00	13.40	13.40
8.00	0.44	0.00	0.00	0.00	13.40	13.40
9.00	0.49	0.00	0.00	0.00	13.40	13.40
10.00	0.55	0.01	0.00	0.00	13.40	13.40
11.00	0.60	0.02	0.00	0.00	13.40	13.40
12.00	0.66	0.03	0.00	0.00	13.41	13.40
13.00	0.71	0.05	0.00	0.00	13.41	13.40
14.00	0.77	0.06	0.00	0.00	13.42	13.40
15.00	0.82	0.07	0.00	0.00	13.43	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
16.00	0.88	0.08	0.00	0.00	13.44	13.40
17.00	0.93	0.09	0.00	0.00	13.45	13.40
18.00	0.99	0.10	0.00	0.00	13.47	13.40
19.00	1.04	0.11	0.00	0.00	13.49	13.40
20.00	1.09	0.12	0.00	0.00	13.50	13.40
21.00	1.15	0.13	0.00	0.00	13.52	13.40
22.00	1.20	0.14	0.00	0.00	13.54	13.40
23.00	1.26	0.15	0.00	0.00	13.56	13.40
24.00	1.31	0.15	0.00	0.00	13.59	13.40
25.00	1.39	0.21	0.00	0.00	13.61	13.40
26.00	1.47	0.24	0.00	0.00	13.65	13.40
27.00	1.55	0.26	0.00	0.00	13.68	13.40
28.00	1.63	0.27	0.00	0.00	13.72	13.40
29.00	1.71	0.28	0.00	0.00	13.77	13.40
30.00	1.79	0.29	0.00	0.00	13.81	13.40
31.00	1.87	0.30	0.00	0.00	13.85	13.40
32.00	1.95	0.31	0.00	0.00	13.90	13.40
33.00	2.03	0.32	0.00	0.00	13.95	13.40
34.00	2.11	0.33	0.00	0.00	14.00	13.40
35.00	2.19	0.34	0.00	0.00	14.04	13.40
36.00	2.27	0.34	0.00	0.00	14.09	13.40
37.00	2.35	0.35	0.00	0.00	14.15	13.40
38.00	2.43	0.36	0.00	0.00	14.20	13.40
39.00	2.51	0.36	0.00	0.00	14.25	13.40
40.00	2.59	0.37	0.00	0.00	14.30	13.40
41.00	2.67	0.37	0.00	0.00	14.36	13.40
42.00	2.75	0.38	0.00	0.00	14.42	13.40
43.00	2.83	0.38	0.00	0.00	14.47	13.40
44.00	2.91	0.39	0.00	0.00	14.53	13.40
45.00	2.99	0.39	0.00	0.00	14.58	13.40
46.00	3.07	0.40	0.00	0.00	14.63	13.40
47.00	3.15	0.40	0.00	0.00	14.69	13.40
48.00	3.23	0.40	0.00	0.00	14.75	13.40
49.00	3.32	0.44	0.00	0.00	14.80	13.40
50.00	3.41	0.46	0.00	0.00	14.87	13.40
51.00	3.52	0.53	0.00	0.00	14.93	13.40
52.00	3.64	0.59	0.00	0.00	15.01	13.40
53.00	3.79	0.74	0.00	0.00	15.11	13.40
54.00	3.98	0.93	0.00	0.00	15.24	13.40
55.00	4.20	1.13	0.00	0.00	15.40	13.40
56.00	4.46	1.34	0.00	0.00	15.60	13.40
57.00	4.77	1.61	0.00	0.00	15.84	13.40
58.00	5.15	1.98	0.00	0.00	16.13	13.40
59.00	5.65	2.65	0.00	0.00	16.49	13.40
60.00	9.13	16.79	0.00	0.00	17.45	13.40
61.00	10.13	9.84	0.00	0.00	18.05	13.40
62.00	10.59	5.41	0.00	0.00	18.22	13.40
63.00	10.88	3.12	0.00	0.00	18.32	13.40
64.00	11.15	2.23	0.00	0.00	18.38	13.40
65.00	11.31	1.47	0.00	0.00	18.43	13.40
66.00	11.47	1.19	0.00	0.00	18.46	13.40
67.00	11.64	1.09	0.00	0.00	18.49	13.40
68.00	11.80	1.05	0.00	0.00	18.51	13.40
69.00	11.91	0.82	0.00	0.00	18.52	13.40
70.00	12.01	0.74	0.00	0.00	18.54	13.40
71.00	12.12	0.70	0.00	0.00	18.55	13.40
72.00	12.23	0.69	0.00	0.00	18.56	13.40
73.00	12.23	0.26	0.00	0.00	18.57	13.40
74.00	12.23	0.09	0.00	0.00	18.57	13.40
75.00	12.23	0.03	0.00	0.00	18.57	13.40
76.00	12.23	0.01	0.00	0.00	18.58	13.40
77.00	12.23	0.00	0.00	0.00	18.58	13.40
78.00	12.23	0.00	0.00	0.00	18.58	13.40
79.00	12.23	0.00	0.00	0.00	18.58	13.40
80.00	12.23	0.00	0.00	0.00	18.58	13.40
81.00	12.23	0.00	0.00	0.00	18.58	13.40
82.00	12.23	0.00	0.00	0.00	18.58	13.40
83.00	12.23	0.00	0.00	0.00	18.58	13.40
84.00	12.23	0.00	0.00	0.00	18.58	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
85.00	12.23	0.00	0.00	0.00	18.58	13.40
86.00	12.23	0.00	0.00	0.00	18.58	13.40
87.00	12.23	0.00	0.00	0.00	18.58	13.40
88.00	12.23	0.00	0.00	0.00	18.58	13.40
89.00	12.23	0.00	0.00	0.00	18.58	13.40
90.00	12.23	0.00	0.00	0.00	18.58	13.40
91.00	12.23	0.00	0.00	0.00	18.58	13.40
92.00	12.23	0.00	0.00	0.00	18.58	13.40
93.00	12.23	0.00	0.00	0.00	18.58	13.40
94.00	12.23	0.00	0.00	0.00	18.58	13.40
95.00	12.23	0.00	0.00	0.00	18.58	13.40
96.00	12.23	0.00	0.00	0.00	18.58	13.40
97.00	12.23	0.00	0.00	0.00	18.58	13.40
98.00	12.23	0.00	0.00	0.00	18.58	13.40
99.00	12.23	0.00	0.00	0.00	18.58	13.40
100.00	12.23	0.00	0.00	0.00	18.58	13.40
101.00	12.23	0.00	0.00	0.00	18.58	13.40
102.00	12.23	0.00	0.00	0.00	18.58	13.40
103.00	12.23	0.00	0.00	0.00	18.58	13.40
104.00	12.23	0.00	0.00	0.00	18.58	13.40
105.00	12.23	0.00	0.00	0.00	18.58	13.40
106.00	12.23	0.00	0.00	0.00	18.58	13.40
107.00	12.23	0.00	0.00	0.00	18.58	13.40
108.00	12.23	0.00	0.00	0.00	18.58	13.40
109.00	12.23	0.00	0.00	0.00	18.58	13.40
110.00	12.23	0.00	0.00	0.00	18.58	13.40
111.00	12.23	0.00	0.00	0.00	18.58	13.40
112.00	12.23	0.00	0.00	0.00	18.58	13.40
113.00	12.23	0.00	0.00	0.00	18.58	13.40
114.00	12.23	0.00	0.00	0.00	18.58	13.40
115.00	12.23	0.00	0.00	0.00	18.58	13.40
116.00	12.23	0.00	0.00	0.00	18.58	13.40
117.00	12.23	0.00	0.00	0.00	18.58	13.40
118.00	12.23	0.00	0.00	0.00	18.58	13.40
119.00	12.23	0.00	0.00	0.00	18.58	13.40
120.00	12.23	0.00	0.00	0.00	18.58	13.40
121.00	12.23	0.00	0.00	0.00	18.58	13.40
122.00	12.23	0.00	0.00	0.00	18.58	13.40
123.00	12.23	0.00	0.00	0.00	18.58	13.40
124.00	12.23	0.00	0.00	0.00	18.58	13.40
125.00	12.23	0.00	0.00	0.00	18.58	13.40
126.00	12.23	0.00	0.00	0.00	18.58	13.40
127.00	12.23	0.00	0.00	0.00	18.58	13.40
128.00	12.23	0.00	0.00	0.00	18.58	13.40
129.00	12.23	0.00	0.00	0.00	18.58	13.40
130.00	12.23	0.00	0.00	0.00	18.58	13.40
131.00	12.23	0.00	0.00	0.00	18.58	13.40
132.00	12.23	0.00	0.00	0.00	18.58	13.40
133.00	12.23	0.00	0.00	0.00	18.58	13.40
134.00	12.23	0.00	0.00	0.00	18.58	13.40
135.00	12.23	0.00	0.00	0.00	18.58	13.40
136.00	12.23	0.00	0.00	0.00	18.58	13.40
137.00	12.23	0.00	0.00	0.00	18.58	13.40
138.00	12.23	0.00	0.00	0.00	18.58	13.40
139.00	12.23	0.00	0.00	0.00	18.58	13.40
140.00	12.23	0.00	0.00	0.00	18.58	13.40
141.00	12.23	0.00	0.00	0.00	18.58	13.40
142.00	12.23	0.00	0.00	0.00	18.58	13.40
143.00	12.23	0.00	0.00	0.00	18.58	13.40
144.00	12.23	0.00	0.00	0.00	18.58	13.40

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.00	0.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	18.58	81.60	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	5.27	0.00	0.00	0.31	5.58	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 25 year
  3 Day Rainfall: 9.5 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.04	0.00	0.00	0.00	13.40	13.40
2.00	0.09	0.00	0.00	0.00	13.40	13.40
3.00	0.13	0.00	0.00	0.00	13.40	13.40
4.00	0.17	0.00	0.00	0.00	13.40	13.40
5.00	0.21	0.00	0.00	0.00	13.40	13.40
6.00	0.26	0.00	0.00	0.00	13.40	13.40
7.00	0.30	0.00	0.00	0.00	13.40	13.40
8.00	0.34	0.00	0.00	0.00	13.40	13.40
9.00	0.38	0.00	0.00	0.00	13.40	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	0.43	0.00	0.00	0.00	13.40	13.40
11.00	0.47	0.00	0.00	0.00	13.40	13.40
12.00	0.51	0.00	0.00	0.00	13.40	13.40
13.00	0.55	0.01	0.00	0.00	13.40	13.40
14.00	0.60	0.02	0.00	0.00	13.40	13.40
15.00	0.64	0.02	0.00	0.00	13.41	13.40
16.00	0.68	0.03	0.00	0.00	13.41	13.40
17.00	0.72	0.04	0.00	0.00	13.42	13.40
18.00	0.77	0.05	0.00	0.00	13.42	13.40
19.00	0.81	0.05	0.00	0.00	13.43	13.40
20.00	0.85	0.06	0.00	0.00	13.44	13.40
21.00	0.89	0.07	0.00	0.00	13.45	13.40
22.00	0.94	0.07	0.01	0.00	13.46	13.40
23.00	0.98	0.08	0.01	0.00	13.47	13.40
24.00	1.02	0.09	0.01	0.00	13.48	13.40
25.00	1.08	0.12	0.02	0.00	13.49	13.41
26.00	1.14	0.14	0.02	0.01	13.51	13.42
27.00	1.21	0.15	0.03	0.01	13.53	13.42
28.00	1.27	0.16	0.04	0.01	13.55	13.43
29.00	1.33	0.17	0.05	0.01	13.56	13.44
30.00	1.39	0.18	0.06	0.02	13.58	13.45
31.00	1.45	0.19	0.07	0.02	13.60	13.46
32.00	1.52	0.20	0.08	0.03	13.62	13.47
33.00	1.58	0.21	0.09	0.04	13.64	13.48
34.00	1.64	0.21	0.10	0.05	13.65	13.48
35.00	1.70	0.22	0.11	0.06	13.67	13.49
36.00	1.77	0.23	0.12	0.06	13.69	13.50
37.00	1.83	0.23	0.13	0.08	13.70	13.51
38.00	1.89	0.24	0.15	0.09	13.72	13.52
39.00	1.95	0.24	0.15	0.10	13.73	13.52
40.00	2.01	0.25	0.16	0.11	13.74	13.53
41.00	2.08	0.25	0.16	0.13	13.76	13.54
42.00	2.14	0.26	0.17	0.14	13.77	13.55
43.00	2.20	0.26	0.17	0.15	13.78	13.56
44.00	2.26	0.27	0.17	0.17	13.80	13.57
45.00	2.32	0.27	0.18	0.18	13.81	13.58
46.00	2.39	0.28	0.18	0.20	13.83	13.58
47.00	2.45	0.28	0.18	0.21	13.84	13.59
48.00	2.51	0.28	0.18	0.23	13.86	13.60
49.00	2.58	0.31	0.17	0.24	13.87	13.65
50.00	2.65	0.32	0.16	0.26	13.90	13.69
51.00	2.73	0.37	0.16	0.27	13.92	13.74
52.00	2.82	0.42	0.15	0.28	13.96	13.78
53.00	2.94	0.53	0.16	0.29	14.01	13.83
54.00	3.09	0.66	0.16	0.31	14.07	13.87
55.00	3.26	0.81	0.18	0.32	14.16	13.91
56.00	3.47	0.97	0.20	0.34	14.26	13.96
57.00	3.70	1.16	0.22	0.36	14.39	14.01
58.00	4.00	1.44	0.25	0.38	14.54	14.05
59.00	4.39	1.95	0.29	0.40	14.73	14.10
60.00	7.10	12.58	0.42	0.43	15.45	14.14
61.00	7.87	7.41	0.60	0.47	16.95	14.19
62.00	8.23	4.08	0.66	0.52	17.52	14.23
63.00	8.45	2.36	0.67	0.58	17.63	14.27
64.00	8.66	1.69	0.67	0.63	17.69	14.32
65.00	8.79	1.12	0.67	0.69	17.72	14.36
66.00	8.91	0.91	0.66	0.74	17.74	14.41
67.00	9.04	0.83	0.66	0.80	17.75	14.45
68.00	9.16	0.80	0.66	0.85	17.76	14.50
69.00	9.25	0.63	0.66	0.91	17.76	14.50
70.00	9.33	0.56	0.66	0.96	17.76	14.49
71.00	9.42	0.54	0.66	1.02	17.75	14.49
72.00	9.50	0.53	0.66	1.07	17.74	14.48
73.00	9.50	0.19	0.66	1.12	17.73	14.48
74.00	9.50	0.07	0.65	1.18	17.71	14.48
75.00	9.50	0.03	0.65	1.23	17.68	14.47
76.00	9.50	0.01	0.65	1.29	17.65	14.47
77.00	9.50	0.00	0.65	1.34	17.62	14.47
78.00	9.50	0.00	0.64	1.39	17.59	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	9.50	0.00	0.64	1.45	17.56	14.46
80.00	9.50	0.00	0.64	1.50	17.53	14.45
81.00	9.50	0.00	0.63	1.55	17.50	14.45
82.00	9.50	0.00	0.63	1.60	17.43	14.45
83.00	9.50	0.00	0.62	1.66	17.35	14.44
84.00	9.50	0.00	0.61	1.71	17.28	14.44
85.00	9.50	0.00	0.60	1.76	17.20	14.44
86.00	9.50	0.00	0.60	1.81	17.13	14.43
87.00	9.50	0.00	0.59	1.85	17.06	14.43
88.00	9.50	0.00	0.58	1.90	16.98	14.42
89.00	9.50	0.00	0.57	1.95	16.90	14.42
90.00	9.50	0.00	0.56	2.00	16.81	14.42
91.00	9.50	0.00	0.55	2.04	16.72	14.41
92.00	9.50	0.00	0.54	2.09	16.64	14.41
93.00	9.50	0.00	0.53	2.13	16.56	14.41
94.00	9.50	0.00	0.52	2.18	16.48	14.40
95.00	9.50	0.00	0.51	2.22	16.39	14.40
96.00	9.50	0.00	0.50	2.26	16.31	14.39
97.00	9.50	0.00	0.49	2.30	16.23	14.39
98.00	9.50	0.00	0.48	2.34	16.16	14.39
99.00	9.50	0.00	0.47	2.38	16.08	14.38
100.00	9.50	0.00	0.46	2.42	16.00	14.38
101.00	9.50	0.00	0.45	2.46	15.93	14.38
102.00	9.50	0.00	0.44	2.50	15.86	14.37
103.00	9.50	0.00	0.43	2.53	15.78	14.37
104.00	9.50	0.00	0.42	2.57	15.71	14.36
105.00	9.50	0.00	0.41	2.60	15.64	14.36
106.00	9.50	0.00	0.40	2.63	15.58	14.36
107.00	9.50	0.00	0.39	2.67	15.51	14.35
108.00	9.50	0.00	0.38	2.70	15.45	14.35
109.00	9.50	0.00	0.37	2.73	15.39	14.35
110.00	9.50	0.00	0.36	2.76	15.34	14.34
111.00	9.50	0.00	0.35	2.79	15.28	14.34
112.00	9.50	0.00	0.34	2.82	15.23	14.33
113.00	9.50	0.00	0.33	2.85	15.18	14.33
114.00	9.50	0.00	0.33	2.87	15.13	14.33
115.00	9.50	0.00	0.32	2.90	15.08	14.32
116.00	9.50	0.00	0.31	2.93	15.03	14.32
117.00	9.50	0.00	0.30	2.95	14.99	14.32
118.00	9.50	0.00	0.29	2.97	14.95	14.31
119.00	9.50	0.00	0.28	3.00	14.91	14.31
120.00	9.50	0.00	0.27	3.02	14.87	14.30
121.00	9.50	0.00	0.26	3.04	14.83	14.30
122.00	9.50	0.00	0.26	3.06	14.79	14.30
123.00	9.50	0.00	0.25	3.09	14.76	14.29
124.00	9.50	0.00	0.24	3.11	14.73	14.29
125.00	9.50	0.00	0.23	3.13	14.69	14.29
126.00	9.50	0.00	0.22	3.14	14.66	14.28
127.00	9.50	0.00	0.22	3.16	14.63	14.28
128.00	9.50	0.00	0.21	3.18	14.60	14.27
129.00	9.50	0.00	0.20	3.20	14.57	14.27
130.00	9.50	0.00	0.19	3.21	14.55	14.27
131.00	9.50	0.00	0.18	3.23	14.52	14.26
132.00	9.50	0.00	0.18	3.24	14.50	14.26
133.00	9.50	0.00	0.17	3.26	14.47	14.26
134.00	9.50	0.00	0.16	3.27	14.45	14.25
135.00	9.50	0.00	0.15	3.28	14.42	14.25
136.00	9.50	0.00	0.14	3.30	14.40	14.24
137.00	9.50	0.00	0.14	3.31	14.38	14.24
138.00	9.50	0.00	0.13	3.32	14.36	14.24
139.00	9.50	0.00	0.12	3.33	14.34	14.23
140.00	9.50	0.00	0.11	3.34	14.33	14.23
141.00	9.50	0.00	0.11	3.35	14.31	14.23
142.00	9.50	0.00	0.10	3.36	14.29	14.22
143.00	9.50	0.00	0.09	3.36	14.28	14.22
144.00	9.50	0.00	0.08	3.37	14.27	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.67	64.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	17.76	68.80	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	3.85	0.00	3.37	0.31	0.79	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 24 hr
  Design Frequency: 10 year
  1 Day Rainfall: 6 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.06	0.00	0.00	0.00	13.40	13.40
2.00	0.12	0.00	0.00	0.00	13.40	13.40
3.00	0.19	0.00	0.00	0.00	13.40	13.40
4.00	0.27	0.00	0.00	0.00	13.40	13.40
5.00	0.37	0.00	0.00	0.00	13.40	13.40
6.00	0.50	0.00	0.00	0.00	13.40	13.40
7.00	0.65	0.05	0.00	0.00	13.40	13.40
8.00	0.82	0.15	0.00	0.00	13.42	13.40
9.00	1.03	0.31	0.01	0.00	13.45	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	1.28	0.53	0.02	0.00	13.51	13.40
11.00	1.61	0.91	0.07	0.01	13.61	13.40
12.00	3.94	8.63	0.26	0.02	14.06	13.40
13.00	4.60	5.35	0.44	0.05	15.01	13.40
14.00	4.91	3.04	0.51	0.09	15.56	13.40
15.00	5.10	1.81	0.55	0.14	15.86	13.40
16.00	5.28	1.33	0.57	0.18	16.02	13.40
17.00	5.39	0.89	0.58	0.23	16.10	13.40
18.00	5.50	0.72	0.58	0.28	16.13	13.40
19.00	5.60	0.67	0.58	0.33	16.15	13.40
20.00	5.71	0.65	0.59	0.37	16.16	13.40
21.00	5.78	0.51	0.59	0.42	16.15	13.40
22.00	5.86	0.46	0.58	0.47	16.14	13.40
23.00	5.93	0.44	0.58	0.52	16.11	13.40
24.00	6.00	0.43	0.58	0.57	16.09	13.40
25.00	6.00	0.16	0.57	0.62	16.04	13.41
26.00	6.00	0.06	0.56	0.66	15.97	13.42
27.00	6.00	0.02	0.55	0.71	15.88	13.42
28.00	6.00	0.01	0.54	0.75	15.79	13.43
29.00	6.00	0.00	0.53	0.80	15.70	13.44
30.00	6.00	0.00	0.52	0.84	15.62	13.45
31.00	6.00	0.00	0.51	0.88	15.53	13.46
32.00	6.00	0.00	0.50	0.93	15.45	13.47
33.00	6.00	0.00	0.49	0.97	15.38	13.48
34.00	6.00	0.00	0.48	1.01	15.30	13.48
35.00	6.00	0.00	0.47	1.05	15.23	13.49
36.00	6.00	0.00	0.46	1.08	15.16	13.50
37.00	6.00	0.00	0.45	1.12	15.09	13.51
38.00	6.00	0.00	0.44	1.16	15.02	13.52
39.00	6.00	0.00	0.43	1.19	14.96	13.52
40.00	6.00	0.00	0.42	1.23	14.90	13.53
41.00	6.00	0.00	0.41	1.26	14.84	13.54
42.00	6.00	0.00	0.40	1.30	14.79	13.55
43.00	6.00	0.00	0.39	1.33	14.73	13.56
44.00	6.00	0.00	0.38	1.36	14.68	13.57
45.00	6.00	0.00	0.37	1.39	14.63	13.58
46.00	6.00	0.00	0.36	1.42	14.58	13.58
47.00	6.00	0.00	0.35	1.45	14.53	13.59
48.00	6.00	0.00	0.34	1.48	14.48	13.60
49.00	6.00	0.00	0.32	1.51	14.43	13.65
50.00	6.00	0.00	0.30	1.53	14.38	13.69
51.00	6.00	0.00	0.28	1.56	14.34	13.74
52.00	6.00	0.00	0.26	1.58	14.30	13.78
53.00	6.00	0.00	0.24	1.60	14.26	13.83
54.00	6.00	0.00	0.22	1.62	14.23	13.87
55.00	6.00	0.00	0.19	1.64	14.20	13.91
56.00	6.00	0.00	0.17	1.65	14.17	13.96
57.00	6.00	0.00	0.14	1.66	14.15	14.01
58.00	6.00	0.00	0.10	1.67	14.13	14.05
59.00	6.00	0.00	0.06	1.68	14.12	14.10
60.00	6.00	0.00	0.00	1.68	14.12	14.14
61.00	6.00	0.00	0.00	1.68	14.12	14.19
62.00	6.00	0.00	0.00	1.68	14.12	14.23
63.00	6.00	0.00	0.00	1.68	14.12	14.27
64.00	6.00	0.00	0.00	1.68	14.12	14.32
65.00	6.00	0.00	0.00	1.68	14.12	14.36
66.00	6.00	0.00	0.00	1.68	14.12	14.41
67.00	6.00	0.00	0.00	1.68	14.12	14.45
68.00	6.00	0.00	0.00	1.68	14.12	14.50
69.00	6.00	0.00	0.00	1.68	14.12	14.50
70.00	6.00	0.00	0.00	1.68	14.12	14.49
71.00	6.00	0.00	0.00	1.68	14.12	14.49
72.00	6.00	0.00	0.00	1.68	14.12	14.48
73.00	6.00	0.00	0.00	1.68	14.12	14.48
74.00	6.00	0.00	0.00	1.68	14.12	14.48
75.00	6.00	0.00	0.00	1.68	14.12	14.47
76.00	6.00	0.00	0.00	1.68	14.12	14.47
77.00	6.00	0.00	0.00	1.68	14.12	14.47
78.00	6.00	0.00	0.00	1.68	14.12	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	6.00	0.00	0.00	1.68	14.12	14.46
80.00	6.00	0.00	0.00	1.68	14.12	14.45
81.00	6.00	0.00	0.00	1.68	14.12	14.45
82.00	6.00	0.00	0.00	1.68	14.12	14.45
83.00	6.00	0.00	0.00	1.68	14.12	14.44
84.00	6.00	0.00	0.00	1.68	14.12	14.44
85.00	6.00	0.00	0.00	1.68	14.12	14.44
86.00	6.00	0.00	0.00	1.68	14.12	14.43
87.00	6.00	0.00	0.00	1.68	14.12	14.43
88.00	6.00	0.00	0.00	1.68	14.12	14.42
89.00	6.00	0.00	0.00	1.68	14.12	14.42
90.00	6.00	0.00	0.00	1.68	14.12	14.42
91.00	6.00	0.00	0.00	1.68	14.12	14.41
92.00	6.00	0.00	0.00	1.68	14.12	14.41
93.00	6.00	0.00	0.00	1.68	14.12	14.41
94.00	6.00	0.00	0.00	1.68	14.12	14.40
95.00	6.00	0.00	0.00	1.68	14.12	14.40
96.00	6.00	0.00	0.00	1.68	14.12	14.39
97.00	6.00	0.00	0.00	1.68	14.12	14.39
98.00	6.00	0.00	0.00	1.68	14.12	14.39
99.00	6.00	0.00	0.00	1.68	14.12	14.38
100.00	6.00	0.00	0.00	1.68	14.12	14.38
101.00	6.00	0.00	0.00	1.68	14.12	14.38
102.00	6.00	0.00	0.00	1.68	14.12	14.37
103.00	6.00	0.00	0.00	1.68	14.12	14.37
104.00	6.00	0.00	0.00	1.68	14.12	14.36
105.00	6.00	0.00	0.00	1.68	14.12	14.36
106.00	6.00	0.00	0.00	1.68	14.12	14.36
107.00	6.00	0.00	0.00	1.68	14.12	14.35
108.00	6.00	0.00	0.00	1.68	14.12	14.35
109.00	6.00	0.00	0.00	1.68	14.12	14.35
110.00	6.00	0.00	0.00	1.68	14.12	14.34
111.00	6.00	0.00	0.00	1.68	14.12	14.34
112.00	6.00	0.00	0.00	1.68	14.12	14.33
113.00	6.00	0.00	0.00	1.68	14.12	14.33
114.00	6.00	0.00	0.00	1.68	14.12	14.33
115.00	6.00	0.00	0.00	1.68	14.12	14.32
116.00	6.00	0.00	0.00	1.68	14.12	14.32
117.00	6.00	0.00	0.00	1.68	14.12	14.32
118.00	6.00	0.00	0.00	1.68	14.12	14.31
119.00	6.00	0.00	0.00	1.68	14.12	14.31
120.00	6.00	0.00	0.00	1.68	14.12	14.30
121.00	6.00	0.00	0.00	1.68	14.12	14.30
122.00	6.00	0.00	0.00	1.68	14.12	14.30
123.00	6.00	0.00	0.00	1.68	14.12	14.29
124.00	6.00	0.00	0.00	1.68	14.12	14.29
125.00	6.00	0.00	0.00	1.68	14.12	14.29
126.00	6.00	0.00	0.00	1.68	14.12	14.28
127.00	6.00	0.00	0.00	1.68	14.12	14.28
128.00	6.00	0.00	0.00	1.68	14.12	14.27
129.00	6.00	0.00	0.00	1.68	14.12	14.27
130.00	6.00	0.00	0.00	1.68	14.12	14.27
131.00	6.00	0.00	0.00	1.68	14.12	14.26
132.00	6.00	0.00	0.00	1.68	14.12	14.26
133.00	6.00	0.00	0.00	1.68	14.12	14.26
134.00	6.00	0.00	0.00	1.68	14.12	14.25
135.00	6.00	0.00	0.00	1.68	14.12	14.25
136.00	6.00	0.00	0.00	1.68	14.12	14.24
137.00	6.00	0.00	0.00	1.68	14.12	14.24
138.00	6.00	0.00	0.00	1.68	14.12	14.24
139.00	6.00	0.00	0.00	1.68	14.12	14.23
140.00	6.00	0.00	0.00	1.68	14.12	14.23
141.00	6.00	0.00	0.00	1.68	14.12	14.23
142.00	6.00	0.00	0.00	1.68	14.12	14.22
143.00	6.00	0.00	0.00	1.68	14.12	14.22
144.00	6.00	0.00	0.00	1.68	14.12	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGE

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.59	20.40	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	16.16	20.40	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	2.08	0.00	1.68	0.31	0.71	0.00

ENVIRONMENTAL ASSESSMENT

6.87-ACRE PARCEL ALONG OKEECHOBEE ROAD

FT. PIERCE, ST. LUCIE COUNTY, FLORIDA

August 2019
Updated June 2020

For

Michael Moore
Arrow Investments
4512 North Flagler Drive, Ste. 216
West Palm Beach, Florida 33412

Prepared by:
David Nickerson, Inc.
6687 SE. Silverbell Avenue
Stuart, Florida 34997
561-891-1572

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Environmental Assessment

Project Name: 6.87-Acre Parcel **Project No.** C19012

Work Date: August 7 and 8, 2019

Site Location: Just east of South 31st Street, north side of Okeechobee Road
Ft. Pierce, Florida

Objective of Work: David Nickerson, Inc., (DNI) conducted an environmental assessment to document occurrences of any significant environmental resources including vegetative communities, jurisdictional wetland areas, and listed plant or wildlife species.

Site Description: The 6.87acre parcel is a vacant commercially zoned lot established in a commercial district located in Section 19, Township 35 South, Range 40 East, in Ft. Pierce, Florida (Figure 1). The property comprises 6.87 acres and is located east of South 31st Street, north of Okeechobee Road, west of developed commercial enterprises and south of undeveloped land. A small wetland ditch exists near the northwestern corner of the property and is connected to the dry drainage ditch located along the western property boundary. The entire site is disturbed and is dominated by cleared land on which a variety of weedy herbaceous plants occur. Remnant forest communities occur along the northeastern, northern and northwestern portions of the site. Several small to large isolated Cabbage palm (*Sabal palmetto*)/Brazilian pepper (*Schinus terebinthifolius*) heads occur along the southern site boundary and interior to the property. The largest of these, near the southwestern portion, supports an active homeless camp. Two well-worn foot paths occur onsite. One servicing the homeless camp from offsite at the intersection of Nebraska Avenue and South 31st Street and the other occurs along the eastern portion from the northern property line south to the business located offsite at the extreme southeastern property corner. No structures or other site improvements occur on the parcel.

Methodology: Prior to the site visit, the U.S. Geological Survey 7.5-minute Quadrangle Topographic Map, Ft. Pierce Quadrangle (Photo-revised 2015) and the Soil Survey of St. Lucie County Florida (U.S. Department of Agriculture 2014) were reviewed to determine topographic features and site soil map



NORTH

David Nickerson, Inc. www.environmentalconsultflorida.com	**Location Map** **6.87-Acre Okeechobee Road Parcel** **Ft. Pierce, Florida**	**Figure 1** August 2019 Not To Scale

units. Copies of Google 2016 aerial photographs of the parcel were obtained and reviewed to determine potential location of environmental features.

Pedestrian surveys of the parcel were conducted on August 7 and 8, 2019 to map approximate locations and boundaries of significant environmental resources, vegetative communities and occurrence of listed plant or animal species. Approximate locations of vegetative community cover type boundaries and other features were mapped on an aerial photograph of the site. Vegetative communities were identified in accordance with Florida Land Use Cover and Forms Classification System Handbook (FLUCFCS) (Florida Department of Transportation 1999).

Listed species of plants and wildlife are found in Florida's Endangered Species, Threatened Species, and Species of Special Concern, Official Lists (Florida Fish and Wildlife Conservation Commission 2013) and Preservation of Native Flora of Florida, Chapter 5B-40 (Florida Department of Agriculture and Consumer Services, Division of Plant Industry, October 2017). Any occurrences of listed species were recorded.

Technical Staff: David Nickerson

Findings: The entire 6.87-acre parcel is disturbed including vegetation and soil surface. Site investigation confirmed mapped soils on the southern half of the property as Tantile and Pomona sands and the northern half is underlain by Nettles and Oldsmar sands. Natural Resource and Conservation Service mapped soils are shown in Attachment A. Relatively intact native upland habitat does not occur on the property. Due to previous clearing, exotic and nuisance plant pioneers have replaced the historic pine flatwood understory vegetation naturally occurring on Tantile and Pomona sands and Nettles and Oldsmar sands soils in this part of St. Lucie County. The narrow forested areas along western and southern portions comprise mostly exotic plant species and the wetland buffer also contains exotic canopy and subcanopy species. Following partial clearing and local/regional historic drainage, six cover types currently occur on site and include Disturbed Herbaceous, Brazilian Pepper, Disturbed Mixed Hardwoods, Brazilian Pepper Cabbage Palm, Disturbed Pine Oak Cabbage Palm and Ditches. The cover types are described below and their locations on the parcel are depicted in Figure 2.



NORTH

LEGEND

- Parcel Boundary
- Human Paths

3101 – Disturbed Herbaceous
4141 – Disturbed Pine Oak Cabbage Palm
4220 – Brazilian Pepper
4221 – Brazilian Pepper Cabbage Palm
4381 – Disturbed Mixed Hardwoods
5101– Ditches
Source – *Florida Land Use, Cover and Forms Classification System* 1999

David Nickerson, Inc. www.environmentalconsultflorida.com	**Vegetation Communities Map 6.87 Acre Okeechobee Road Parcel Ft. Pierce, Florida**	Figure 2 August 2019 Not to Scale

Disturbed Herbaceous – FLUCFCS 3101; Disturbed Herbaceous cover type is the dominant cover on site, occurring on approximately 2.25 acres of the 6.87-acre parcel. Because this cover type has been cleared of all but herbaceous plants, no canopy, subcanopy or shrub plants occur. Bahiagrass (*Paspalum notatum*), in the eastern and southern portions, and St. Augustine grass (*Stenotaphrum secundatum*), in the northern and western portions, dominate the vegetation in the ground cover layer. Additional exotic and native herbaceous plants found in the ground cover include creeping oxeye (*Sphagneticola trilobata*), beggarticks (*Bidens pilosa*), sandspur (*Cenchrus spinifex*), morning glory (*Ipomea imperati*), frostweed (*Verbesina virginica*), creeping beggar weed (*Desmodium incanum*), pepper vine (*Ampleopsis arborea*), creeping indigo (*Indigofera spicata*), large flower pusley (*Richardia grandiflora*), West Indian dropseed (*Sporobolus jacquemontii*), shrubby false button (*Spermacoce verticillata*) and Guinea grass (*Panicum maximum*). Occasionally, ragweed (*Ambrosia artimisifolia*), dayflower (*Commelina* sp.), wild grape (*Vitis rotundifolia*), broomsedge bluestem (*Andropogon virginicus*), catbriar (*Smilax* spp.), wild poinsettia (*Poinsettia cyathophora*), Florida threeawn (*Aristida rhizomophora*), and dog fennel (*Eupatorium capillifolium*) also occur. Select photographs of this cover type are provided in Attachment B.

Disturbed Pine Oak Cabbage Palm – FLUCFCS 4141: Disturbed Pine Oak Cabbage Palm cover type occurs along the northern and eastern property boundaries. It comprises 2.1 acres. Evidence of disturbance observed includes abundant solid waste, soil disturbance and invasion of exotic plants. Only a few slash pine (*Pinus elliottii*) remain in the community and they occur in the northern extreme of the cover type. Other canopy plants include cabbage palm, laurel oak (*Quercus laurifolia*), melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper with occasional horse bush (*Peltophorum dubium*), Mexican fan palm (*Washingtonia robusta*), and Queen Palm (*Syagrus romanzoffiana*). Subcanopy vegetation comprises Brazilian pepper, cabbage palm, melaleuca, Guinea grass and carrotwood (*Cupaniopsis anacardioides*). Ground cover includes Brazilian pepper, cabbage palm, carrotwood, Surinam cherry (*Ugenia uniflora*), blechnum fern (*Blechnum serrulatum*), with occasional marlberry (*Ardisia escallonioides*), beauty berry (*Callicarpa americana*), caesar weed (*Urena lobata*), frostweed, cat briar (*Smilax* sp.), and monk orchid (*Oceoclades maculata*).

Brazilian Pepper – FLUCFCS 4220; Brazilian Pepper cover type occurs south of the Disturbed Pine Oak Cabbage Palm and north of Disturbed Herbaceous and Disturbed Mixed Hardwoods in the northwestern forested portion of the property. It

comprises approximately 0.92 acres. Canopy trees are dominated by the exotic Brazilian pepper (*Schinus terebinthifolius*) with occasional representation by cabbage palm (*Sabal palmetto*), laurel oak and queen palm. Brazilian pepper also dominates the subcanopy with occasional laurel oak and cabbage palm. Ground cover plants are sparse and include seedlings of Brazilian pepper, Caesar weed (*Urena lobata*), pepper vine and frostweed (*Verbesina virginica*). Select photographs of this cover type are provided in Attachment B.

Brazilian Pepper Cabbage Palm – FLUCFCS 4221; Brazilian Pepper Cabbage Palm cover type occurs mostly as isolated tree "heads" within the Disturbed Herbaceous cover and includes an upland fringing community along the west central site boundary. It comprises approximately 0.92 acres. This community is highly disturbed as evidenced by dominance of exotic and invasive plants and scattered solid waste in each area. The largest of the heads contains an active homeless camp with several tents, makeshift tables and clothes lines (Figure 2) and Attachment B. Trees in the canopy layer of this cover type are dominated by the exotic Brazilian pepper and include Cabbage palm and an occasional laurel oak. Subcanopy plants include Brazilian pepper, strangler fig (*Ficus aurea*), occasional laurel oak and the invasive Surinam cherry (*Ugenia uniflora*). Ground cover plants are sparse but include Brazilian pepper, West Indian dropseed, Caesar weed, bahia grass and Florida threeawn. Select photographs of this cover type are provided in Attachment B.

Disturbed Mixed Hardwoods – FLUCFCS 4381; Disturbed Mixed Hardwoods cover type occurs in a small area along the west central portion of the property south of the Brazilian Pepper and north of the Disturbed Herbaceous cover type. It comprises 0.39 acres. Canopy vegetation comprises False Tamarind (*Lysiloma latisiliquum*), cabbage palm, rosewood (*Dalbergia sissoo*), Brazilian pepper and laurel oak. Subcanopy plants include Brazilian pepper, rosewood, cabbage palm, Surinam cherry and laurel oak. Ground cover comprises seedlings of canopy and subcanopy species as well as Guinea grass, pepper vine, frostweed, Bahia grass and Caesar weed. A photograph of this cover type is provided in Attachment B.

Ditches – FLUCFCS 5101; Ditches cover type occurs as a 10-20 foot wide mostly dry drainage ditch along and just within the western property boundary from Okeechobee Road north to the Disturbed Pine Oak Cabbage Palm community. It comprises approximately 0.29 acres. On the day of this assessment, standing water was observed to occur only in the northern half of the ditch. The southern two fifths of the ditch and its banks are open and without any shrubs or trees. The northern three fifths of the ditch length are covered by

overhanging vegetation and the portion west of the Disturbed Mixed Hardwoods community has Primrose willow (*Ludwigia peruviana*) plants growing in the ditch. No canopy trees actually grow in the ditch but overhanging Brazilian pepper predominates over the ditch in that community and an occasional laurel oak and Carolina willow (Salix caroliniana) overhang to the south. Herbaceous plants growing in the open portion of the ditch include Guinea grass, West Indian dropseed, pepper vine, Caesar weed, rattlebox, blechnum fern (*Blechnum serrulatum*), with occasional maidencane (*Panicum hemitomon*) and plants typically found in the Disturbed Herbaceous cover type to the east. Select photographs of this cover type are provided in Attachment B.

A Gopher Tortoise Burrow Survey was conducted on the property. No active or inactive burrows were found. No other animals listed as protected by federal, state, or local environmental regulatory agencies, nor any signs of such animals, were observed on the parcel. Unlisted animal species and/or sign observed on the parcel included southern leopard frog (*Lithobates utricularia*), common oak toad (*Bufo quercicus*), Cuban anole (*Anolis sagrei*), Southern black racer (*Coluber constrictor*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), mockingbird (*Mimus polyglottos*), loggerhead shrike (*Lanius ludovicianus*), zebra longwing butterfly (*Heliconius charitonia*) and a few other butterflies. Sign of animal occurrence observed include common rabbit (*Sylvilagus floridanus*) scat.

No plant species regulated by the Florida Department of Agriculture and Consumer Services were observed on the property.

Recommendations: Ft. Pierce Land Development Regulations address Tree Protection of native trees. A tree removal permit and a land clearing permit must be obtained prior to conducting any site work. No tree removal permit is required should only Brazilian pepper, Australian pine or Melaleuca trees be removed. Ft. Pierce Landscape Code defines material standards as to species and sizes. A tree survey may be necessary as the few native trees occurring onsite are required to be protected onsite or replaced with same species in future landscaping areas.

A small area of low land adjacent to and east of northern portions of the western drainage ditch is jurisdictional wetland and a wetland delineation was conducted to determine and mark the actual jurisdictional wetland limits on site in accordance with South Florida Water Management District (SFWMD) rules. The wetland delineation has been approved by SFWMD and the wetland has been determined to be an isolated wetland less than 0.5

acre in area. Should the wetland be maintained as part of the site plan, a 25 foot wide upland buffer must be maintained outside and surrounding the jurisdictional wetland line. Should the isolated wetland be impacted by the project, no mitigation would be required in accordance with SFWMD rules.

Because native upland habitat does not occur on site, Ft. Pierce Land Development Regulations (LDR) do not require any portion of onsite upland habitat to be protected in an upland preserve area on site.

Additionally, in accordance with Fort Pierce rules, all prohibited exotic plant species occurring on the property must be eradicated as a condition of building permit approval. Consequently, all prohibited species, including Brazilian pepper, camphor tree, Old World climbing fern and Guinea grass found on the site must be removed during the development process.

DNI can assist in addressing all of the above topics by conducting pre-permit application meetings with environmental regulatory agencies, preparing permit applications in cooperation with planners and engineers, and defining options that will assist in the development goals for the parcel.

Figures:

Figure 1 – Location Map
Figure 2 – Vegetative Communities Map

References:

Florida Association of Environmental Soil Scientists. 1995. Hydric Soils of Florida Handbook, second edition. University of Florida, United States Department of Agriculture, Florida Department of Environmental Protection, and St. Johns River Water Management District. 409p.

Florida Fish and Wildlife Conservation Commission. 2013. Florida's Endangered Species, Threatened Species and Species of Special Concern, Official Lists. Tallahassee, Florida. 12p.

U. S. Department of Agriculture, Soil Conservation Service. 2014. NRCS Web Soil Survey, Custom Soil Resource Report for St Lucie County

Attachment A

Area Soils Map



Map Scale: 1:8,520 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 400 800 1600 2400

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

Natural Resources Web Soil Survey **Conservation Service** National Cooperative Soil Survey Soil Map—St. Lucie County, Florida (6.87 Acre Parcel)

MAP LEGEND

Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Map Unit Polygons
Soil Map Unit Lines
Soil Map Unit Points
Special Line Features
Blowout
Borrow Pit
Clay Spot
Closed Depression
Gravel Pit
Gravelly Spot
Landfill
Lava Flow
Marsh or swamp
Mine or Quarry
Miscellaneous Water
Perennial Water
Rock Outcrop
Saline Spot
Sandy Spot
Severely Eroded Spot
Sinkhole
Slide or Slip
Sodic Spot
Spoil Area
Stony Spot
Very Stony Spot
Wet Spot
Other
Special Point Features
Water Features
Streams and Canals
Transportation
Rails
Interstate Highways
US Routes
Major Roads
Local Roads
Background
Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were m

Warning: Soil Map may not be valid at this

Enlargement of maps beyond the scale of misunderstanding of the detail of mapping line placement. The maps do not show th contrasting soils that could have been sho scale.

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

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

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

This product is ge NRCS certified data as of the version date(s) lis

Soil Survey Area: St. Lucie
Survey Area Data: Version 11, Sep 17, 2018

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

Date(s) aerial images were 2019—Mar 23, 2019

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

Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farmton sands	12.2	3.7%
4	Arents, 0 to 5 percent slopes	5.6	1.7%
21	Lawnwood and Myakka sands	1.9	0.6%
25	Nettles and Oldsmar sands	29.7	9.0%
31	Pepper and EauGallie sands	55.0	16.6%
32	Pineda sand, 0 to 2 percent slopes	1.5	0.4%
40	Samsula muck, frequently ponded, 0 to 1 percent slopes	2.7	0.8%
44	Tantile and Pomona sands	188.8	57.0%
50	Waveland and Immokalee fine sands	1.2	0.4%
52	Waveland-Urban land complex	29.7	9.0%
99	Water	2.6	0.8%
Totals for Area of Interest		**330.9**	**100.0%**

Attachment B
Selected Photographs



Brazilian Pepper Cabbage Palm Head & Disturbed Herbaceous cover at SE property corner view to W



Disturbed Herbaceous cover and Human Path at SE property corner view to N



Disturbed Pine Oak Cabbage Palm, Disturbed Herbaceous & Human Path at NE corner view to S



Disturbed Herbaceous and Pine Oak Cabbage Palm at NE corner view to W



Adjacent land, Ditch, Disturbed Herbaceous & Brazilian Pepper head at SW corner view to N



Ditch, Disturbed Herbaceous & Brazilian Pepper Cabbage Palm head at SW corner view to ENE



Disturbed Herbaceous & Brazilian Pepper Heads from S of Disturbed Mixed Hardwoods view to SE



BP head, Disturbed Herbaceous and Brazilian Pepper head along street near SW corner view to E



Eastern Disturbed Pine Oak Cabbage Palm interior view to SE



Northern Disturbed Pine Oak Cabbage Palm western interior view to SW



False Tamarind tree and Brazilian pepper in Disturbed Mixed Hardwoods View to NW



Disturbed Herbaceous, Wetland portion of Ditch and Mexican fan palms in NW portion view to NNW



Homeless camp in Largest Brazilian Pepper Cabbage Palm head in SW portion of site view to ESE

Kimley»Horn

June 22, 2020

Arrow Investment Group, LLC
c/o Michael Sanchez
4512 North Flagler Drive, Suite 206
West Palm Beach, Florida 33407

Re: Arrow Fort Pierce North Residential – Future Land Use Plan Amendment Analysis
Fort Pierce, Florida
Kimley-Horn #043264001

Dear Mr. Sanchez:

Kimley-Horn and Associates, Inc. has prepared a future land use plan amendment traffic analysis for the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The proposed plan of development includes changing the future land use designation from general commercial (GC) to medium density residential (RM). The parcel identification number for the site is 2417-504-0020-001-6.

The attached **Figure 1** shows the location of the site. The site plan and parcel number are attached for reference.

Table 1 summarizes the maximum development intensities for proposed future land use designation on the parcel based upon the proposed medium density residential (RM) designation. Per *City of Fort Pierce Comprehensive Plan* Policy 1.1.5, the City allows a density bonus of 5 dwelling units per acre for developments located within a ¼ mile of a rail station, multimodal transit center, or transit stop.

This analysis was conducted following short-term and long-term analysis procedures typically used to evaluate comprehensive plan amendments in Fort Pierce as outlined in the Comprehensive Plan. This report summarizes the findings of the comprehensive plan land use amendment traffic analysis.

TRIP GENERATION

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

The trip generation calculations are based on the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition* for the following:

- Scenario A: Maximum development potential under the existing FLU – General Commercial (GC)
- Scenario B: Maximum development potential under the future FLU – Medium Density Residential (RM)

The trip differential between the maximum development potential of the existing FLU site and maximum development potential of the proposed FLU was used for the short-range (year 2025) analysis and for the long-range (year 2040) analysis. As indicated in **Table 2**, the proposed development is a decrease in 26 net new external AM peak hour trips and a decrease in 32 net new external PM peak hour trips. Therefore, no further analysis is required for the proposed future lane use.

CONCLUSION

The foregoing comprehensive plan traffic analysis has been conducted to evaluate the proposed future land use to medium density residential at the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the trip generation calculation between the existing and proposed future land use, the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project. Therefore, the change in future land use for the subject parcel meets applicable criteria for an amendment to Fort Pierce's comprehensive plan.

Please contact me at (561) 840-0874 or adam.kerr@kimley-horn.com should you have any questions.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.

Adam B. Kerr, P.E.
Transportation Engineer

Florida Registration
Number 64773
Certificate of Authorization
Number 696

Attachments

k:\wpb_tpto\0432\043264001 - arrow fp north\flupa\2020-03-19 arrow flupa.docx

TABLE 1: MAXIMUM DEVELOPMENT INTENSITIES ARROW FORT PIERCE NORTH RESIDENTIAL			
Scenario	Maximum Intensity	Acreage	Max
Existing Future Land Use *General Commercial (GC)*	1.0 FAR	6.796	296,034 SF
Proposed Future Land Use *Medium Density Res (RM)*	17 DU per Acre	6.796	115 DU

TABLE 2
WEEKDAY TRIP GENERATION
ARROW FORT PIERCE NORTH RESIDENTIAL

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Future Land Use								
Commercial	296.034 KSF	12,576	99	26	73	126	77	49
Subtotal		*12,576*	*99*	*26*	*73*	*126*	*77*	*49*
Pass-By								
Commercial	34%	4,276	34	9	25	43	26	17
Net External Trips		*8,300*	*65*	*17*	*48*	*83*	*51*	*32*
Proposed Future Land Use								
Multifamily Residential (Mid-Rise)	115 DU	625	39	10	29	51	31	20
Net External Trips		*625*	*39*	*10*	*29*	*51*	*31*	*20*
Existing Future Land Use - Proposed Future Land Use		*(7,675)*	*(26)*	*(7)*	*(19)*	*(32)*	*(20)*	*(12)*

Trip generation was calculated using the following data:

Daily Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.68Ln(X) + 5.57 trips/1,000 SF
Multifamily Residential (Mid-Rise)	[ITE 221]	=	T = 5.45(X) - 1.75 trips/DU
AM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	T = 0.50(X) + 151.78 trips/1,000 SF (62% in, 38% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)
PM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.74 Ln(X) + 2.89 trips/1,000 SF (48% in, 52% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Kimley»Horn


S 25TH STREET
VIRGINIA AVENUE
OKEECHOBEE ROAD
FIGURE 1
SITE LOCATION
ARROW FP NORTH RESIDENTIAL
Kimley»Horn
LEGEND
Project Site
NORTH

SITE INFORMATION

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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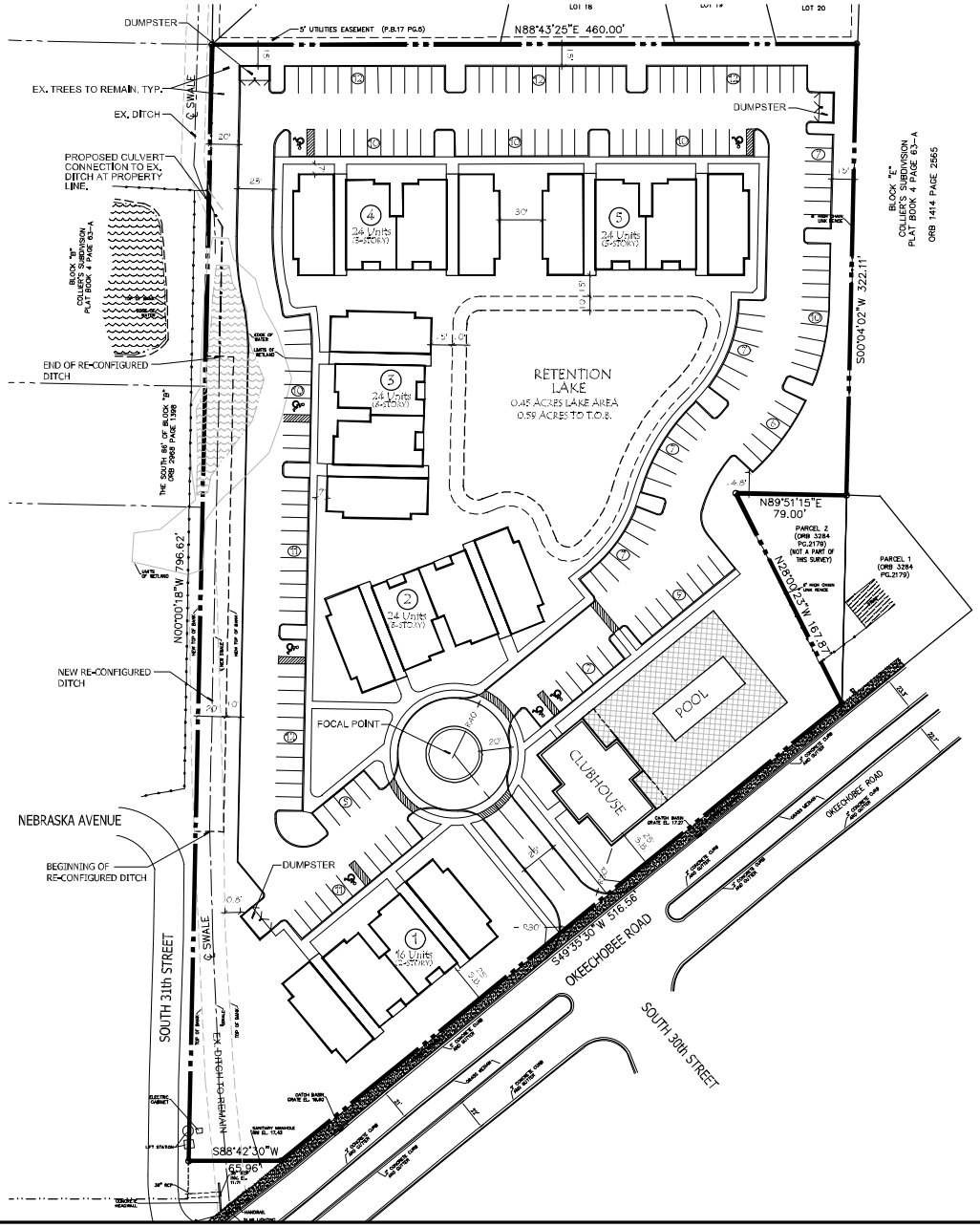


MANAGED LAND ENTITLEMENTS

3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8065

APPLICATION DATA:

NAME OF APPLICATION:	ARROW FP NORTH RESIDENTIAL
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	109,454.95 S.F. (36.9%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		175 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champions, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Dipner (561-622-6990)

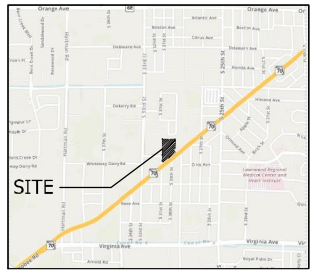
CIVIL ENGINEER/SURVEYOR
Michael G. Schorah & Associates, Inc.
1650 Forest Hill Blvd., Suite 208
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-368-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Florida 34990
Contact: Jason Litterick (561-719-3878)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-478-3888)

LOCATION MAP



Site Plan

0 25' 50' 100' 150' 200'

NORTH

Scale: 1" = 50'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3878
JasonLA1677@yahoo.com

Project Name

Arrow FP North Residential
Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA
LA0001677

Scale: 1" = 50'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	3/13/2020
Job No.	
Revisions:	

Sheet No.
SP-1

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS
FT PIERCE, FL

PREPARED FOR:
ARROW INVESTMENT GROUP, LLC.

Kimley»Horn

Project # 043264001
June 22, 2020
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS

FT PIERCE, FL

Prepared by:
Kimley-Horn and Associates, Inc.
West Palm Beach, Florida

Project # 043264001
June 22, 2020
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

Adam B. Kerr, P.E.
Florida Registration Number 64773

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Introduction

Kimley-Horn and Associates, Inc. has performed a traffic impact analysis to evaluate future traffic conditions associated with the proposed development located on the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The traffic impact analysis has been conducted using a buildout year of 2025. Figure 1 illustrates the location of the project site. The Parcel ID for the site is 2417-504-0020-001-6.

The proposed site plan and parcel information are included in *Appendix A*.

Kimley-Horn and Associates, Inc was retained to prepare a traffic impact analysis for the proposed development. The study quantifies the project's impact on the adjacent transportation network. This report summarizes the project trip generation, distribution, and intersection analyses. This analysis followed the methodology and procedures determined by St Lucie County's *Standardized Traffic Impact Studies Methodology and Procedures.*



NORTH

LEGEND

Project Site

FIGURE 1
SITE LOCATION
ARIA APARTMENTS

Kimley»Horn

Inventory and Planning Data

The data used in this analysis was obtained from St. Lucie County and from the Florida Department of Transportation. The data included:

- Roadway link volume data
- Committed Developments
- Historical growth rate information

Turning movement counts were collected at the following intersections during the AM peak period (7:00 am to 9:00 am) and PM peak period (4:00 pm to 6:00 pm). Counts at the intersection of N 25th Street & Okeechobee Road were performed on Tuesday, October 22, 2019 and the interaction of Okeechobee Road & Virginia Avenue were performed on Wednesday, April 3, 2019:

- N 25th Street & Okeechobee Road
- Okeechobee Road & Virginia Avenue

Roadway link volumes and the committed developments are included in *Appendix B.* The growth rate calculation is included in *Appendix C* and turning movement counts are included in *Appendix D.*

Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The existing site is vacant. The proposed plan of development includes 112 multifamily (mid-rise) dwelling units.

Trip Generation

The trip generation potential for the proposed redevelopment was calculated using the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. Land Use [221] rates and equations were used for multifamily residential (mid-rise) use. As indicated in Table 1, the proposed development is projected to generate 609 net new external daily trips, an increase in 38 net new AM peak hour trips (+10 in, +28 out), and an increase of 49 net new external PM peak hour trips (+30 in, +19 out). Based on the new external daily trips, the area of influence is one-mile.

Table 1: Trip Generation

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed								
Multifamily Residential (Mid-Rise)	112 DU	609	38	10	28	49	30	19
Driveway Volumes		609	38	10	28	49	30	19
Net External Trips		*609*	*38*	*10*	*28*	*49*	*30*	*19*

Trip generation was calculated using the following data:

Daily Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = T = 5.45(X) - 1.75 trips/DU

AM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)

PM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Traffic Distribution

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. The project assignment on the study roadway links based on the characteristics of the proposed land use and existing travel demands.

The distribution is the following:

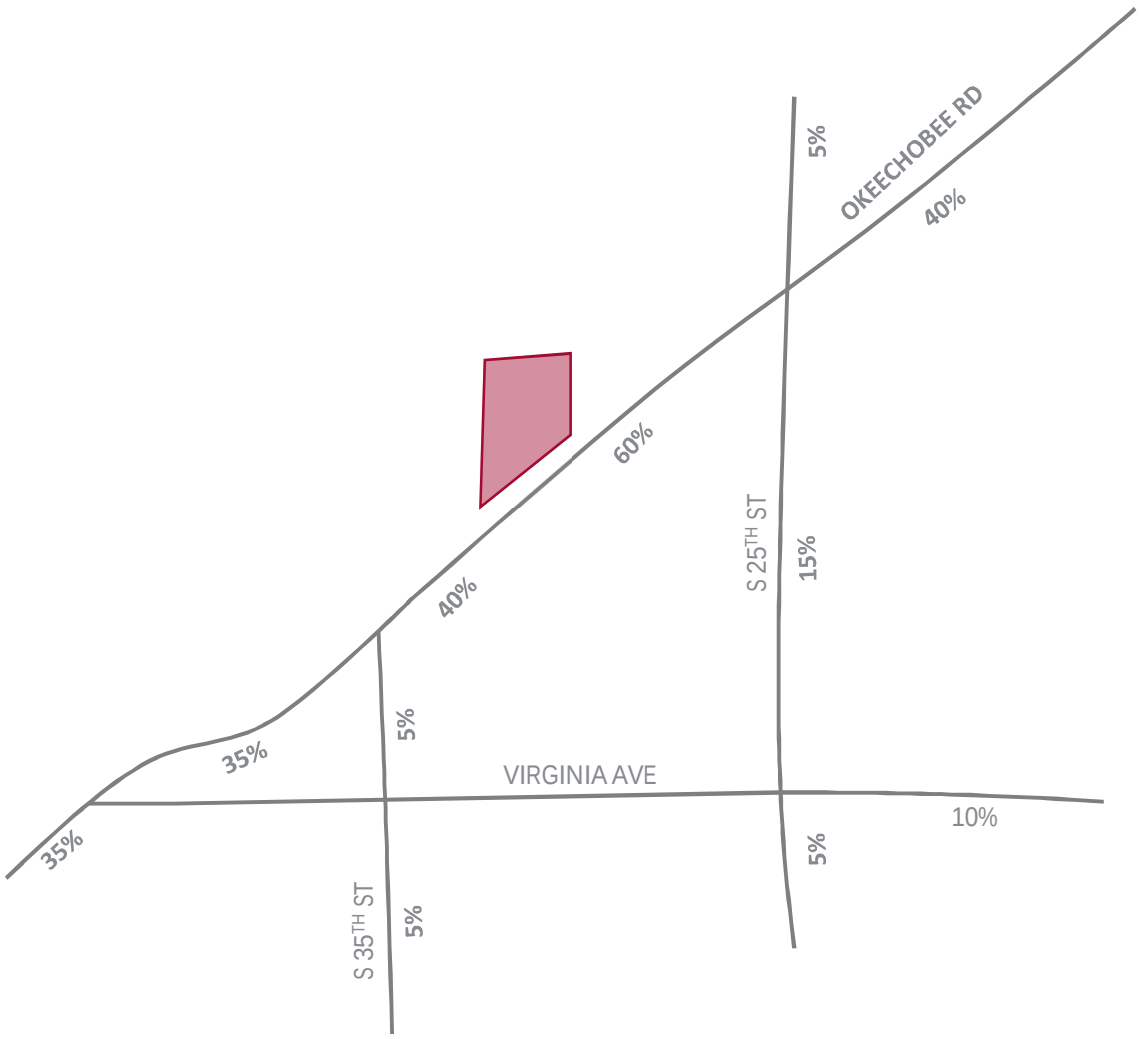
NORTH	5 percent
SOUTH	10 percent
WEST	35 percent
EAST	40 percent

Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns and the traffic distribution. The function classification of the surround roadways is the following:

- Okeechobee Road – Minor Arterial
- S 35th Street – Major Collector
- S 25th Street – Other Principal Arterial
- Virginia Avenue – Other Principal Arterial

Figure 2 illustrates the roadway link assignment. The AM and PM peak hour trips for the project were then assigned to the surrounding roadway network projected to be in place by 2025.



NORTH

LEGEND

Project Site

XX% Project Assignment

FIGURE 2
PROJECT ASSIGNMENT
ARIA APARTMENTS

Kimley»Horn

Background Traffic

Background traffic is calculated from historical annual growth rates and/or traffic from the unbuilt portions of committed developments. For this study, the areawide growth rate was calculated as 2.53% and was applied to links and intersections to account for background growth not related to the approved projects. Growth rate calculations are included in *Appendix C*. St Lucie County provided committed development projects in the area. The impacts of the approved projects were added to links and intersections that were subject to analysis.

A nominal 1% growth rate was applied to links and intersections (to which committed project traffic was already added) to account for background growth not related to the approved projects. The total background traffic for each significantly impacted link and intersection was then determined as the greater of the following:

- Existing traffic volumes plus growth due to a historic growth rate of 2.53%
- Existing traffic volumes plus growth due to committed projects and a nominal 1% background growth rate

Roadway Segment Analysis

The roadway segments within the adjacent influence area were analyzed and are summarized in Table 2. Significantly impacted roadways, where the project traffic consumes one percent or more of the existing peak hour peak direction service capacity, are considered significantly impacted and required further analysis. The following roadway segments were significantly impacted due to the project traffic:

AM Peak Hour and PM Peak Hour

- Okeechobee Road: S 25th Street to Georgia Avenue

The future volume on each significantly impacted roadway segment was analyzed in comparison to its peak hour directional service capacity volume. Committed development information for each significantly impacted link was provided by St Lucie County. It should be noted, committed developments which were identified to be insignificant (fewer than 20 peak hour trips) did not have a provided inbound/outbound distribution. Committed developments that generated greater traffic volumes were applied using the corresponding approved traffic study, attached in *Appendix B*. As seen in Table 2, the significantly impacted roadways are projected to operate acceptably during the AM and PM peak hours through buildout 2025.

Table 2: Peak Hour Peak Direction Roadway Segment Analysis

Roadway			Existing		Existing Base Peak Direction Volume/LOS		Peak Hour Peak Direction Project Traffic					Background Traffic			Capacity	
From	To		Lanes	Peak Hour Service Capacity			Last Count Year	% Assignment	Project Trips	% Impact	Significant Impact ?	Growth Rate (1)	2025 Background Growth	2025 Background Traffic	2025 Project	Over Capacity ?
AM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	687	C	2020	35%	10	0.61%	No	2.53%	91	778	788	-
S 35th Street	Project Driveway		4	1630	922	C	2020	35%	10	0.61%	No	2.53%	123	1,045	1,055	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	11	0.67%	No	2.53%	123	1,045	1,056	-
S 25th Street	Georgia Ave		4	1630	777	C	2020	60%	17	1.04%	Yes	2.53%	103	880	897	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	497	D	2020	5%	1	0.13%	No	2.53%	66	563	564	-
Virginia Ave	Okeechobee Rd		2	750	279	C	2016	5%	1	0.13%	No	2.53%	70	349	350	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1182	C	2020	5%	1	0.05%	No	2.53%	157	1,339	1,340	-
Virginia Ave	Okeechobee Rd		5	2000	1193	C	2017	15%	4	0.20%	No	2.53%	264	1,457	1,461	-
Okeechobee Rd	Georgia Ave		5	1630	1196	D	2017	5%	1	0.06%	No	2.53%	265	1,461	1,462	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 35th Street	S 25th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 25th Street	13th Street		6	3020	1093	C	2017	10%	3	0.10%	No	2.53%	242	1,335	1,338	-
PM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	727	C	2020	35%	11	0.67%	No	2.53%	97	824	835	-
S 35th Street	Project Driveway		4	1630	902	C	2020	35%	11	0.67%	No	2.53%	120	1,022	1,033	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	12	0.74%	No	2.53%	123	1,045	1,057	-
S 25th Street	Georgia Ave		4	1630	738	C	2020	60%	18	1.10%	Yes	2.53%	98	836	854	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	406	D	2020	5%	2	0.25%	No	2.53%	54	460	462	-
Virginia Ave	Okeechobee Rd		2	750	280	C	2016	5%	2	0.27%	No	2.53%	71	351	353	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1261	C	2020	5%	2	0.10%	No	2.53%	168	1,429	1,431	-
Virginia Ave	Okeechobee Rd		5	2000	1069	C	2017	15%	5	0.25%	No	2.53%	237	1,306	1,311	-
Okeechobee Rd	Georgia Ave		5	1630	1159	D	2017	5%	2	0.12%	No	2.53%	256	1,415	1,417	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 35th Street	S 25th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 25th Street	13th Street		6	3020	1164	C	2017	10%	3	0.10%	No	2.53%	258	1,422	1,425	-

Intersection Analysis

The operating conditions for the existing, background, and future total buildout was analyzed using Trafficware's *Synchro 10.0* Software during the AM peak hour and the PM peak hour at the following intersections because the intersection is part of the impacted roadway:

1. S 25th Street & Okeechobee Road (signalized)

In addition to the intersection of S 25th Street & Okeechobee Road, the intersection of Okeechobee Road & Virginia Avenue was analyzed for the existing, background, and future total buildout.

These analyses use the methodologies outlined in the *Highway Capacity Manual*, 6th *Edition* in order to determine the overall intersection level of service and delay. The signal timing sheet was provided by the City of Ft Pierce and is included in *Appendix E.* Table 3 summarizes the level of service and delay at the study intersections under existing, background, and future total conditions. As shown in Table 3, the intersection operates at an acceptable overall level of service during the existing, background, and future total (with project traffic) conditions.

Table 3: Intersection Analysis

Intersection	Type	Movement	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
Existing Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	42.7	D	35.4	D
		WB	31.1	C	34.2	C
		NB	32.9	C	45.3	D
		SB	52.1	D	58.8	E
		Overall	41.1	D	45.3	D
Okeechobee Road & Virginia Avenue	Signalized	EB	6.3	A	10.1	B
		WB	53.8	D	45.8	D
		SB	5.6	A	10.6	B
		Overall	16.3	B	20.7	C
Background Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.4	C	44.0	D
		WB	20.5	C	40.8	D
		NB	43.9	D	47.0	D
		SB	85.6	F	67.5	E
		Overall	49.3	D	51.5	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	14.8	B
		WB	51.5	D	42.3	D
		SB	7.1	A	15.8	B
		Overall	17.1	B	23.0	C
Future Total Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.2	C	40.7	D
		WB	20.2	C	34.8	C
		NB	43.9	D	47.8	D
		SB	85.9	F	62.6	E
		Overall	49.3	D	49.0	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	27.0	C
		WB	51.5	D	26.4	C
		SB	7.1	A	29.1	C
		Overall	17.0	B	27.2	C

The 95th percentile queue lengths are summarized in Table 4 for the study intersection of S 25th Street & Okeechobee Road. As shown in Table 4, the queues will remain within the provided storage through future total buildout year.

Table 4: 95th Percentile Queue Lengths

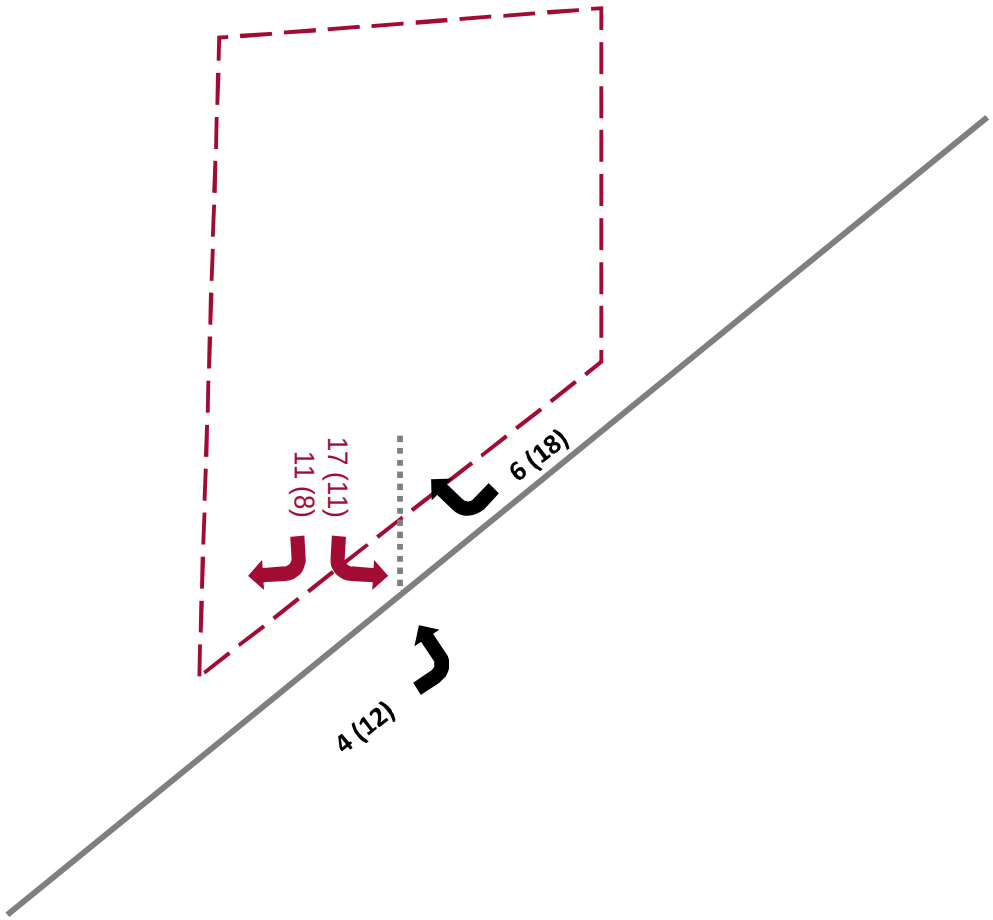
Movement	EBL	WBL	NBL	SBL
Provided Storage	225	200	225	200
Existing Scenario				
AM Peak Hour	108	84	80	33
PM Peak Hour	184	154	145	43
Background Scenario				
AM Peak Hour	125	97	102	37
PM Peak Hour	266	199	182	48
Future Total Scenario				
AM Peak Hour	126	97	109	37
PM Peak Hour	186	141	149	47

The volume development sheet is included in *Appendix F*. The Synchro output sheets are included in *Appendix G*.

Access Review

Access to the proposed site includes one proposed full-access driveway on Okeechobee Road *Figure 3* illustrates the AM peak hour and PM peak hour driveway volumes. According to the FDOT's Driveway Information Guide, exclusive right-turn lanes are recommended at unsignalized intersections for roadways with a posted speed limit of 45 mph or less when the volume of right turns per hour exceed 80 vehicles. As shown in *Figure 3,* the project driveway volume on Okeechobee Road is not expected to generate 80 vehicles; therefore, a right-turn lane is not required. The need for left-turn lanes is evaluated based on the Pennsylvania Department of Transportation's (PennDOT) Publication 46. This warrant considers the left-turn volume, the adjacent volume ("advancing" volume), the conflicting volume ("opposing" volume), and the posted speed limit to determine whether the percentage of left-turns justifies the presence of an exclusive left-turn lane.

Under existing conditions, the advancing volume is the eastbound through volume and the opposing volume is the westbound through volume. The highest eastbound left-turn volume is anticipated to be 12 vehicles per hour, which is projected to occur during the PM peak hour and constitutes approximately 1.8% percent of the total advancing volume. The opposing volume during this hour is 733 vehicles. The volumes were compared to the thresholds defined for a four-lane divided highway with a speed of 35 mph. The left-turn lane warrant worksheet is included in *Appendix H* for Okeechobee Road. The results of the analysis show that an eastbound left turn lane is warranted on Okeechobee Road at the proposed project driveway under current conditions. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.



NORTH

LEGEND

Project Site

XX (XX) AM (PM) Inbound Driveway Volumes

XX (XX) AM (PM) Outbound Driveway Volumes

FIGURE 3
DRIVEWAY VOLUMES
ARIA APARTMENTS

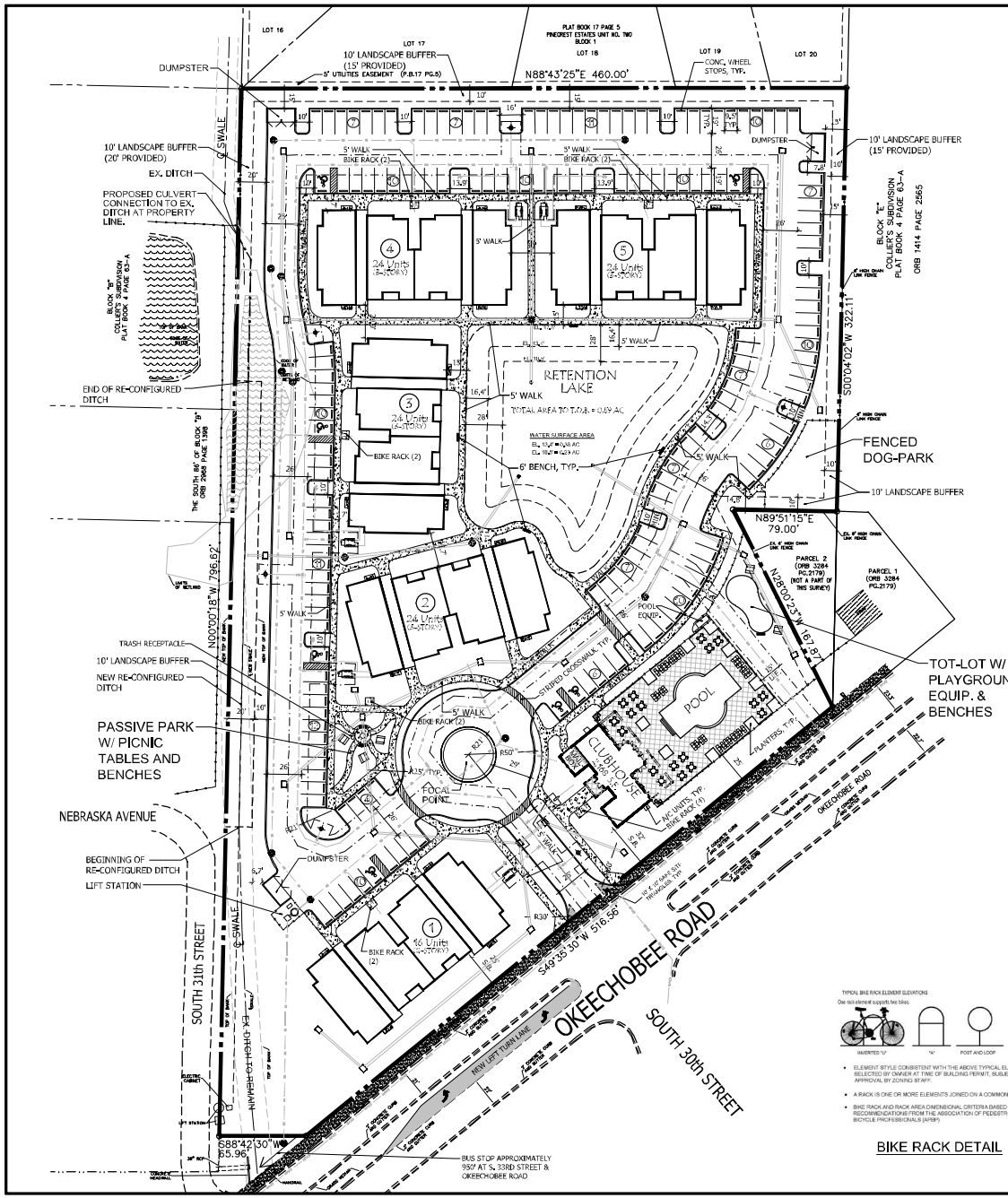
Kimley»Horn

Conclusion

The proposed plan of development includes 112 multifamily (mid-rise) dwelling units located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the analysis undertaken, the roadway links are sufficient to accommodate the project traffic during the AM and PM peak hours.

An intersection analysis was conducted at the signalized intersection of S 25th Street & Okeechobee Road, which is the intersection that was part of a significantly impacted roadway. In addition, an intersection analysis was conducted at Okeechobee Road & Virginia Avenue. Based on the intersection analysis, the existing geometry is expected to operate acceptably under existing, background, and future total conditions. The 95th percentile queue lengths at S 25th Street & Okeechobee Road are within the provided storage through future total conditions. An eastbound left turn lane is required per Pennsylvania Department of Transportation's (PennDOT) Publication 46 warrant criteria. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.

Appendix A: Project Site Data



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-3020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,912.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	109,454.95 S.F. (36.9%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES



TRASH RECEPTACLE DETAIL
N.T.S.

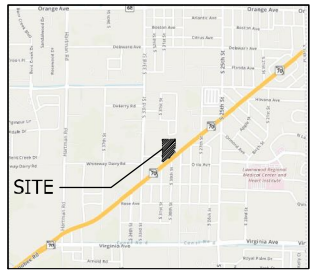
BIKE RACK DETAIL



LANDSCAPE FORMS • CHASE PARK BENCH CAST ALUM./W STEEL FRAMES & ARMREST ARMS

BENCH DETAIL
N.T.S.

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champions, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Dilsher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
Michael B. Schaarsh & Associates, Inc.
1650 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-368-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Florida 34990
Contact: Jason Litterick (561-719-3878)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-478-3888)

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3878
Jasonl.LA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA 0001677

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/15/2020
Job No.	
Revisions:	

Sheet No.

SP-1

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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Appendix B: St Lucie County Traffic Data

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE Q	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	18,275	2017	2,100	1,310	C	0.652	1,222	C	0.608
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	22,049	2017	2,000	1,405	C	0.736	1,401	C	0.734
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	19,612	2017	1,630	1,021	D	0.626	1,015	D	0.623
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE Q	940050	15,331	2017	1,630	807	D	0.495	784	D	0.481
25TH ST	AVENUE Q to JUANITA AVE	945152	13,301	2017	2,000	752	C	0.394	689	C	0.361
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	5,924	2017	2,100	340	C	0.169	380	C	0.189
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	4,991	2017	790	230	C	0.622	230	C	0.622
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
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St. Lucie Transportation Planning Organization

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466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIO RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIO RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

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Appendix C: Growth Rate Calculations

Road Segment	2015 Volume	2018 Volume	Growth Rate	Yearly Growth
Virginia Ave	22,000	22,000	0.00%	0
S 35th Street	7,900	10,900	11.33%	1235
S 25th Street	22,000	22,500	0.75%	169
Sum		55,400		1,404
Area Wide Growth Rate =			2.53%	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0032 - SR 70/VIRGINIA AVE - W OF SR 615/25 ST

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22000 C	E 11000	W 11000	9.00	51.30	6.10
2017	20900 C	E 9900	W 11000	9.00	50.90	4.10
2016	20800 C	E 9800	W 11000	9.00	50.90	4.10
2015	22000 C	E 11000	W 11000	9.00	51.00	4.10
2014	21000 C	E 11000	W 10000	9.00	50.80	4.20
2013	21000 C	E 10500	W 10500	9.00	50.80	3.70
2012	23000 F	E 12000	W 11000	9.00	56.80	4.30
2011	23000 C	E 12000	W 11000	9.00	57.20	5.10
2010	22500 C	E 11500	W 11000	10.32	55.40	5.10
2009	22500 C	E 11500	W 11000	10.27	57.35	5.10
2008	23500 C	E 11500	W 12000	10.45	58.06	4.10
2007	25000 C	E 13000	W 12000	10.31	58.74	4.10
2006	21500 C	E 11500	W 10000	10.73	65.89	4.10
2005	23500 C	E 12000	W 11500	10.80	60.70	6.00
2004	22500 C	E 11500	W 11000	10.30	57.70	6.00
2003	20500 C	E 10500	W 10000	10.20	59.60	2.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0083 - S 35 ST- NORTH OFARNOLD RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	10900 C	N 6500	S 4400	9.00	51.30	5.80
2017	8100 V	0	0	9.00	50.90	10.00
2016	8000 R	0	0	9.00	50.90	6.20
2015	7900 T	0	0	9.00	51.00	41.80
2014	7900 S			9.00	50.80	49.50
2013	7900 F	0	0	9.00	50.80	11.90
2012	7900 C	N 0	S 0	9.00	56.80	7.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0015 - SR 615/25 ST - N OF SR 70/VIRGINIA AVE (COUNTY 15)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22500 C	N 11500	S 11000	9.00	51.30	5.40
2017	20500 C	N 11000	S 9500	9.00	50.90	4.80
2016	22500 C	N 11000	S 11500	9.00	50.90	4.80
2015	22000 C	N 11000	S 11000	9.00	51.00	4.80
2014	21000 C	N 10000	S 11000	9.00	50.80	4.20
2013	20500 C	N 10500	S 10000	9.00	50.80	4.20
2012	22500 C	N 11500	S 11000	9.00	56.80	4.20
2011	22500 C	N 12000	S 10500	9.00	57.20	3.00
2010	23000 C	N 12000	S 11000	10.32	55.40	3.00
2009	22500 C	N 12000	S 10500	10.27	57.35	3.00
2008	21500 C	N 11000	S 10500	10.45	58.06	3.90
2007	25000 C	N 13000	S 12000	10.31	58.74	3.90
2006	23000 C	N 11500	S 11500	10.73	65.89	3.90
2005	24000 C	N 12000	S 12000	10.80	60.70	3.10
2004	23000 C	N 11500	S 11500	10.30	57.70	3.10
2003	22500 C	N 11500	S 11000	10.20	59.60	3.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix D: Turning Movement Counts

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- ALL VEHICLES

	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	5	135	26	0	26	49	2	0	19	162	24	0	37	40	9	534
07:15	0	6	159	33	0	25	50	4	0	24	162	35	0	37	52	14	601
07:30	0	5	177	35	0	26	46	1	0	30	158	37	0	28	74	27	644
07:45	0	11	186	28	2	26	62	4	0	27	171	50	0	38	95	30	730
Total	0	27	657	122	2	103	207	11	0	100	653	146	0	140	261	80	2509
08:00	0	13	197	33	1	27	75	6	0	24	115	45	0	37	124	25	722
08:15	0	11	155	22	0	27	64	3	0	25	131	41	1	39	98	23	640
08:30	0	18	152	18	2	28	48	3	0	23	106	41	1	36	49	12	537
08:45	0	11	164	19	1	27	71	3	0	21	97	26	0	25	63	23	551
Total	0	53	668	92	4	109	258	15	0	93	449	153	2	137	334	83	2450
16:00	0	7	162	24	0	42	76	7	0	29	137	49	1	30	73	16	653
16:15	0	10	155	29	3	41	84	3	0	31	151	32	1	37	82	26	685
16:30	0	10	160	23	0	44	88	2	0	32	141	48	1	44	51	18	662
16:45	0	7	171	25	0	28	112	3	0	36	154	31	1	42	78	31	719
Total	0	34	648	101	3	155	360	15	0	128	583	160	4	153	284	91	2719
17:00	0	13	182	43	0	46	112	3	0	33	166	39	0	39	75	34	785
17:15	0	12	194	37	1	28	96	5	0	24	162	41	0	42	93	25	760
17:30	0	9	194	35	0	36	80	2	0	33	157	33	0	43	111	22	755
17:45	0	6	157	26	0	33	66	5	0	22	148	25	1	28	98	16	631
Total	0	40	727	141	1	143	354	15	0	112	633	138	1	152	377	97	2931
Grand Total	0	154	2700	456	10	510	1179	56	0	433	2318	597	7	582	1256	351	10609
Apprch %	0	4.7	81.6	13.8	0.6	29.1	67.2	3.2	0	12.9	69.2	17.8	0.3	26.5	57.2	16	
Total %	0	1.5	25.5	4.3	0.1	4.8	11.1	0.5	0	4.1	21.8	5.6	0.1	5.5	11.8	3.3	

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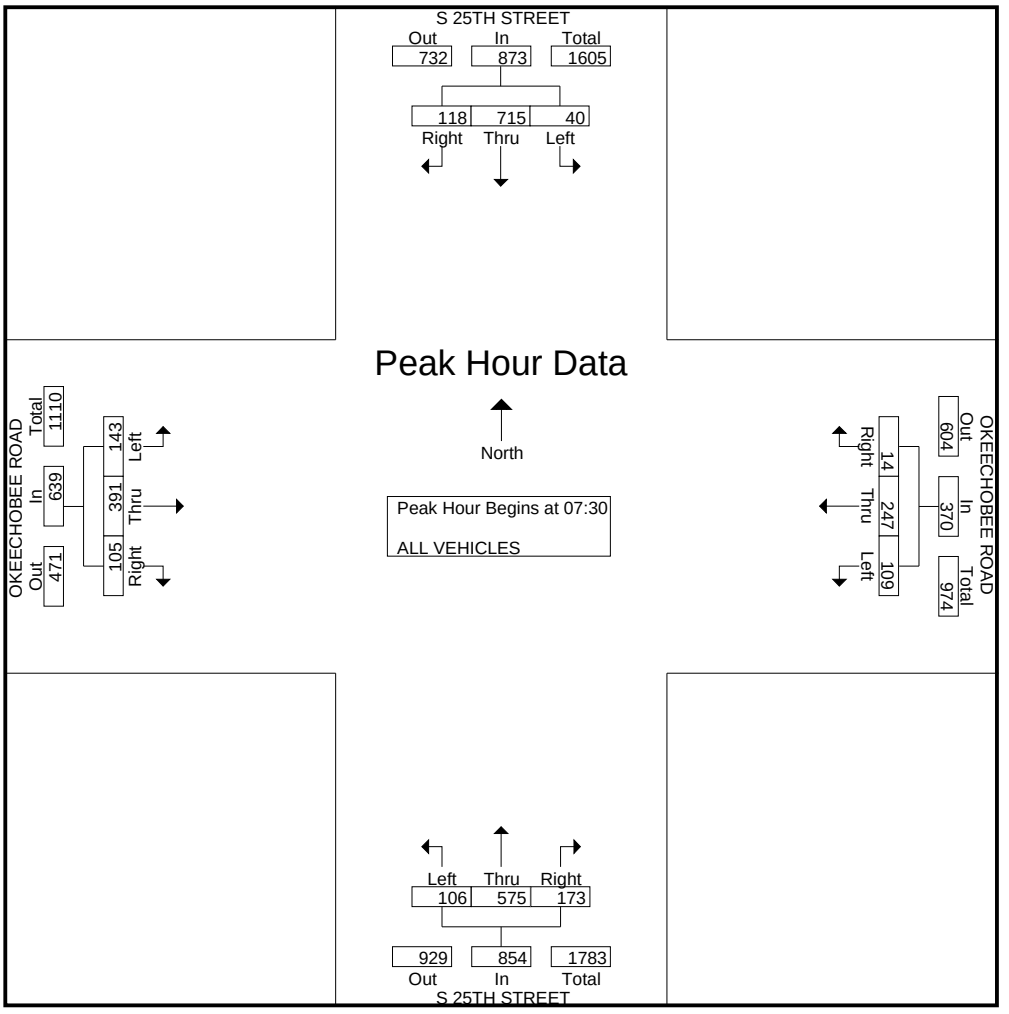
S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 2

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	5	177	**35**	217	0	26	46	1	73	0	**30**	158	37	225	0	28	74	27	129	644
07:45	0	11	186	28	225	**2**	26	62	4	94	0	27	**171**	**50**	**248**	0	38	95	**30**	163	**730**
08:00	0	**13**	**197**	33	**243**	1	**27**	**75**	**6**	**109**	0	24	115	45	184	0	37	**124**	25	**186**	722
08:15	0	11	155	22	188	0	27	64	3	94	0	25	131	41	197	**1**	**39**	98	23	161	640
Total Volume	0	40	715	118	873	3	106	247	14	370	0	106	575	173	854	1	142	391	105	639	2736
% App. Total	0	4.6	81.9	13.5		0.8	28.6	66.8	3.8		0	12.4	67.3	20.3		0.2	22.2	61.2	16.4		
PHF	.000	.769	.907	.843	.898	.375	.981	.823	.583	.849	.000	.883	.841	.865	.861	.250	.910	.788	.875	.859	.937



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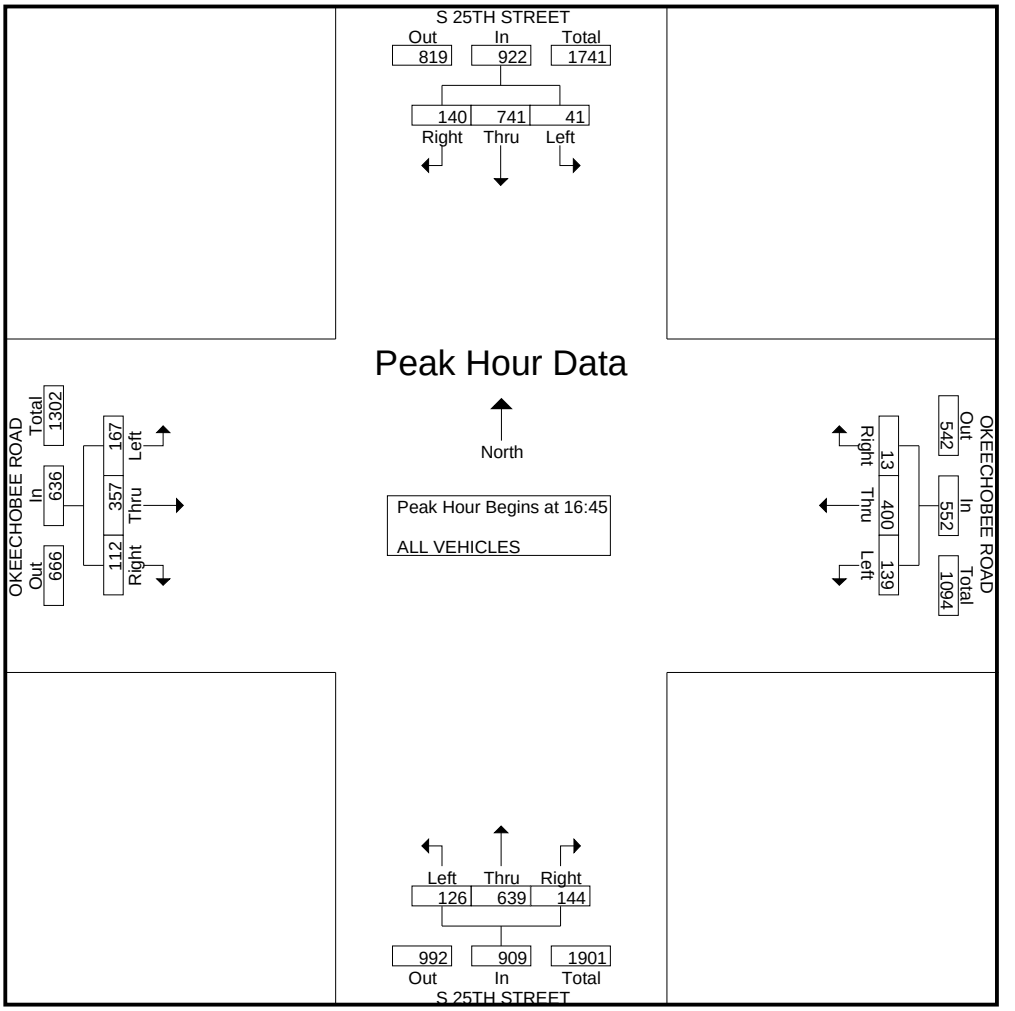
S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 3

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	7	171	25	203	0	28	**112**	3	143	0	**36**	154	31	221	**1**	42	78	31	152	719
17:00	0	**13**	182	**43**	238	0	**46**	112	3	**161**	0	33	**166**	39	**238**	0	39	75	**34**	148	**785**
17:15	0	12	**194**	37	**243**	**1**	28	96	**5**	130	0	24	162	**41**	227	0	42	93	25	160	760
17:30	0	9	194	35	238	0	36	80	2	118	0	33	157	33	223	0	**43**	**111**	22	**176**	755
Total Volume	0	41	741	140	922	1	138	400	13	552	0	126	639	144	909	1	166	357	112	636	3019
% App. Total	0	4.4	80.4	15.2		0.2	25	72.5	2.4		0	13.9	70.3	15.8		0.2	26.1	56.1	17.6		
PHF	.000	.788	.955	.814	.949	.250	.750	.893	.650	.857	.000	.875	.962	.878	.955	.250	.965	.804	.824	.903	.961



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S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- PEDESTRIANS & BIKES

	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
08:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
16:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
16:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	4
Total	0	0	2	0	0	0	0	0	0	0	1	0	1	0	2	0	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	4
17:45	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	0	1	0	0	0	1	0	1	0	2	0	1	0	1	0	7
Grand Total	1	0	4	0	0	0	1	0	2	0	3	0	2	0	3	0	16
Apprch %	20	0	80	0	0	0	100	0	40	0	60	0	40	0	60	0	
Total %	6.2	0	25	0	0	0	6.2	0	12.5	0	18.8	0	12.5	0	18.8	0	

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
07:00	0	0	47	0	0	0	102	0	0	0	0	0	0	0	70	114	333
07:15	0	0	71	0	0	0	114	0	0	0	0	0	0	0	82	165	432
07:30	0	0	104	0	0	0	136	0	0	0	0	0	0	0	126	252	618
07:45	0	0	99	0	0	0	124	0	0	0	0	0	0	0	134	317	674
Hr Total	0	0	321	0	0	0	476	0	0	0	0	0	0	0	412	848	2057
08:00	0	0	97	0	0	0	133	0	0	0	0	0	0	0	113	258	601
08:15	0	0	89	0	0	0	133	0	0	0	0	0	0	0	104	259	585
08:30	0	0	103	0	0	0	144	0	0	0	0	0	0	0	112	244	603
08:45	0	0	103	0	0	0	149	0	0	0	0	0	0	0	90	216	558
Hr Total	0	0	392	0	0	0	559	0	0	0	0	0	0	0	419	977	2347
---------- * BREAK * ----------																	
16:00	0	0	129	0	0	0	229	0	0	0	0	0	0	0	128	207	693
16:15	0	0	105	0	0	0	197	0	0	0	0	0	0	0	128	225	655
16:30	0	0	149	0	0	0	203	0	0	0	0	0	0	0	119	227	698
16:45	0	0	141	0	0	0	231	0	0	0	0	0	0	0	123	215	710
Hr Total	0	0	524	0	0	0	860	0	0	0	0	0	0	0	498	874	2756
17:00	0	0	161	0	0	0	272	0	0	0	0	0	0	0	109	233	775
17:15	0	0	167	0	0	0	200	0	0	0	0	0	0	0	160	223	750
17:30	0	0	130	0	0	0	210	0	0	0	0	0	0	0	145	256	741
17:45	0	0	137	0	0	0	202	0	0	0	0	0	0	0	144	245	728
Hr Total	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	2994
TOTAL	0	0	1832	0	0	0	2779	0	0	0	0	0	0	0	1887	3656	10154

TRAFFIC SURVEY SPECIALISTS, INC.

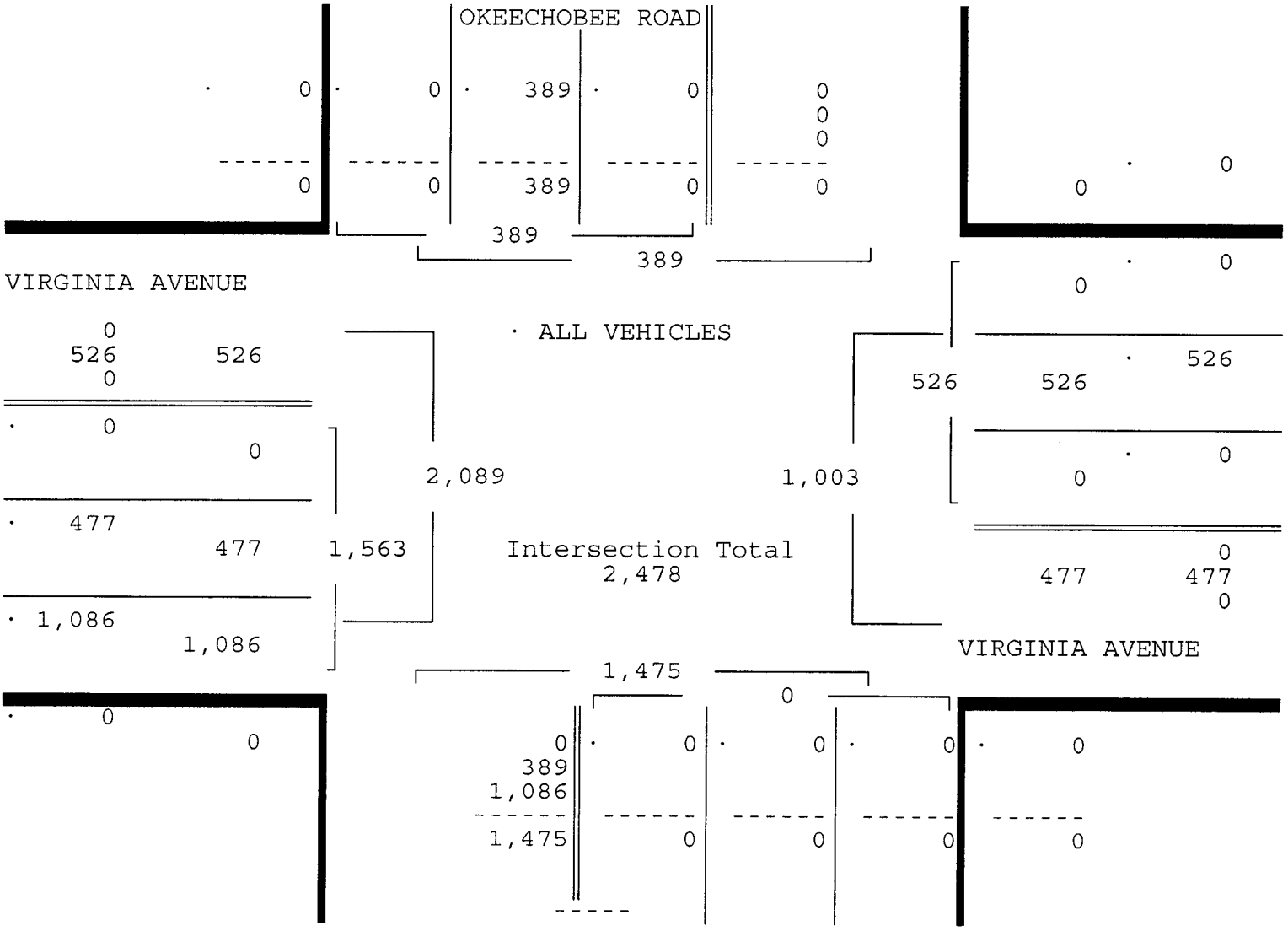
VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/03/19																	
Peak start	07:30				07:30				07:30				07:30				
Volume	0	0	389	0	0	0	526	0	0	0	0	0	0	0	477	1086	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	31%	69%	
Pk total	389				526				0				1563				
Highest	07:30				07:30				07:00				07:45				
Volume	0	0	104	0	0	0	136	0	0	0	0	0	0	0	134	317	
Hi total	104				136				0				451				
PHF	.94				.97				.0				.87				



TRAFFIC SURVEY SPECIALISTS, INC.

VIRGINIA AVENUE & OKEECHOBEE ROAD
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Site Code : 00190070
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File I.D. : VIRG_OKE
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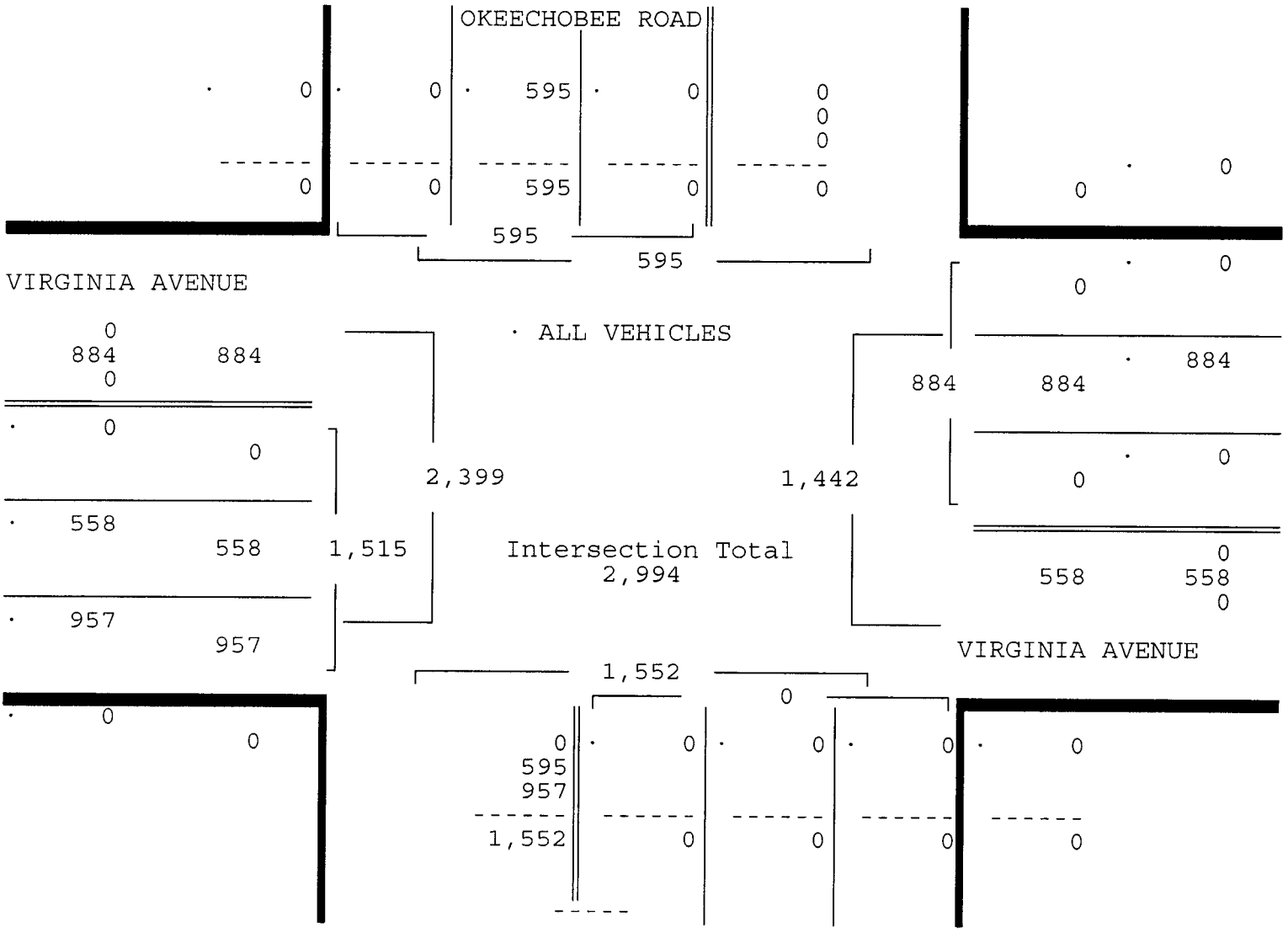
ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 04/03/19																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	37%	63%	
Pk total	595				884				0				1515				
Highest	17:15				17:00				07:00				17:30				
Volume	0	0	167	0	0	0	272	0	0	0	0	0	0	0	145	256	
Hi total	167				272				0				401				
PHF	.89				.81				.0				.94				



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Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

PEDESTRIANS & BIKES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/03/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
* BREAK *																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2

Appendix E: Signal Timing Sheet

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-615 at Okeechobee Road**

Part I — Actuated Timing Information

Non-coordinated Operation

Phase	1	2	3	4	5	6	7	8		
Approach	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB		
Initial	12	12	9	12	12	12	9	12		
Passage	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Max1	15.0	35.0	20.0	45.0	15.0	35.0	20.0	45.0		
Yellow	4.0	3.7	4.0	4.4	3.7	4.0	4.4	4.0		
Red	2.6	2.7	2.0	2.1	2.6	2.7	2.0	2.1		
Walk		7.0		7.0		7.0		7.0		
Ped Clear		28.0		25.0		30.0		29.0		
Recall		Min				Min				
LT Type	Prot+Perm		Prot+Perm		Prot+Perm		Prot+Perm			

Part II — Coordinated Timing Information

Pattern Tables

PHASE	1	2	3	4	5	6	7	8	Cycle	Offset
Split Pattern 1	17	25	15	33	17	25	15	33	90	59
Split Pattern 2	18	31	15	36	18	31	15	36	100	50
Split Pattern 3	17	44	15	64	17	44	23	56	140	49
Split Pattern 4	15	22	15	28	15	22	15	28	80	42
Split Pattern 5	15	33	15	37	15	33	15	37	100	30

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Split	Start	End	Split			
0:00	6:30	100	0:00	7:00	100			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	100			
21:00	0:00	100						

Part III — Notes and Comments

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)

Office DEPOT®

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-70 at Okeechobee Road**

Part I — *Actuated Timing Information*

Non-coordinated Operation

Phase	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*		
Approach		EB/SBR		WBT						
Initial		12		12						
Passage		5.0		5.0						
Max1		60.0		60.0						
Max2										
Yellow		4.8		4.8						
Red		2.5		2.5						
Walk		5.0								
Ped Clear		9.0								
Recall				Min						
LT Type										

Part II — *Coordinated Timing Information*

Pattern Tables

PHASE	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Cycle*	*Offset*
Split Pattern 1		60		70					130	34
Split Pattern 2		65		65					130	22
Split Pattern 3		65		65					130	103
Split Pattern 4		50		50					100	70
Split Pattern 5		55		65					120	80

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Pattern	Start	End	Pattern			
0:00	6:30	Free	0:00	7:00	Free			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	Free			
21:00	0:00	Free						

Part III — *Notes and Comments*

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)
2. Coord offset reference - Phase 4

Appendix F: Volume Development Worksheet

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
OKEECHOBEE ROAD & VIRIGNIA AVENUE

Peak Season =	1.01	1.01
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	389	0	0	477	1,086	0	526	0
Peak Season Volume	0	0	0	0	393	0	0	482	1,097	0	531	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	64	0	0	78	177	0	86	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					5						15	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								19	56			
Project Traffic	0	0	0	0	5	0	0	19	56	0	15	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					38						38	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								51	51			
Project Traffic	0	0	0	0	38	0	0	51	51	0	38	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					7							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	7	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					2						11	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								1	3			
Project Traffic	0	0	0	0	2	0	0	1	3	0	11	0
Total Committed Projects	0	0	0	0	52	0	0	71	110	0	64	0
1.0% Traffic Volume Growth	0	0	0	0	24	0	0	30	67	0	33	0
Committed + 1.0% Growth	0	0	0	0	76	0	0	101	177	0	97	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	76	0	0	101	177	0	97	0
Background Traffic Volumes	0	0	0	0	469	0	0	583	1,274	0	628	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								4				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					10							
Project Traffic	0	0	0	0	10	0	0	4	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	479	0	0	587	1,274	0	628	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	479	0	0	587	1,274	0	628	0

PM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	595	0	0	558	957	0	884	0
Peak Season Volume	0	0	0	0	601	0	0	564	967	0	893	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	97	0	0	91	156	0	144	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					20						60	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								11	32			
Project Traffic	0	0	0	0	20	0	0	11	32	0	60	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					23						23	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								63	63			
Project Traffic	0	0	0	0	23	0	0	63	63	0	23	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					25							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	25	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					3						17	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								4	20			
Project Traffic	0	0	0	0	3	0	0	4	20	0	17	0
Total Committed Projects	0	0	0	0	71	0	0	78	115	0	100	0
1.0% Traffic Volume Growth	0	0	0	0	37	0	0	35	59	0	55	0
Committed + 1.0% Growth	0	0	0	0	108	0	0	113	174	0	155	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	108	0	0	113	174	0	155	0
Background Traffic Volumes	0	0	0	0	709	0	0	677	1,141	0	1,048	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								11				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					7							
Project Traffic	0	0	0	0	7	0	0	11	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	716	0	0	688	1,141	0	1,048	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	716	0	0	688	1,141	0	1,048	0

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
S 25TH STREET & OKEECHOBEE ROAD

Peak Season =	1.11	1.11
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	106	575	173	40	715	118	143	391	105	109	247	14
Peak Season Volume	118	638	192	44	794	131	159	434	117	121	274	16
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	19	103	31	7	128	21	26	70	19	20	44	3
1.0% Traffic Volume Growth	7	39	12	3	49	8	10	27	7	7	17	1
Committed + 1.0% Growth	7	39	12	3	49	8	10	27	7	7	17	1
Max (Committed + 1.0% or Historic Growth)	19	103	31	7	128	21	26	70	19	20	44	3
Background Traffic Volumes	137	741	223	51	922	152	185	504	136	141	318	19
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	2				1						4	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	11	4			
Project Traffic	2	0	0	0	1	0	1	11	4	0	4	0
Total Traffic w/o RTOR	139	741	223	51	923	152	186	515	140	141	322	19
RTOR Reduction												
TOTAL TRAFFIC	139	741	223	51	923	152	186	515	140	141	322	19

PM Peak Hour

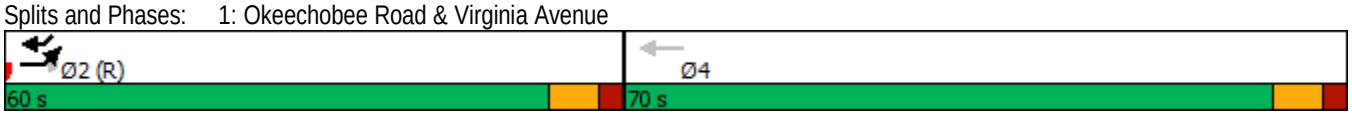
	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	126	639	144	41	741	140	167	357	112	139	400	13
Peak Season Volume	140	709	160	46	823	155	185	396	124	154	444	14
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	23	115	26	7	133	25	30	64	20	25	72	2
1.0% Traffic Volume Growth	9	44	10	3	51	10	11	24	8	9	27	1
Committed + 1.0% Growth	9	44	10	3	51	10	11	24	8	9	27	1
Max (Committed + 1.0% or Historic Growth)	23	115	26	7	133	25	30	64	20	25	72	2
Background Traffic Volumes	163	824	186	53	956	180	215	460	144	179	516	16
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	5				2						12	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	8	3			
Project Traffic	5	0	0	0	2	0	1	8	3	0	12	0
Total Traffic w/o RTOR	168	824	186	53	958	180	216	468	147	179	528	16
RTOR Reduction												
TOTAL TRAFFIC	168	824	186	53	958	180	216	468	147	179	528	16

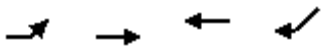
Appendix G: Synchro Analyses

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	482	1097	531	393
Future Volume (vph)	482	1097	531	393
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	94.5	94.5	20.9	94.5
Actuated g/C Ratio	0.73	0.73	0.16	0.73
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
LOS	A	A	E	A
Approach Delay		6.6	55.6	
Approach LOS		A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 36.2%	ICU Level of Service A
Analysis Period (min) 15	

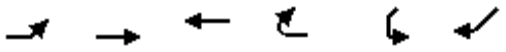
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	507	1155	559	414
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
Queue Length 50th (ft)	62	112	164	0
Queue Length 95th (ft)	96	155	198	15
Internal Link Dist (ft)		358	1207	
Turn Bay Length (ft)				
Base Capacity (vph)	2494	3694	2452	2141
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.31	0.23	0.19

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	482	1097	531	0	0	393
Future Volume (vph)	482	1097	531	0	0	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	507	1155	559	0	0	414
RTOR Reduction (vph)	0	0	0	0	0	113
Lane Group Flow (vph)	507	1155	559	0	0	301
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	94.5	94.5	20.9			94.5
Effective Green, g (s)	94.5	94.5	20.9			94.5
Actuated g/C Ratio	0.73	0.73	0.16			0.73
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2495	3696	817			2025
v/s Ratio Prot	0.15					0.11
v/s Ratio Perm		c0.23	c0.11			
v/c Ratio	0.20	0.31	0.68			0.15
Uniform Delay, d1	5.7	6.3	51.4			5.4
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.2	2.4			0.2
Delay (s)	5.9	6.5	53.8			5.6
Level of Service	A	A	D			A
Approach Delay (s)		6.3	53.8		5.6	
Approach LOS		A	D		A	

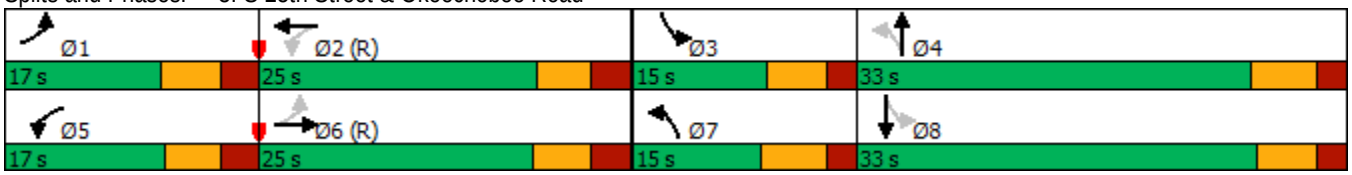
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

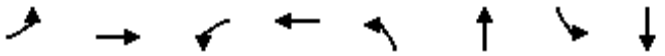
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	159	434	121	274	118	638	44	794
Future Volume (vph)	159	434	121	274	118	638	44	794
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	25.0	17.0	25.0	15.0	33.0	15.0	33.0
Total Split (%)	18.9%	27.8%	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	28.9	18.4	29.5	18.7	37.7	32.4	35.9	26.8
Actuated g/C Ratio	0.32	0.20	0.33	0.21	0.42	0.36	0.40	0.30
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
LOS	C	D	C	C	C	C	B	D
Approach Delay		37.3		29.5		28.0		44.9
Approach LOS		D		C		C		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.7	Intersection LOS: D
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

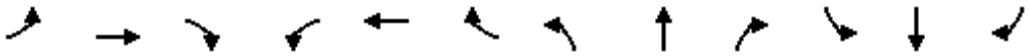




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	580	127	305	124	874	46	974
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Length 50th (ft)	62	156	46	77	39	233	14	276
Queue Length 95th (ft)	108	#234	84	117	80	#333	33	#402
Internal Link Dist (ft)		1962		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	409	725	305	732	243	1259	298	1050
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Future Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3427		1770	3510		1770	3417		1770	3464	
Flt Permitted	0.54	1.00		0.25	1.00		0.12	1.00		0.22	1.00	
Satd. Flow (perm)	1001	3427		457	3510		230	3417		405	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	457	123	127	288	17	124	672	202	46	836	138
RTOR Reduction (vph)	0	28	0	0	5	0	0	28	0	0	14	0
Lane Group Flow (vph)	167	552	0	127	300	0	124	846	0	46	960	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Effective Green, g (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Actuated g/C Ratio	0.29	0.18		0.30	0.18		0.46	0.36		0.38	0.32	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	609		293	635		251	1230		237	1123	
v/s Ratio Prot	0.05	c0.16		c0.05	0.09		c0.05	c0.25		0.01	c0.28	
v/s Ratio Perm	0.08			0.08			0.18			0.06		
v/c Ratio	0.44	0.91		0.43	0.47		0.49	0.69		0.19	0.85	
Uniform Delay, d1	24.8	36.3		24.2	33.0		17.5	24.5		18.1	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	19.6		1.0	2.5		1.5	1.6		0.4	6.5	
Delay (s)	25.6	55.8		25.2	35.5		19.1	26.1		18.5	34.9	
Level of Service	C	E		C	D		B	C		B	C	
Approach Delay (s)		49.1			32.5			25.2			34.2	
Approach LOS		D			C			C			C	

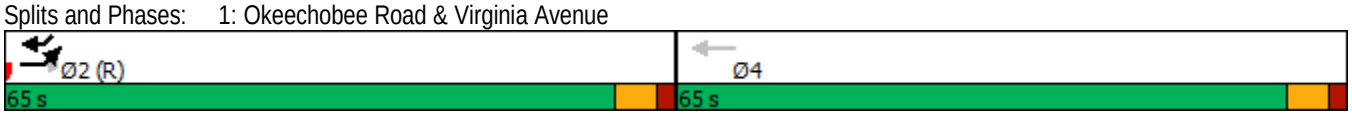
Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

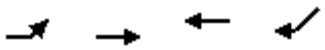
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	564	967	893	601
Future Volume (vph)	564	967	893	601
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	84.5	84.5	33.5	84.5
Actuated g/C Ratio	0.65	0.65	0.26	0.65
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
LOS	B	B	D	A
Approach Delay		10.7	46.9	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

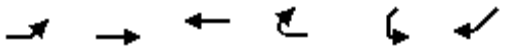
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	594	1018	940	633
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
Queue Length 50th (ft)	102	128	265	100
Queue Length 95th (ft)	153	178	293	159
Internal Link Dist (ft)		326	1056	
Turn Bay Length (ft)				
Base Capacity (vph)	2230	3304	2307	1853
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.31	0.41	0.34

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	564	967	893	0	0	601
Future Volume (vph)	564	967	893	0	0	601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	594	1018	940	0	0	633
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	594	1018	940	0	0	591
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	84.5	84.5	33.5			84.5
Effective Green, g (s)	84.5	84.5	33.5			84.5
Actuated g/C Ratio	0.65	0.65	0.26			0.65
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2231	3305	1310			1811
v/s Ratio Prot	0.17					c0.21
v/s Ratio Perm		0.20	c0.18			
v/c Ratio	0.27	0.31	0.72			0.33
Uniform Delay, d1	9.6	10.0	43.9			10.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.2	1.9			0.5
Delay (s)	9.9	10.2	45.8			10.6
Level of Service	A	B	D			B
Approach Delay (s)		10.1	45.8		10.6	
Approach LOS		B	D		B	

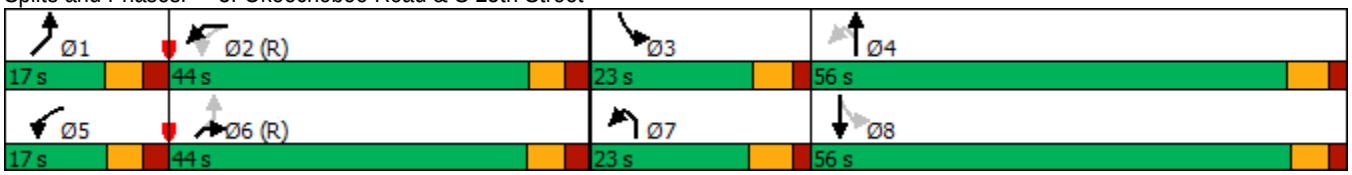
Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	154	444	140	709	46	823	185	396
Future Volume (vph)	154	444	140	709	46	823	185	396
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	53.6	42.1	65.6	54.6	56.6	47.5	54.2	42.4
Actuated g/C Ratio	0.38	0.30	0.47	0.39	0.40	0.34	0.39	0.30
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
LOS	C	C	D	D	C	D	D	D
Approach Delay		31.5		38.1		50.1	35.2	
Approach LOS		C		D		D	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	162	482	147	914	48	1029	195	548
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Length 50th (ft)	93	138	77	357	22	445	115	192
Queue Length 95th (ft)	154	193	145	414	43	533	184	267
Internal Link Dist (ft)		574		2034		690	3530	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	1122	260	1360	337	1249	354	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.43	0.57	0.67	0.14	0.82	0.55	0.59

Intersection Summary

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Future Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3442		1770	3455		1770	2787	
Flt Permitted	0.29	0.95		0.08	1.00		0.19	1.00		0.36	1.00	
Satd. Flow (perm)	539	3431		142	3442		363	3455		679	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	467	15	147	746	168	48	866	163	195	417	131
RTOR Reduction (vph)	0	91	0	0	13	0	0	11	0	0	91	0
Lane Group Flow (vph)	162	391	0	147	901	0	48	1018	0	195	457	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Effective Green, g (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Actuated g/C Ratio	0.37	0.29		0.48	0.39		0.40	0.35		0.38	0.29	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	301	1004		222	1342		217	1199		348	822	
v/s Ratio Prot	0.04	0.11		c0.06	c0.26		0.01	c0.29		c0.05	0.16	
v/s Ratio Perm	0.16			0.26			0.08			c0.17		
v/c Ratio	0.54	0.39		0.66	0.67		0.22	0.85		0.56	0.56	
Uniform Delay, d1	31.0	39.5		29.1	35.3		27.3	42.3		30.8	41.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	1.1		7.2	1.3		0.5	5.8		2.1	2.7	
Delay (s)	32.8	40.6		36.4	36.6		27.8	48.1		32.9	44.3	
Level of Service	C	D		D	D		C	D		C	D	
Approach Delay (s)		38.7			36.6			47.2		41.3		
Approach LOS		D			D			D		D		

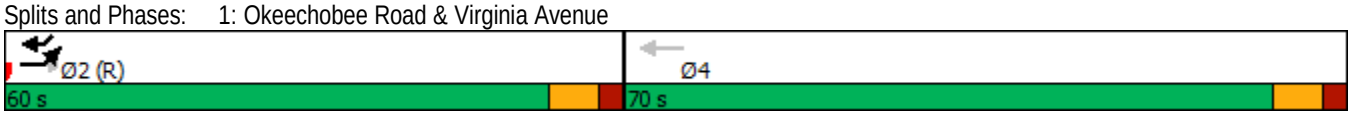
Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

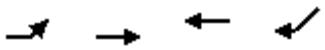
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	583	1274	628	469
Future Volume (vph)	583	1274	628	469
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 40.9%	ICU Level of Service A
Analysis Period (min) 15	

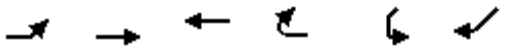
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	614	1341	661	494
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
Queue Length 50th (ft)	88	153	191	24
Queue Length 95th (ft)	132	207	225	51
Internal Link Dist (ft)		282	721	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.24

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	583	1274	628	0	0	469
Future Volume (vph)	583	1274	628	0	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	614	1341	661	0	0	494
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	614	1341	661	0	0	399
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.14
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.20
Uniform Delay, d1	7.1	7.9	49.3			6.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

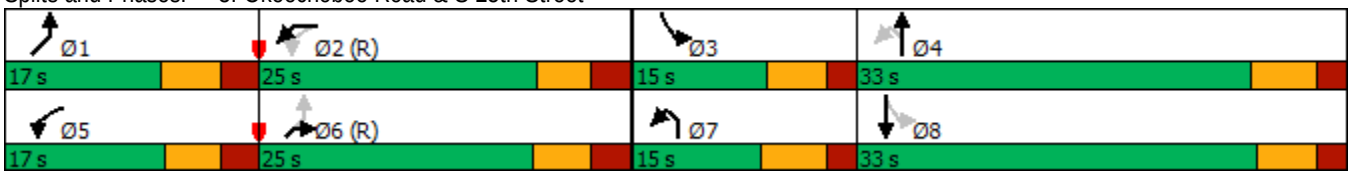
Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	318	137	741	51	922	185	504
Future Volume (vph)	141	318	137	741	51	922	185	504
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.5		32.4		79.2	40.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	355	144	1015	54	1131	195	674
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Length 50th (ft)	54	38	46	288	16	~377	74	155
Queue Length 95th (ft)	97	76	#102	#427	37	#507	125	#276
Internal Link Dist (ft)		574		2034		690	2264	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	386	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Future Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.48	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		888	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	335	20	144	780	235	54	971	160	195	531	143
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	191	0	144	986	0	54	1117	0	195	509	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		361	492	
v/s Ratio Prot	0.06	0.06		c0.05	c0.29		0.02	c0.32		c0.06	c0.18	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.31		0.57	0.80		0.28	0.99		0.54	1.04	
Uniform Delay, d1	25.0	32.0		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.3		3.2	3.7		0.8	24.5		1.7	50.0	
Delay (s)	26.4	33.4		22.3	29.6		19.6	54.7		27.0	87.0	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.3			28.7			53.1		73.6		
Approach LOS		C			C			D		E		

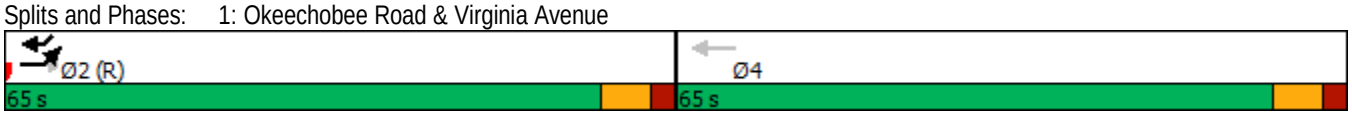
Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

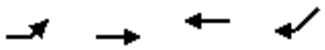
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	677	1141	1048	709
Future Volume (vph)	677	1141	1048	709
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	76.3	76.3	39.1	76.3
Actuated g/C Ratio	0.59	0.59	0.30	0.59
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
LOS	B	B	D	B
Approach Delay		15.6	43.1	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

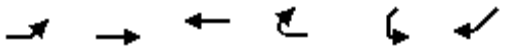
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	713	1201	1103	746
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
Queue Length 50th (ft)	154	191	304	172
Queue Length 95th (ft)	224	259	326	259
Internal Link Dist (ft)		557	1265	
Turn Bay Length (ft)				
Base Capacity (vph)	2015	2984	2256	1663
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.40	0.49	0.45

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	677	1141	1048	0	0	709
Future Volume (vph)	677	1141	1048	0	0	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	713	1201	1103	0	0	746
RTOR Reduction (vph)	0	0	0	0	0	28
Lane Group Flow (vph)	713	1201	1103	0	0	718
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	76.3	76.3	39.1			76.3
Effective Green, g (s)	76.3	76.3	39.1			76.3
Actuated g/C Ratio	0.59	0.59	0.30			0.59
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2014	2984	1529			1635
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.35	0.40	0.72			0.44
Uniform Delay, d1	14.0	14.5	40.6			14.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	0.4	1.7			0.9
Delay (s)	14.5	14.9	42.3			15.8
Level of Service	B	B	D			B
Approach Delay (s)		14.8	42.3		15.8	
Approach LOS		B	D		B	

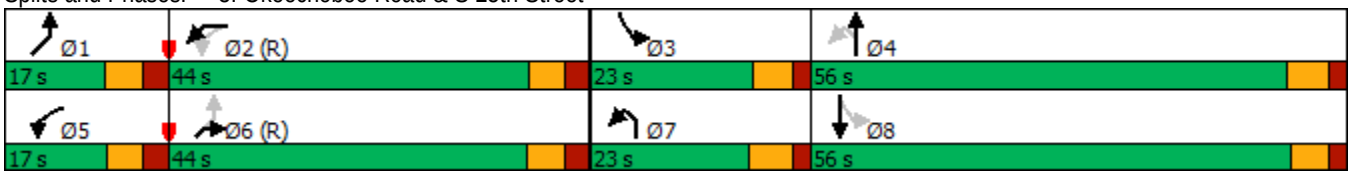
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	179	516	163	824	53	956	215	460
Future Volume (vph)	179	516	163	824	53	956	215	460
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	49.2	38.3	70.9	59.2	60.3	51.1	49.3	38.3
Actuated g/C Ratio	0.35	0.27	0.51	0.42	0.43	0.36	0.35	0.27
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
LOS	E	D	D	D	C	E	D	D
Approach Delay		40.5		38.9		55.3	46.1	
Approach LOS		D		D		E	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 45.7	Intersection LOS: D
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	188	560	172	1063	56	1195	226	636
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Length 50th (ft)	116	174	101	421	25	540	143	246
Queue Length 95th (ft)	#200	234	182	511	48	#705	#261	327
Internal Link Dist (ft)		574		2034		690	4088	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	235	1031	260	1467	319	1271	282	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.54	0.66	0.72	0.18	0.94	0.80	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Future Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3441		1770	3455		1770	2787	
Flt Permitted	0.19	0.95		0.07	1.00		0.15	1.00		0.28	1.00	
Satd. Flow (perm)	360	3431		128	3441		285	3455		527	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	543	17	172	867	196	56	1006	189	226	484	152
RTOR Reduction (vph)	0	95	0	0	12	0	0	11	0	0	95	0
Lane Group Flow (vph)	188	465	0	172	1051	0	56	1184	0	226	541	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Effective Green, g (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Actuated g/C Ratio	0.34	0.27		0.52	0.42		0.42	0.37		0.34	0.27	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	909		234	1455		198	1288		277	740	
v/s Ratio Prot	0.06	0.14		c0.08	c0.31		0.01	c0.34		c0.06	0.19	
v/s Ratio Perm	0.21			0.31			0.11			c0.22		
v/c Ratio	0.81	0.51		0.74	0.72		0.28	0.92		0.82	0.73	
Uniform Delay, d1	35.8	43.7		36.5	33.6		25.9	41.9		38.1	46.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.3	2.1		11.3	1.8		0.8	10.6		16.7	6.3	
Delay (s)	55.1	45.8		47.8	35.4		26.7	52.5		54.8	53.1	
Level of Service	E	D		D	D		C	D		D	D	
Approach Delay (s)		48.1			37.1			51.3		53.6		
Approach LOS		D			D			D		D		

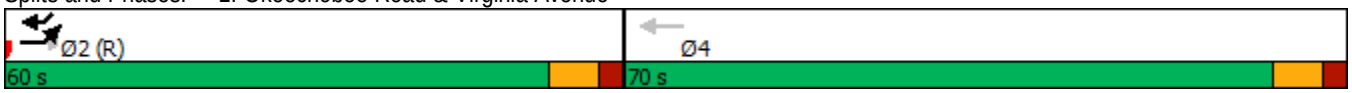
Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

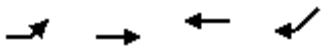
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	587	1274	628	479
Future Volume (vph)	587	1274	628	479
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

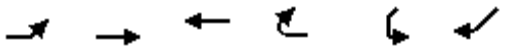
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	618	1341	661	504
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
Queue Length 50th (ft)	89	153	191	26
Queue Length 95th (ft)	132	207	225	53
Internal Link Dist (ft)		281	1314	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.25

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	587	1274	628	0	0	479
Future Volume (vph)	587	1274	628	0	0	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	618	1341	661	0	0	504
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	618	1341	661	0	0	409
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.15
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.21
Uniform Delay, d1	7.1	7.9	49.3			6.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

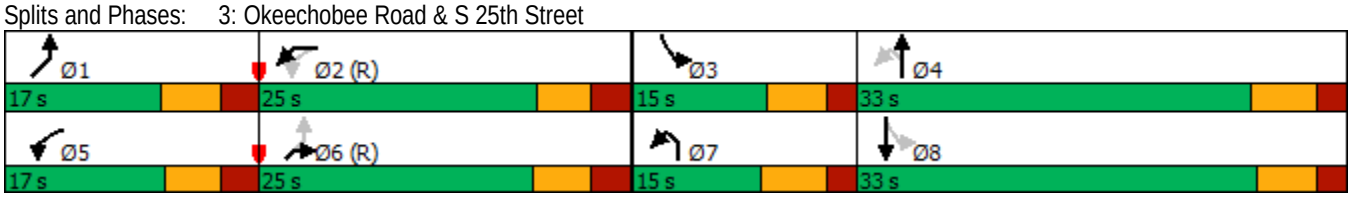
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	322	139	741	51	923	186	515
Future Volume (vph)	141	322	139	741	51	923	186	515
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.6		32.4		79.5	43.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street



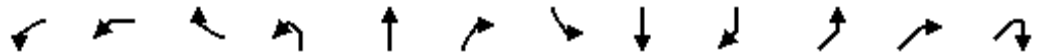


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	359	146	1015	54	1132	196	689
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Length 50th (ft)	54	39	47	288	16	~377	74	161
Queue Length 95th (ft)	97	77	#109	#427	37	#507	126	#286
Internal Link Dist (ft)		574		2034		690	4876	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	383	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Future Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.47	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		878	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	339	20	146	780	235	54	972	160	196	542	147
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	195	0	146	986	0	54	1118	0	196	524	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		359	492	
v/s Ratio Prot	0.06	0.06		c0.06	c0.29		0.02	c0.32		c0.06	c0.19	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.32		0.58	0.80		0.28	0.99		0.55	1.07	
Uniform Delay, d1	25.0	32.1		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.4		3.4	3.7		0.8	24.7		1.7	59.2	
Delay (s)	26.4	33.4		22.6	29.6		19.6	55.0		27.1	96.3	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.4			28.7			53.3		80.9		
Approach LOS		C			C			D		F		

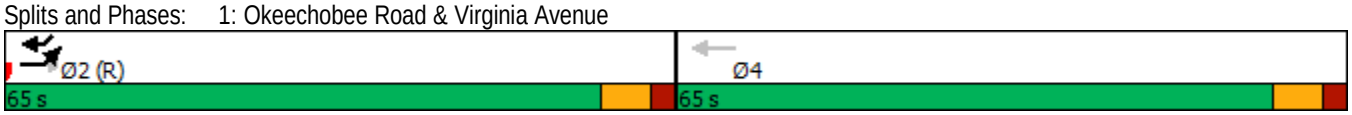
Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

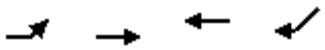
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	688	1141	1048	716
Future Volume (vph)	688	1141	1048	716
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effct Green (s)	57.7	57.7	57.7	57.7
Actuated g/C Ratio	0.44	0.44	0.44	0.44
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
LOS	C	C	C	C
Approach Delay		27.2	26.6	
Approach LOS		C	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

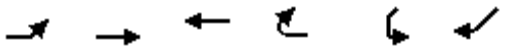
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	724	1201	1103	754
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
Queue Length 50th (ft)	218	265	237	244
Queue Length 95th (ft)	272	310	279	315
Internal Link Dist (ft)		228	779	
Turn Bay Length (ft)				
Base Capacity (vph)	1523	2256	2256	1274
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.53	0.49	0.59

Intersection Summary



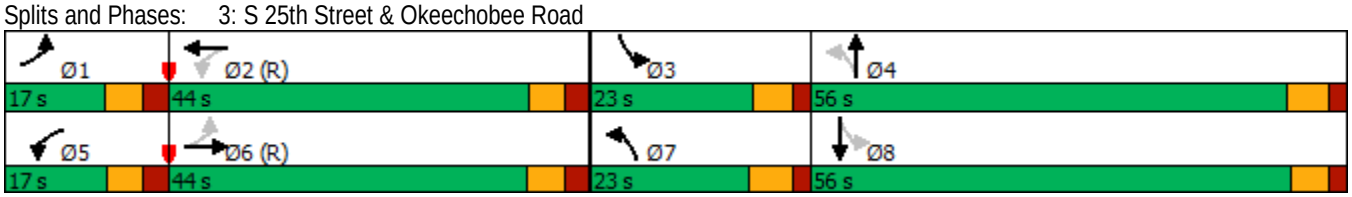
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	688	1141	1048	0	0	716
Future Volume (vph)	688	1141	1048	0	0	716
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	1201	1103	0	0	754
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	724	1201	1103	0	0	717
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	57.7	57.7	57.7			57.7
Effective Green, g (s)	57.7	57.7	57.7			57.7
Actuated g/C Ratio	0.44	0.44	0.44			0.44
Clearance Time (s)	7.3	7.3	7.3			7.3
Lane Grp Cap (vph)	1523	2256	2256			1236
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.48	0.53	0.49			0.58
Uniform Delay, d1	25.5	26.3	25.7			27.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.1	0.9	0.8			2.0
Delay (s)	26.5	27.2	26.4			29.1
Level of Service	C	C	C			C
Approach Delay (s)		27.0	26.4		29.1	
Approach LOS		C	C		C	

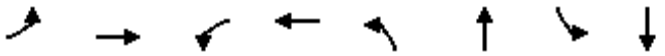
Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	186	515	141	322	139	741	51	923
Future Volume (vph)	186	515	141	322	139	741	51	923
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	44.0	17.0	44.0	23.0	56.0	23.0	56.0
Total Split (%)	12.1%	31.4%	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	51.5	40.4	51.0	40.1	68.3	57.3	59.5	50.3
Actuated g/C Ratio	0.37	0.29	0.36	0.29	0.49	0.41	0.42	0.36
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
LOS	C	D	D	D	D	D	C	D
Approach Delay		44.7		40.5		38.0		51.2
Approach LOS		D		D		D		D

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 86.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

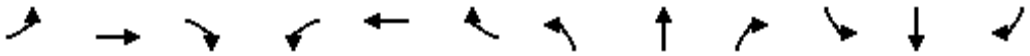




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	689	148	359	146	1015	54	1132
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Length 50th (ft)	122	293	89	139	77	390	24	486
Queue Length 95th (ft)	186	367	141	186	149	475	47	#641
Internal Link Dist (ft)		2355		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	384	1004	247	1009	258	1414	321	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.69	0.60	0.36	0.57	0.72	0.17	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Future Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3426		1770	3510		1770	3416		1770	3464	
Flt Permitted	0.46	1.00		0.21	1.00		0.07	1.00		0.16	1.00	
Satd. Flow (perm)	848	3426		385	3510		130	3416		299	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	196	542	147	148	339	20	146	780	235	54	972	160
RTOR Reduction (vph)	0	17	0	0	3	0	0	18	0	0	9	0
Lane Group Flow (vph)	196	672	0	148	356	0	146	997	0	54	1123	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Effective Green, g (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Actuated g/C Ratio	0.36	0.28		0.36	0.28		0.50	0.41		0.42	0.37	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	956		243	975		217	1398		202	1276	
v/s Ratio Prot	0.04	c0.20		c0.05	0.10		c0.06	c0.29		0.01	c0.32	
v/s Ratio Perm	0.15			0.17			0.27			0.10		
v/c Ratio	0.52	0.70		0.61	0.37		0.67	0.71		0.27	0.88	
Uniform Delay, d1	32.7	45.2		33.3	40.6		31.6	34.5		26.2	41.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	4.3		4.3	1.1		8.0	1.7		0.7	7.2	
Delay (s)	34.0	49.5		37.6	41.7		39.5	36.2		26.9	48.5	
Level of Service	C	D		D	D		D	D		C	D	
Approach Delay (s)		46.1			40.5			36.7			47.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix H: Turn Lane Warrant Worksheet

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:	N/A	Analysis Date:	3/19/2020
County:	Saint Lucie	Conducted By:	MAG
FDOT District:	5	Checked By:	ABK
		Agency/Company Name:	Kimley Horn

Intersection & Approach Description: Okeechobee Road and Project Driveway

Analysis Scenario:	Existing 2020	Number of Approach Lanes:	2
Design Hour:	PM Peak Hour	Undivided or Divided Highway:	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	12	2.0%	13
	Through	-	705	2.0%	713
	Right	No		0.0%	N/A
Opposing	Left	No		0.0%	N/A
	Through	-	739	2.0%	747
	Right	Yes	18	2.0%	19

Advancing Volume:	726
Opposing Volume:	766
Left Turn Volume:	13
% Left Turns in Advancing Volume:	1.79%

TURN LANE WARRANT FINDINGS

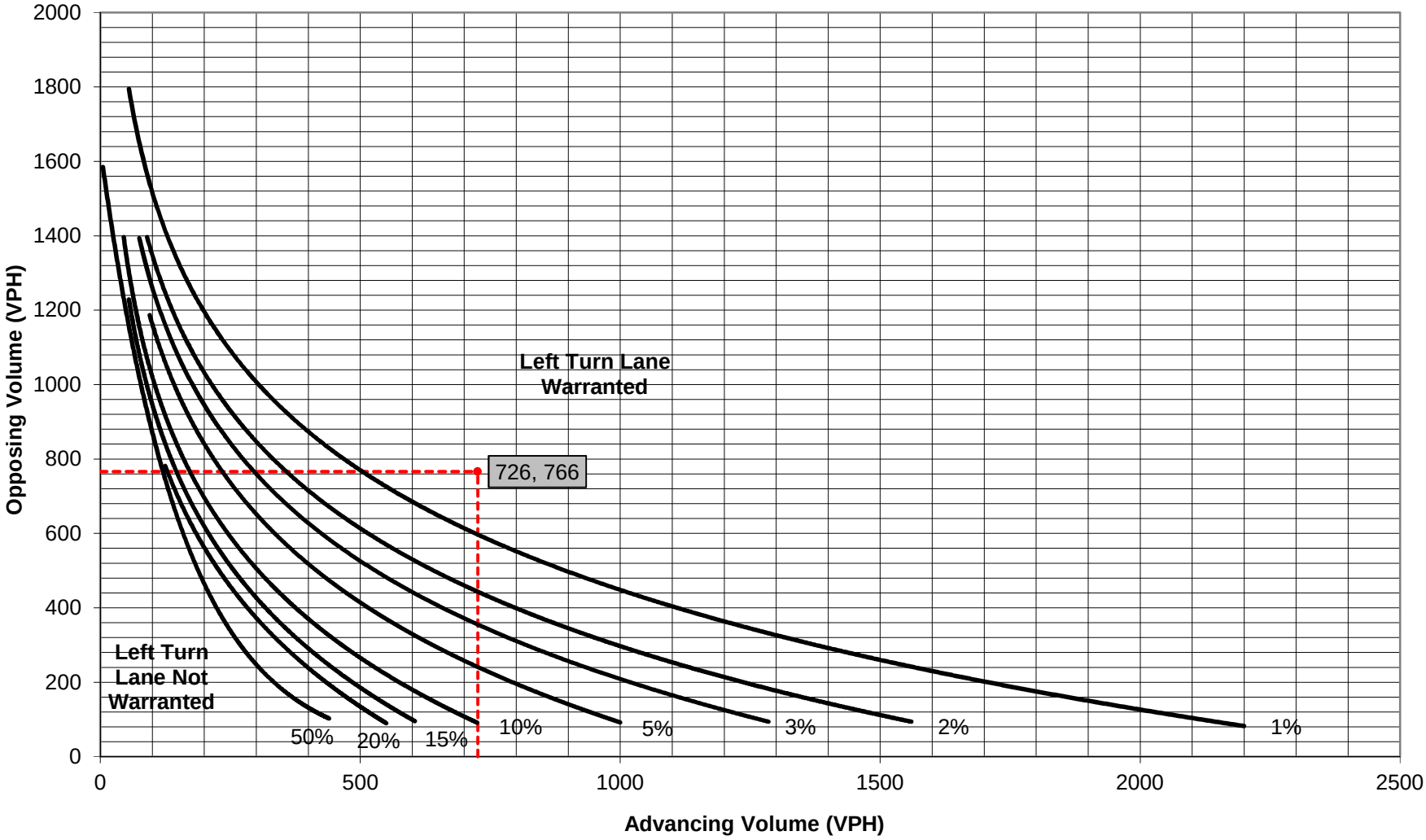
Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

Warrant Met?: Yes

Additional Comments / Justifications:

Figure 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)





REAR ELEVATION
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

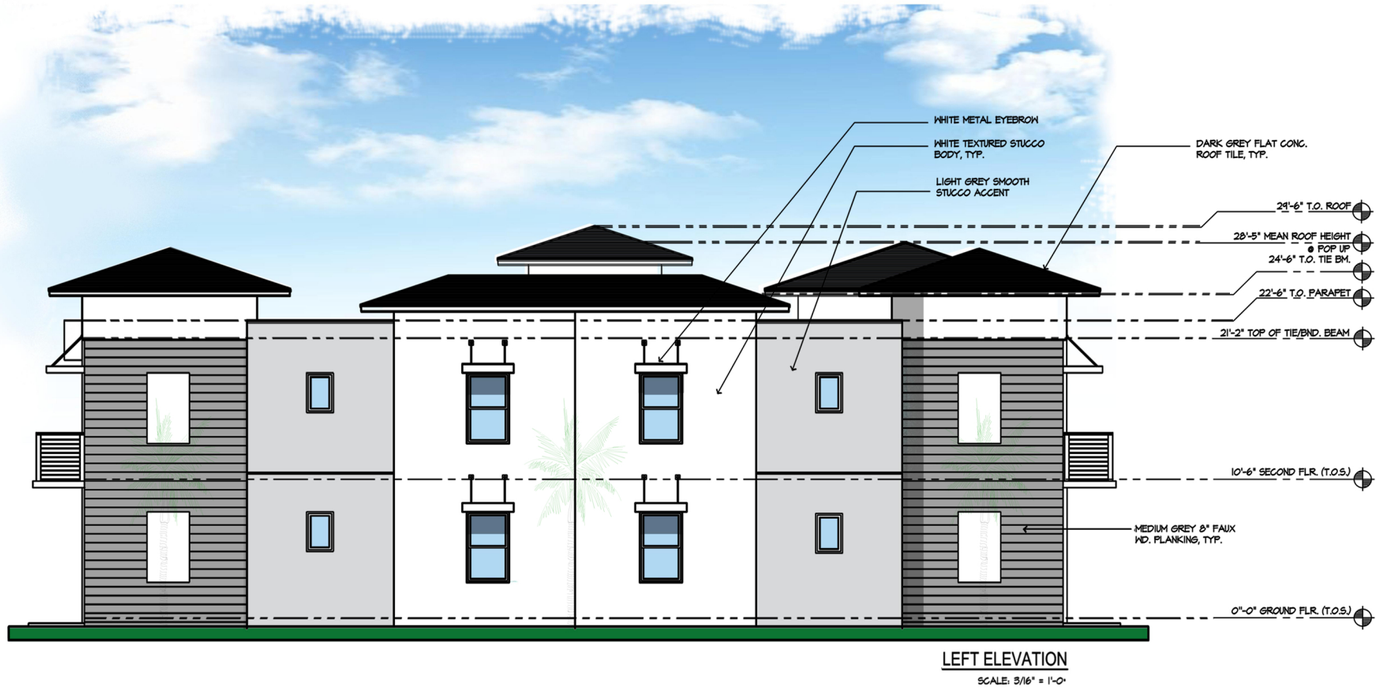
project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC

ARCHITECTURAL Studio, Inc.
Architecture • Planning
300 Avenue of Champions
Suite 260
Palm Beach Gardens, Florida 33418
Phone 561.202.6990
Fax 561.296.2494
archstudiofl.com

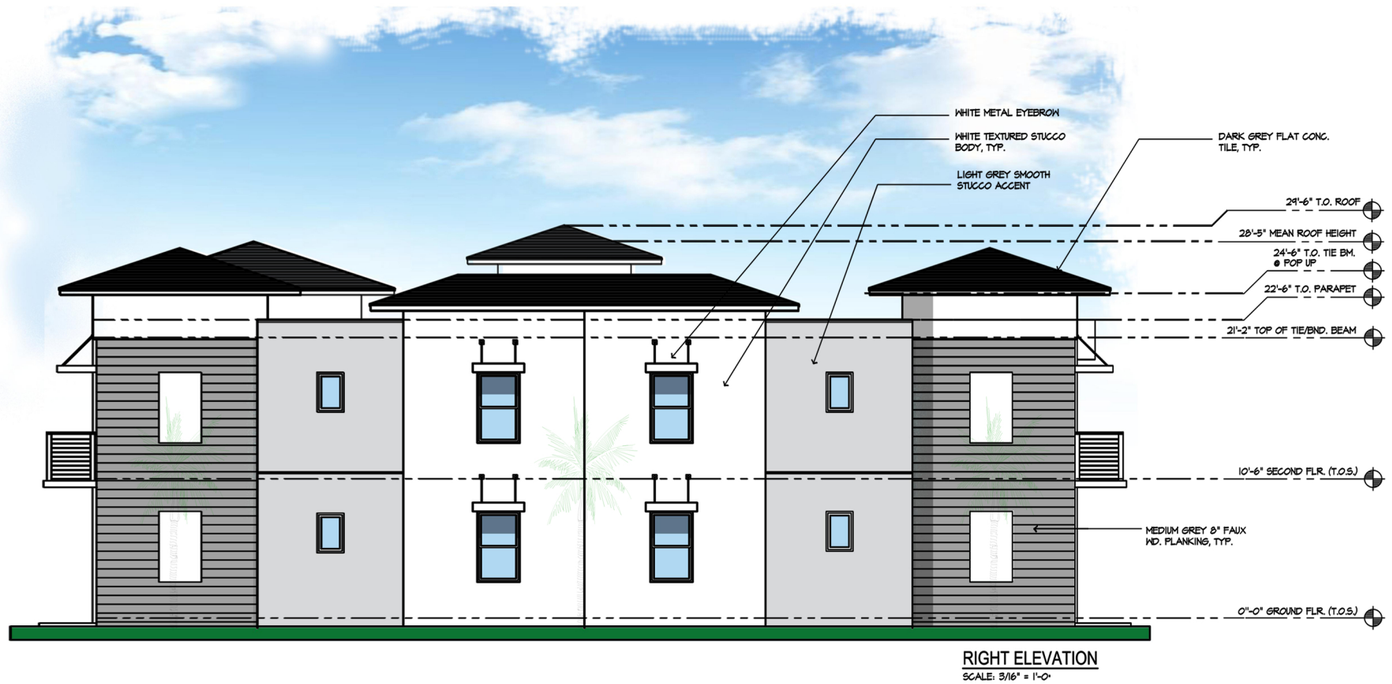
drawing
COLORED ELEVATIONS

sheet
A-3



LEFT ELEVATION

SCALE: 3/16" = 1'-0"



RIGHT ELEVATION

SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

16 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC.

ARCHITECTURAL Studio, Inc.

Architecture
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Planning

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drawing

COLORED ELEVATIONS

sheet

A-4

CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
AC (3)	UNIT C	957 SF
AC (2)	UNIT B	1227 SF
AC	UNIT A	735 SF
	TTL.	7752 SF

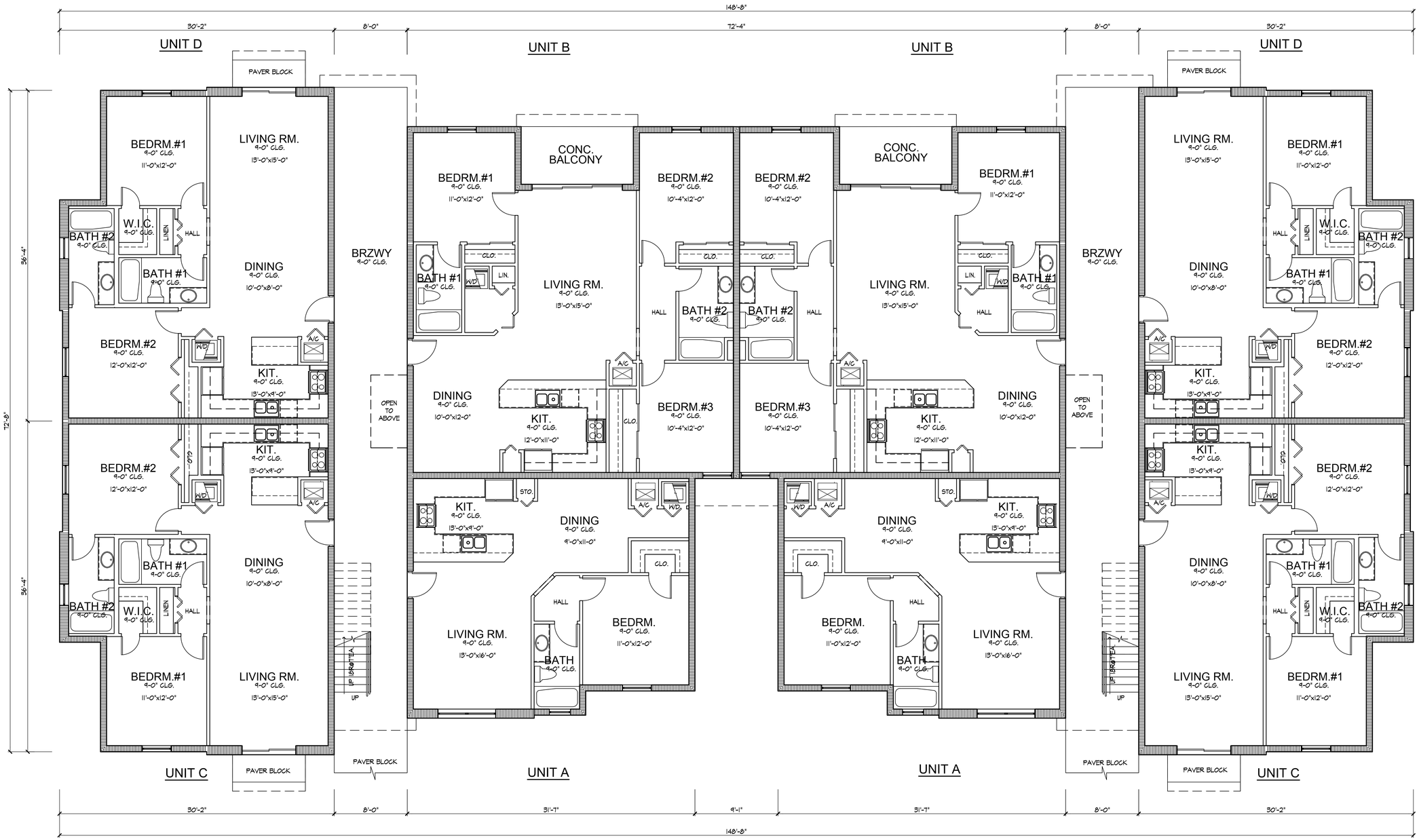
NON CONDITIONED AREAS

NC	BREEZEWAY	522 SF
NC (2)	BREEZEWAY	522 SF
NC (4)	BALCONY(B)	96 SF
NC (8)	BALCONY(B)	96 SF
NC (3)	BALCONY(C)	32 SF
NC (5)	BALCONY(C)	32 SF
NC (7)	BALCONY(D)	32 SF
NC (6)	BALCONY(D)	32 SF
	TTL.	1364 SF

GROSS AREA

GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
TOTAL AC AREA:	23256 SF
TOTAL NON-AC AREA:	4092 SF
TOTAL GROSS AREA:	24477 SF



Scott Blakeslee Disher
AR-0011586 AA-0003285

revisions

no.		date
REVIEW		6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
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Architecture
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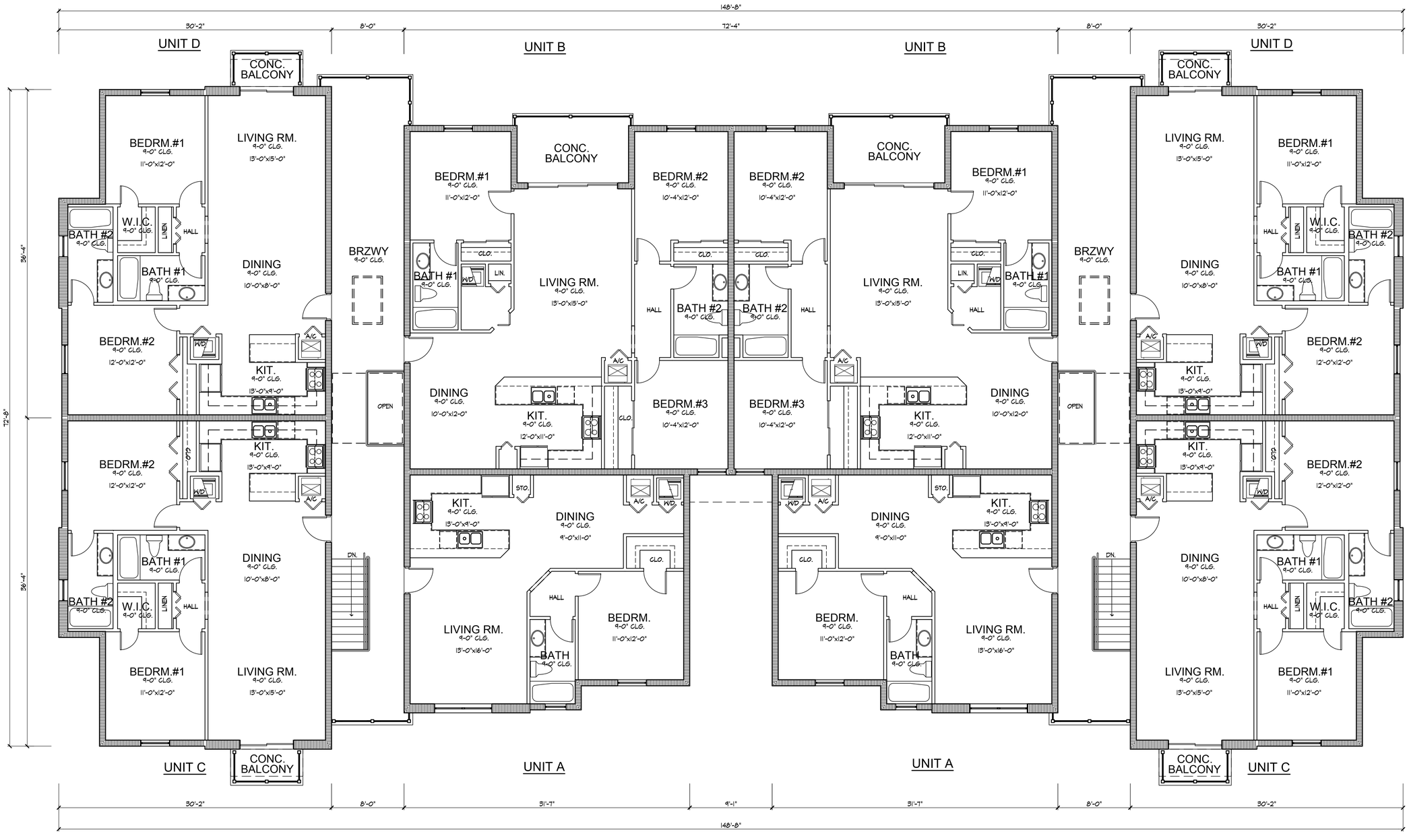
drawing
GROUND FLOOR PLAN

sheet
A-1



revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

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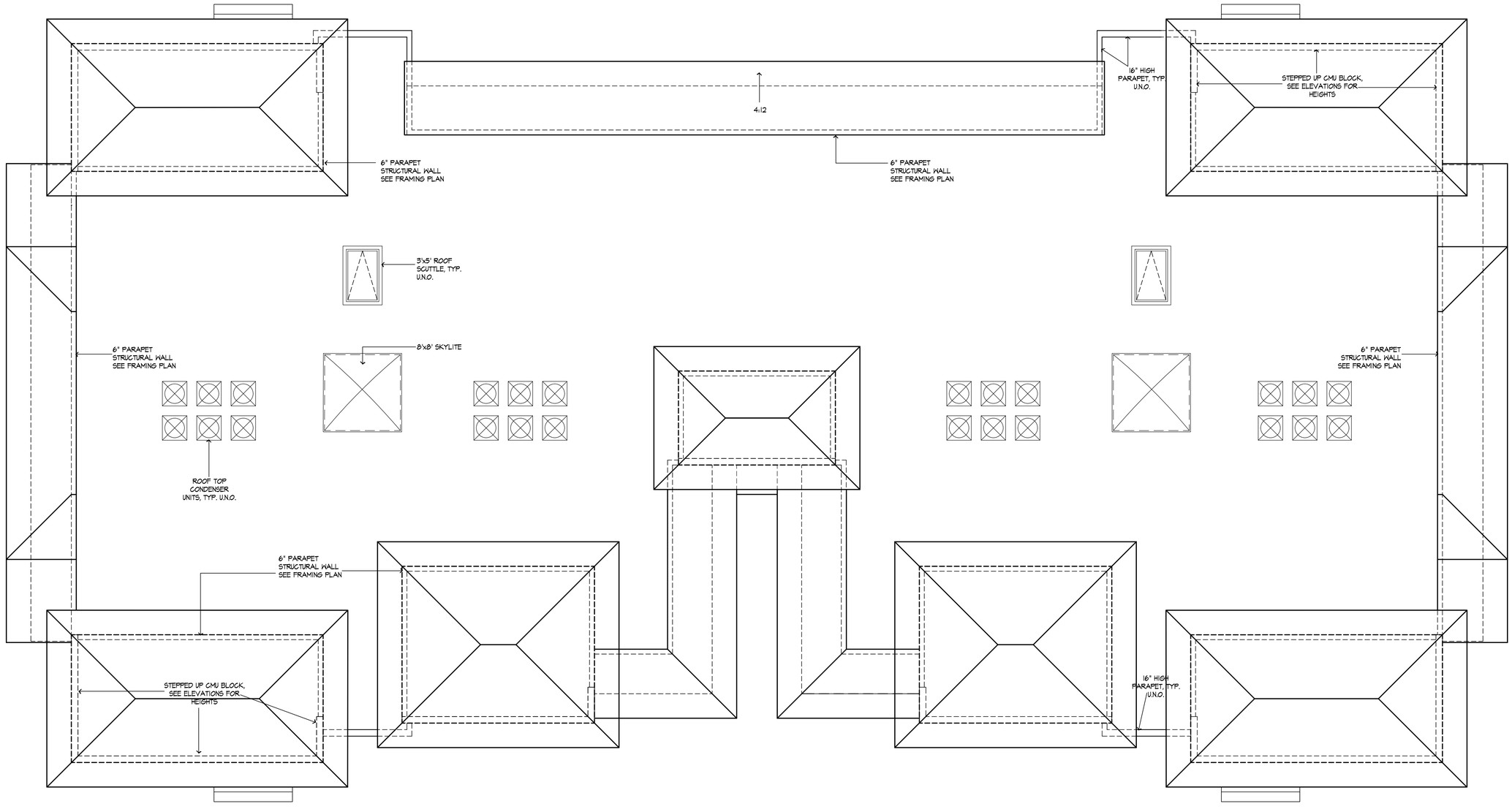
drawing

SECOND FLOOR PLAN

sheet

A-3



revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

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project

16 UNIT APARTMENT BUILDING
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drawing

ROOF PLAN

sheet

A-6



REAR ELEVATION

SCALE: 3/16" = 1'-0"



FRONT ELEVATION

SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC

project

ARCHITECTURAL Studio, Inc.

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Planning

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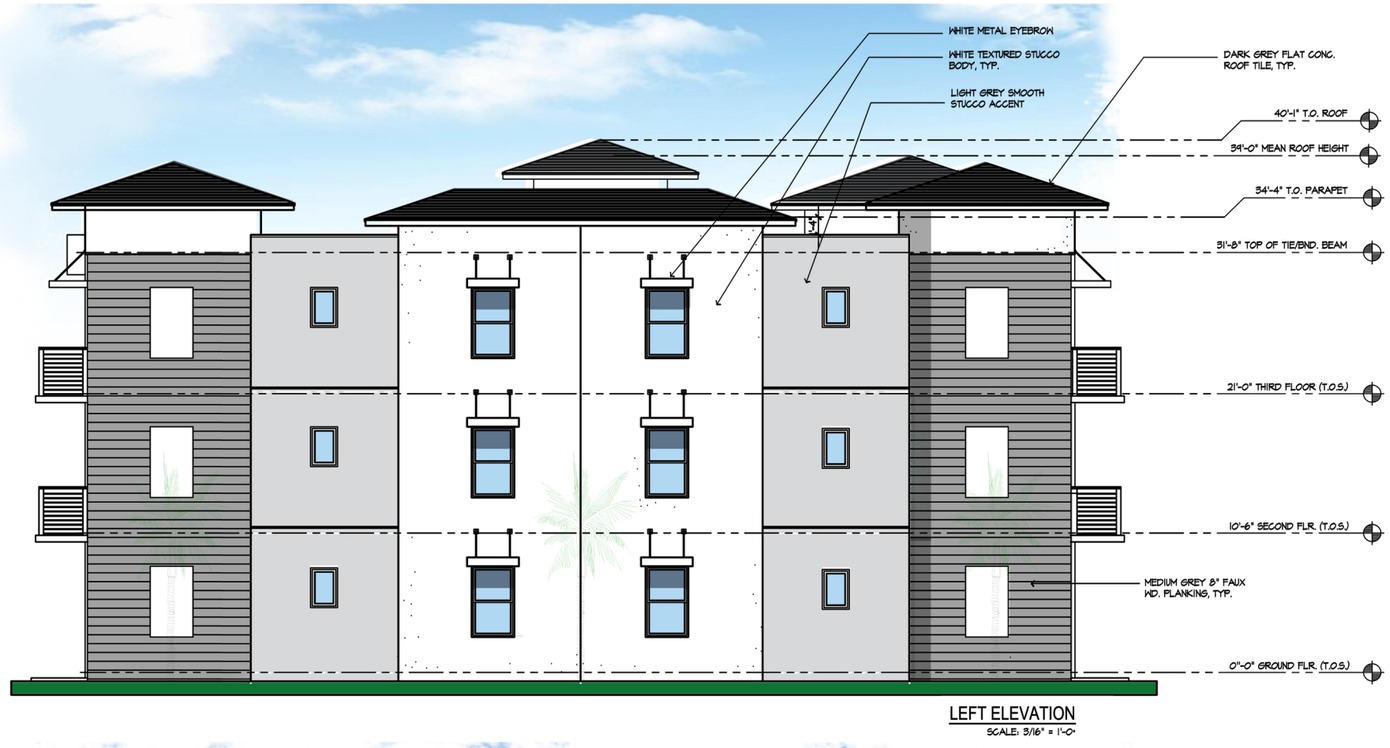
Fax 561.296.2494
archstudiofl.com

drawing

COLORED ELEVATIONS

sheet

A-4



LEFT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

project
24 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

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Architecture
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Planning
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drawing
COLORED ELEVATIONS

sheet
A-5

CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
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GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
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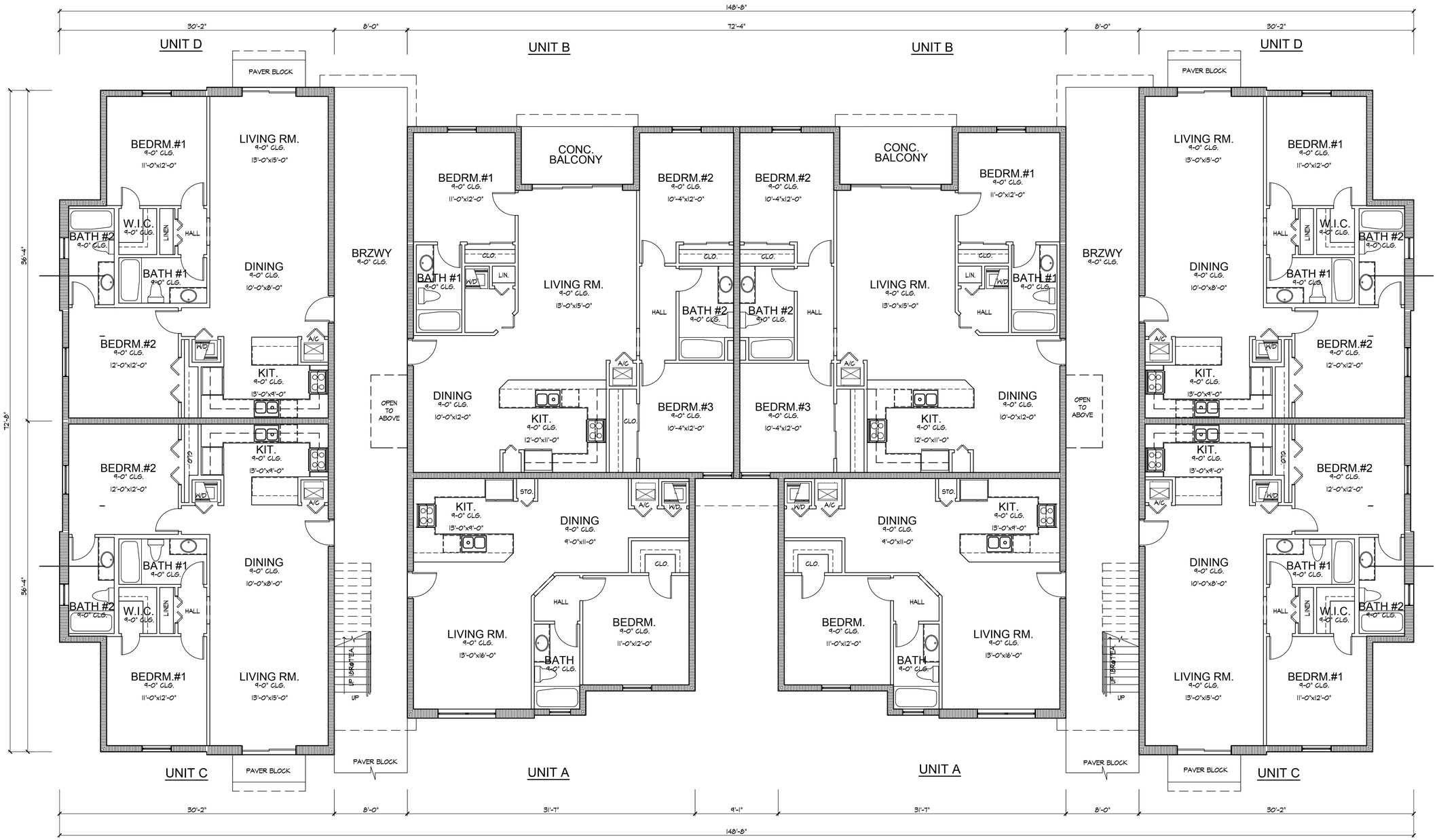

Scott Blakeslee Disher
AR-0011586 AA-0003285

revisions

no.		date
REVIEW		6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

project

24 UNIT APARTMENT BUILDING

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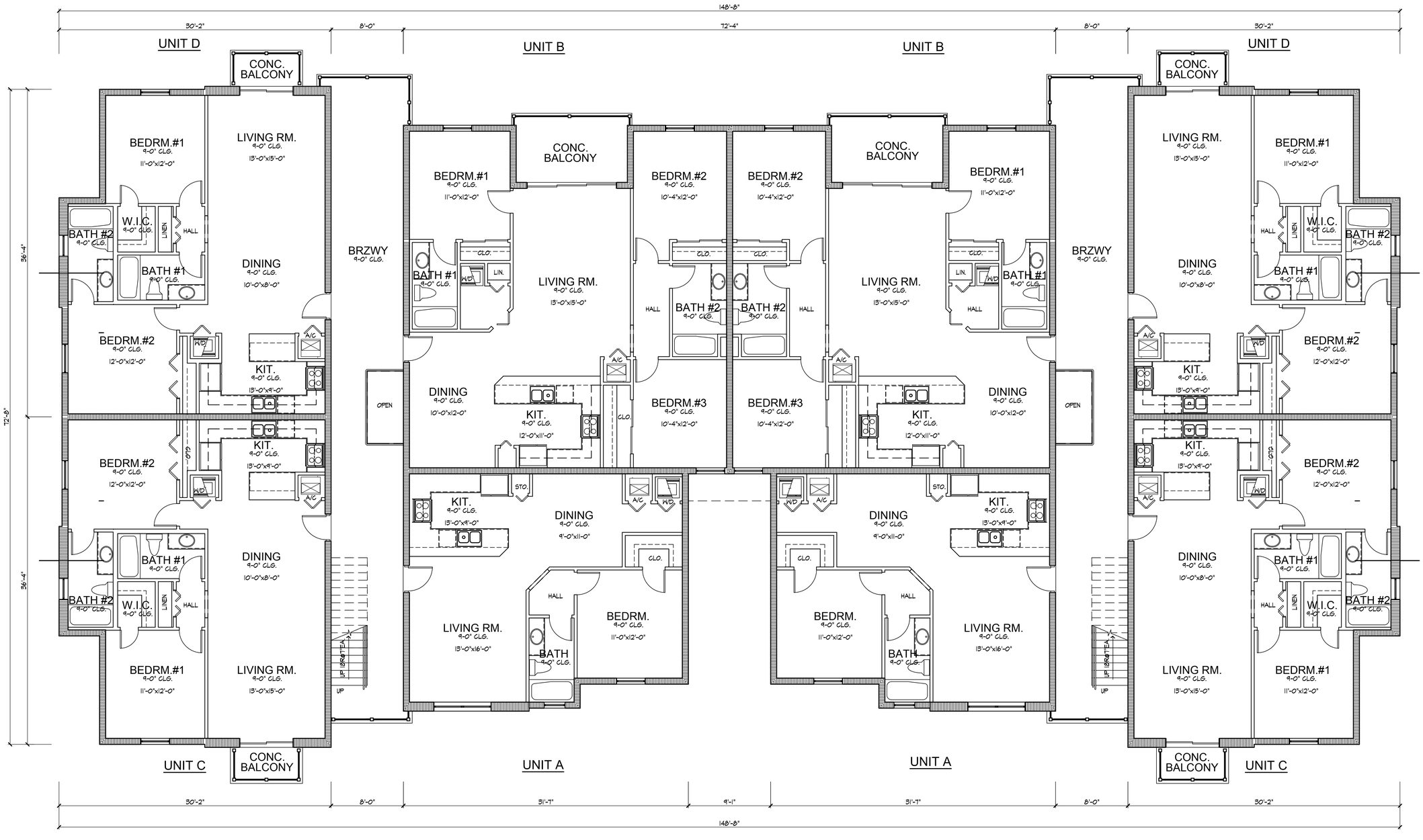
drawing

GROUND FLOOR PLAN

sheet

A-1



revisions

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REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
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date	05/25/2020
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job no.	190725_AIG

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AR-0011586 AA-0003285

project

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
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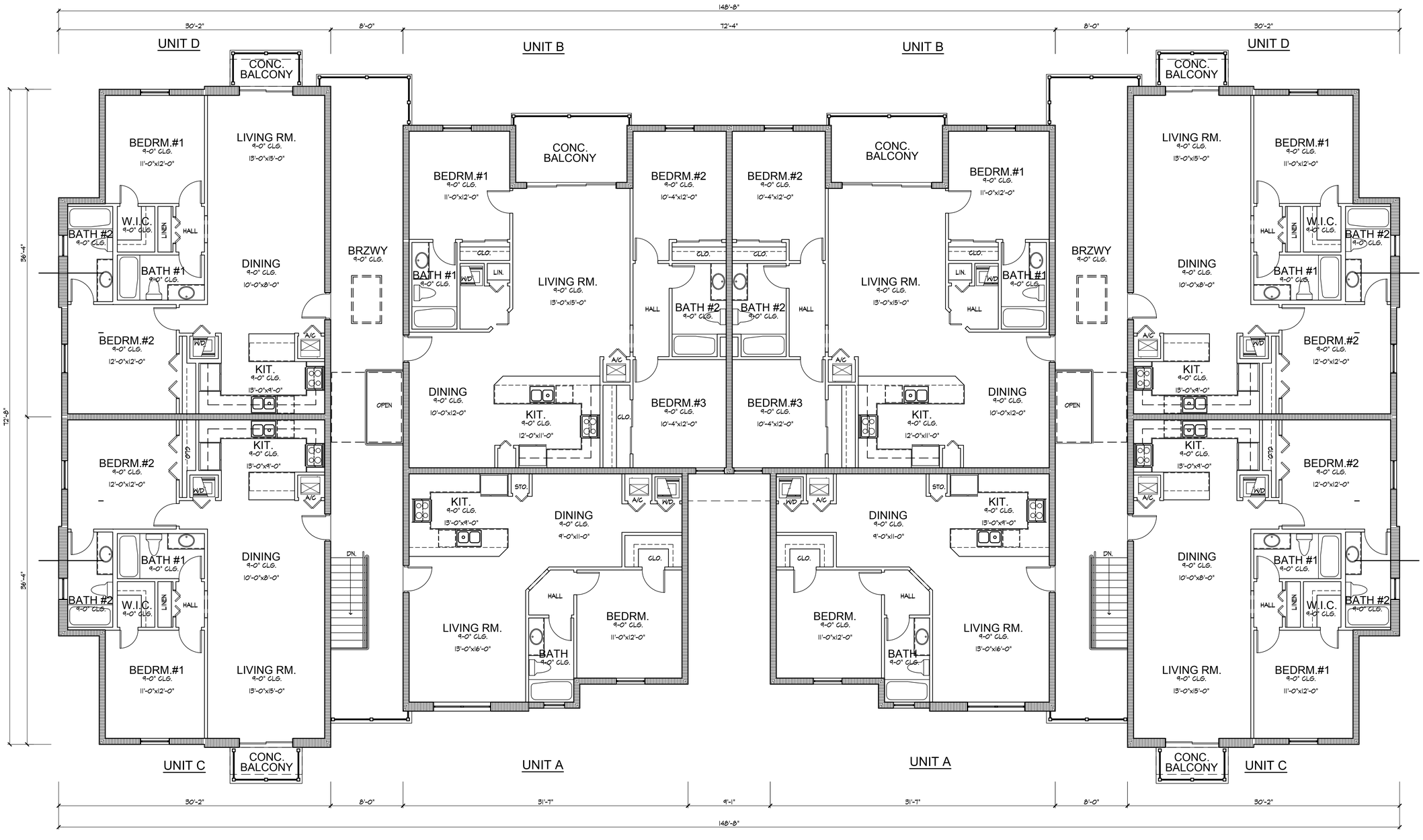
drawing

SECOND FLOOR PLAN

sheet

A-2



revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

24 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

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Architecture
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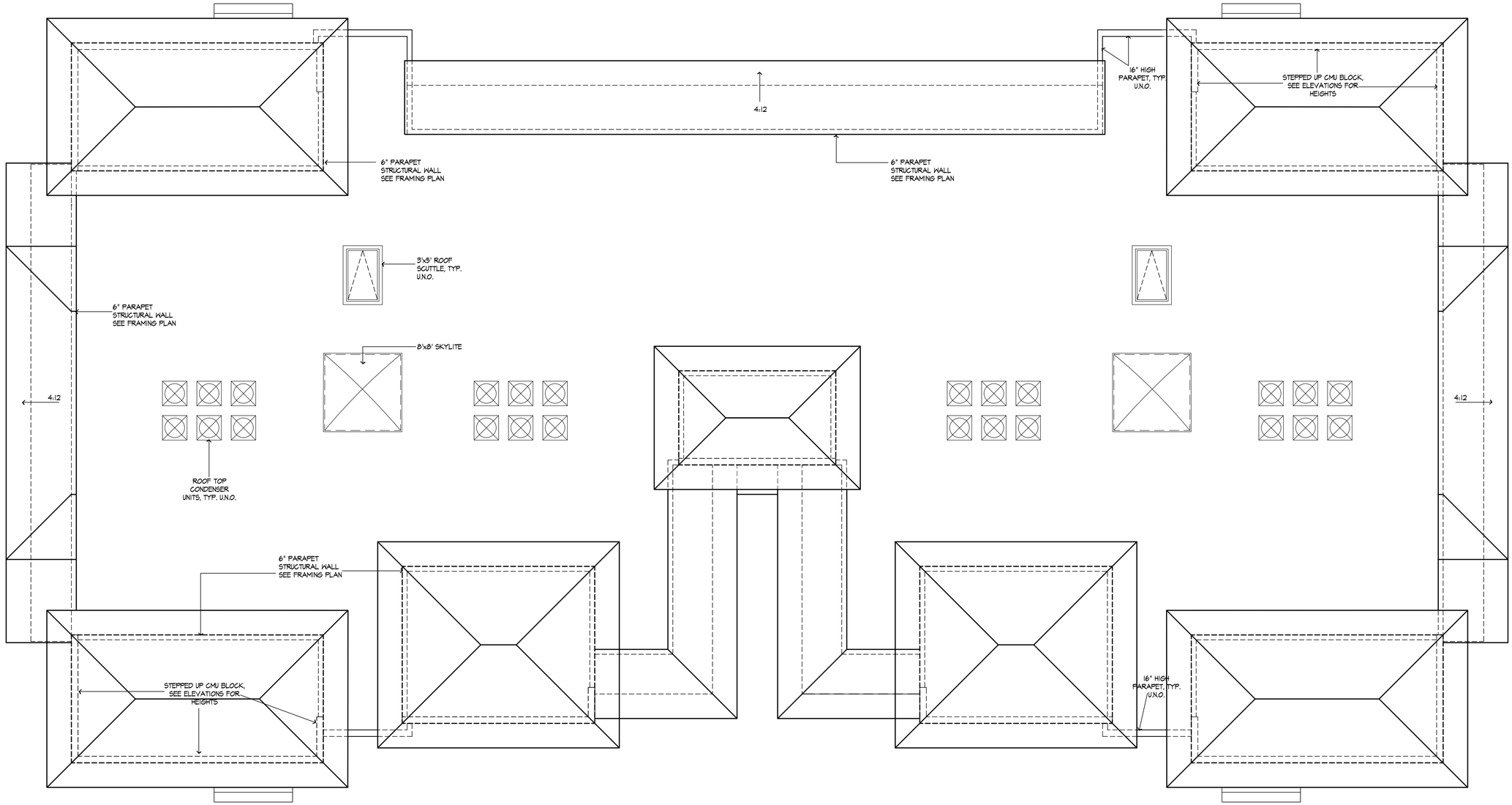
drawing

THIRD FLOOR PLAN

sheet

A-3



revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC.

project

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drawing

ROOF PLAN

sheet

A-6



LEFT ELEVATION



REAR ELEVATION



FRONT ELEVATION

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190123_CH.AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

ARCHITECTURAL Studio, Inc.

Architecture
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Planning

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drawing

ELEVATIONS

sheet

A-2



LEFT ELEVATION



RIGHT ELEVATION

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190123_CH.AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

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Planning

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drawing

ELEVATIONS

sheet

A-3

CALCULATIONS

AIR CONDITIONED AREAS

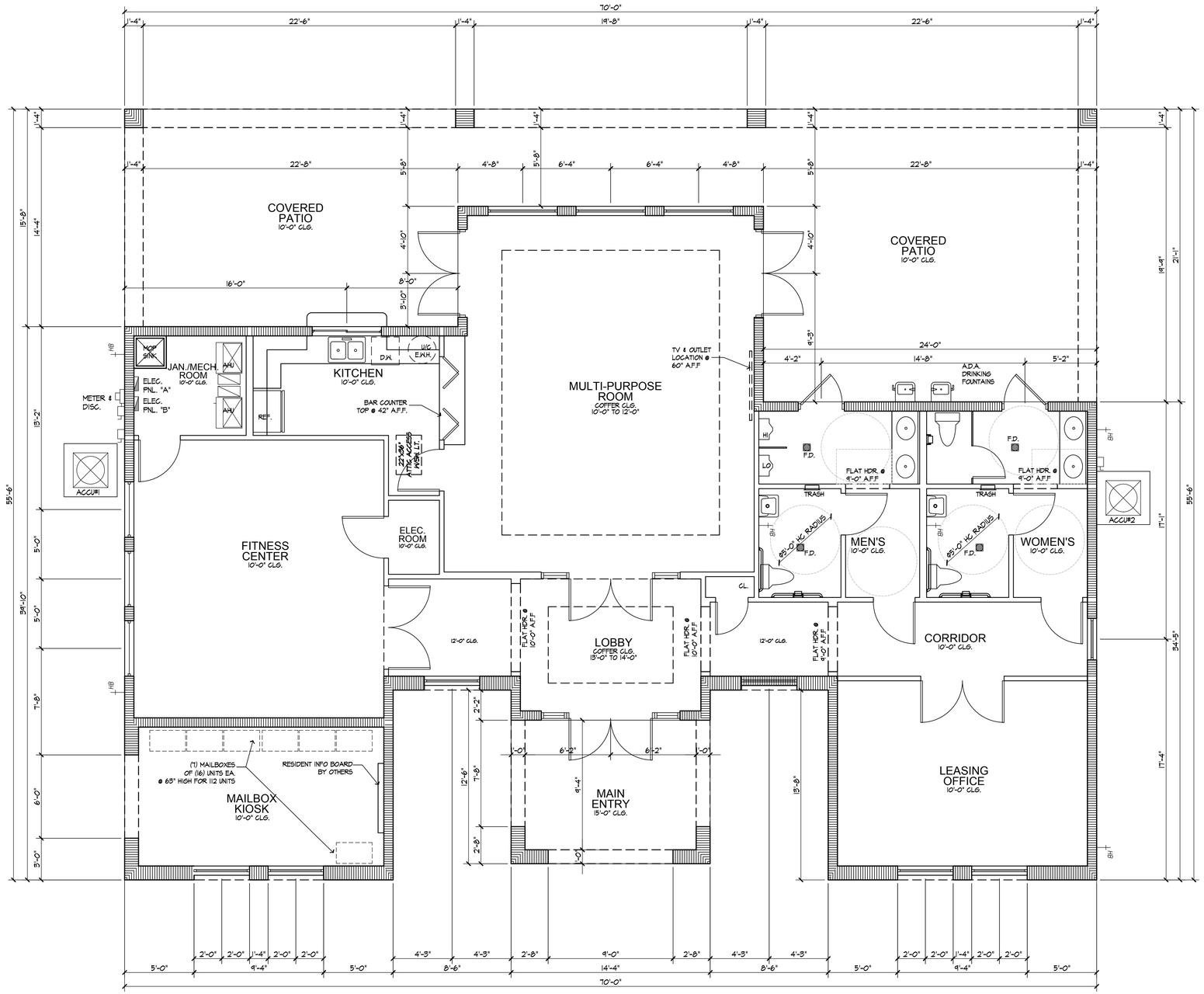
CLUBHOUSE A/C	2239 SF
	2239 SF

NON CONDITIONED AREAS

MAIN ENTRY	148 SF
MAILBOX KIOSK	213 SF
COVERED PATIO	1036 SF
	1397 SF

GROSS AREA

GROSS AREA	3636 SF



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no.	date
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designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190723_CH.AIG

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AR-0011586 AA-0003285

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CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

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drawing

FLOOR PLAN

sheet

A-1

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
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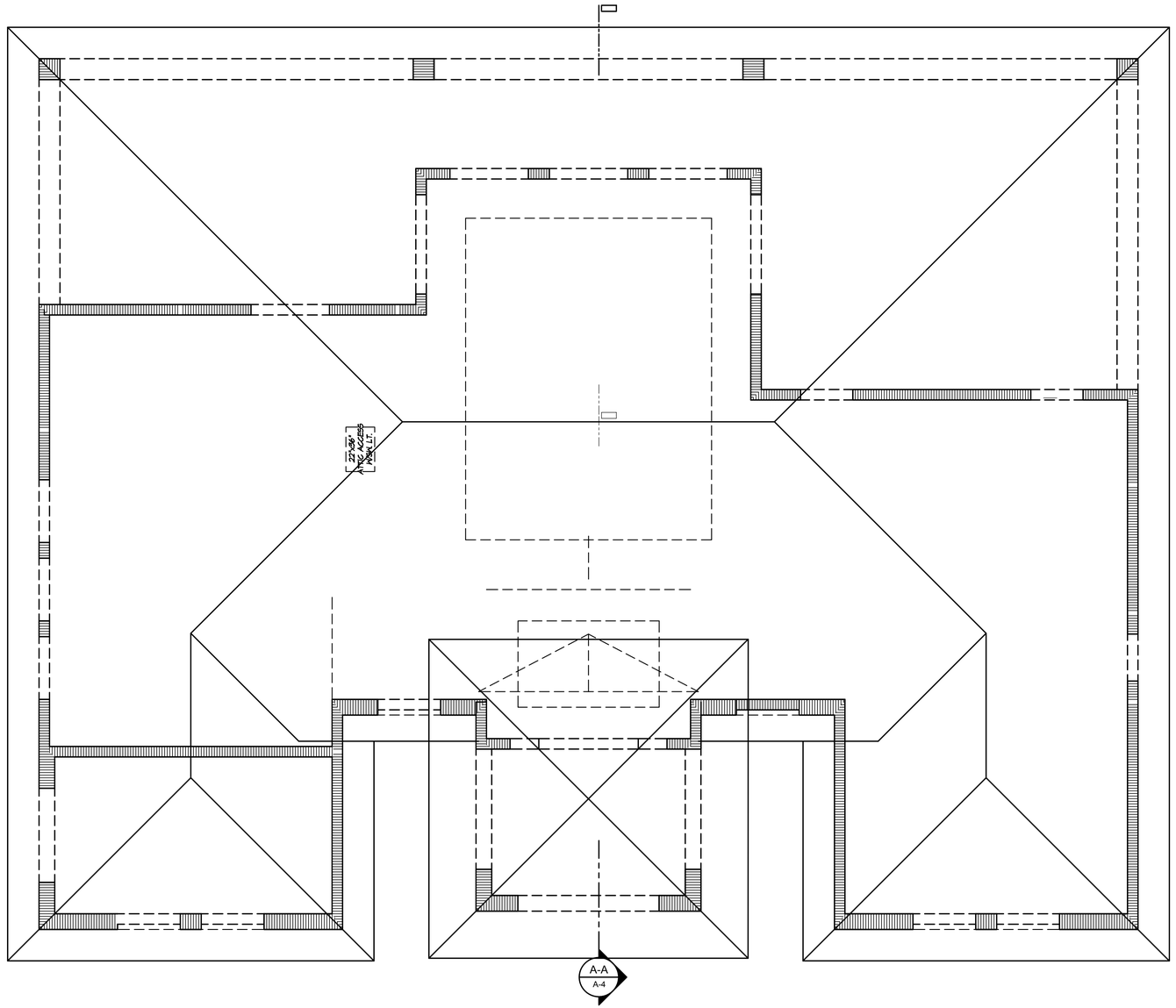
job no.	190723_CH.AIG



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CLUBHOUSE
project

ARIA APARTMENTS
FT. PIERCE, FLORIDA

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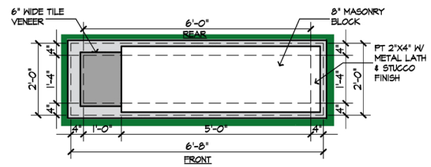
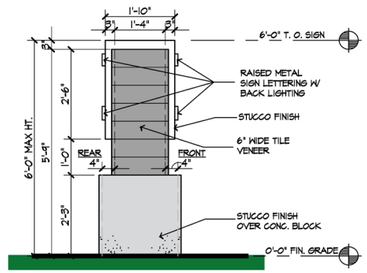
drawing
ROOF
FRAMING
PLAN

sheet
S-2



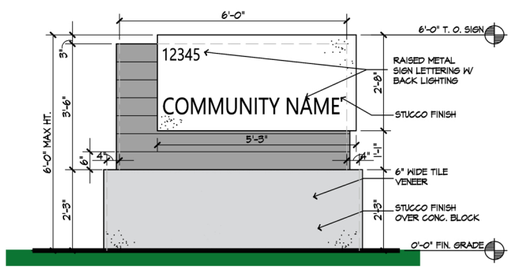
ENTRY MONUMENT PLAN

SCALE: 1/2" = 1'-0"



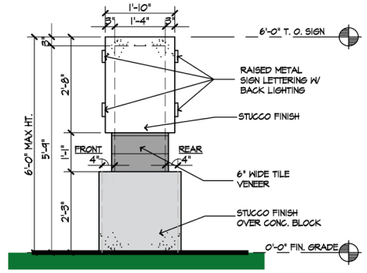
ENTRY MONUMENT LEFT SIDE ELEVATION

SCALE: 1/2" = 1'-0"



ENTRY MONUMENT FRONT ELEVATION

SCALE: 1/2" = 1'-0" (REAR ELEVATION TO MATCH FRONT ELEVATION)



ENTRY MONUMENT RIGHT SIDE ELEVATION

SCALE: 1/2" = 1'-0"

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	06/12/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190724_EM.dig

Scott Blakeslee Disher
AR-0011586 AA-0003285

PROGRESS SET
06/15/20

project

ENTRY MONUMENT

FORT PIERCE NORTH APTS. & COMMERCIAL CENTER
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

ARCHITECTURAL Studio, Inc.

Architecture
+
Planning

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drawing

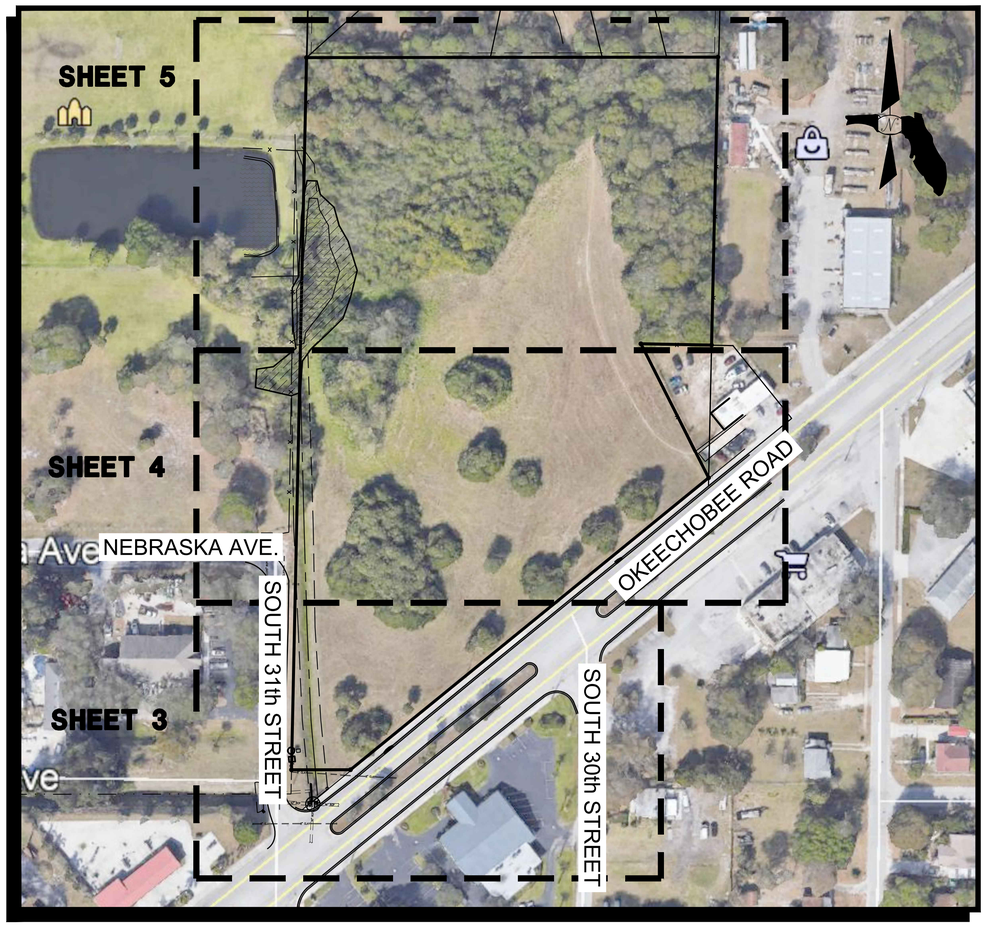
ENTRY MONUMENT

sheet

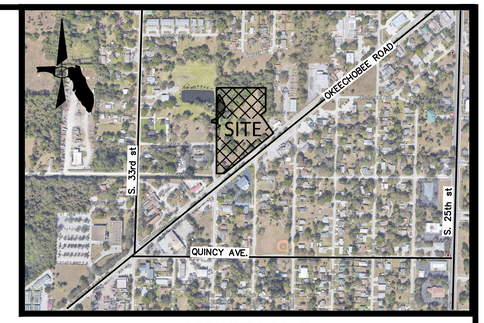
A-1

ST. LUCIE COUNTY
STATE OF FLORIDA

SKETCH OF BOUNDARY SURVEY
FOR
FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD



KEY MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS:
P.O.C.– POINT OF COMMENCEMENT
P.O.B. – POINT OF BEGINNING
P.B. – PLAT BOOK
ORB – OFFICIAL RECORD BOOK
D.B. – DEED BOOK
PG. – PAGE
R/W – RIGHT–OF–WAY
R – RADIUS
Δ – CENTRAL ANGLE
A – ARC LENGTH
U.E. – UTILITY EASEMENT
D.E. – DRAINAGE EASEMENT
(P) – PLAT DIMENSION
(D) – DEED DIMENSION
(M) – MEASURED DIMENSION
℄ – CENTERLINE
IR – IRON ROD
IR/C – IRON ROD WITH CAP AS NOTED
C.M. – 4"x4" CONCRETE MONUMENT
PRM – PERMANENT REFERENCE MONUMENT
PCP – PERMANENT CONTROL POINT
N/D – NAIL & DISK
PK – PARKER KALON
NAD – NORTH AMERICAN DATUM
NAVD – NORTH AMERICAN VERTICAL DATUM
LB – LICENSED BUSINESS
WM – WATER MAIN
TOW – TOP OF WALL
INV – INVERT
DIP – DUCTILE IRON PIPE
PVC – POLYVINYL CHLORIDE PIPE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
MON – MONUMENT
RCP – REINFORCED CONCRETE PIPE
HDPE – HIGH DENSITY POLYETHYLENE PIPE
EL. – ELEVATION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS–OF–WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT–OF–WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

SURVEY REPORT:

1. THIS IS A BOUNDARY SURVEY, PREPARED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF THE STANDARDS OF PRACTICE SET FORTH IN RULE 5J–17.051 THROUGH 5J–17.053, FLORIDA ADMINISTRATIVE CODE. THE FIELD WORK WAS COMPLETED ON SEPTEMBER 30, 2019.
2. THE SURVEY WAS BASED ON INSTRUCTIONS FROM CLIENT, AND ST. LUCIE COUNTY SURVEY DEPARTMENT INFORMATION.
3. BEARINGS ARE BASED ON S49°35'30"W (DEED) ALONG THE NORTH RIGHT–OF–WAY OF OKEECHOBEE ROAD.
4. THE LEGAL DESCRIPTION IS RECORDED IN OFFICIAL RECORD BOOK 3204 PAGE 743.
5. AREA = 6.796 ACRES, MORE OR LESS.
6. EASEMENTS, RESTRICTIONS, AND OTHER ITEMS OF RECORD SHOWN ARE PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO.756647, DATED JULY 8, 2019.

   NO SEARCH OF THE PUBLIC RECORDS HAS BEEN PERFORMED BY BROWN & PHILLIPS, INC.

   THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ST. LUCIE COUNTY.
7. ALL DISTANCES ARE MEASURED UNLESS NOTED OTHERWISE.
8. THE PROPERTY WAS VACANT AS OF THE DATE OF SURVEY. THE PROPOSED USE IS FOR SITE PLANNING.
9. ALL FIELD–MEASURED CONTROL MEASUREMENTS EXCEEDED AN ACCURACY OF 1:7,500.
10. THE CONTRACTED PURPOSE OF THIS SURVEY IS FOR SITE PLANNING THIS SURVEY IS NOT VALID FOR ANY OTHER USE.
11. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
12. THIS SURVEY WAS PREPARED FOR THE PARTIES LISTED BELOW AND IS NOT ASSIGNABLE:
    –ARROW INVESTMENT GROUP, LLC
    –LIGHTHOUSE GLOBAL INVESTMENTS, INC.
    –OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
13. THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' (SHEET 2) AND 1"=50' (SHEETS 3–5), ON 24"x 36" SHEETS.
14. SOME TOPOGRAPHIC FEATURES MAY BE EXAGGERATED IN SCALE FOR CLARITY. THE CENTER OF THE SYMBOL OF SUCH FEATURES IS THE CORRECT LOCATION.
15. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED AS PART OF THIS SURVEY.
16. ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988, AND ARE REFERENCED TO ST. LUCIE COUNTY BENCHMARK "VIR 3–10", ELEVATION=17.47.
17. +10.0 DENOTES SPOT ELEVATION, REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.
18. © COPYRIGHT 2019 BY BROWN & PHILLIPS, INC. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND STAMP, OR A DIGITALLY VERIFIED ELECTRONIC SIGNATURE AND SEAL, OF A FLORIDA LICENSED SURVEYOR AND MAPPER EMPLOYED BY BROWN & PHILLIPS, INC.

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988, 615–3991 FAX

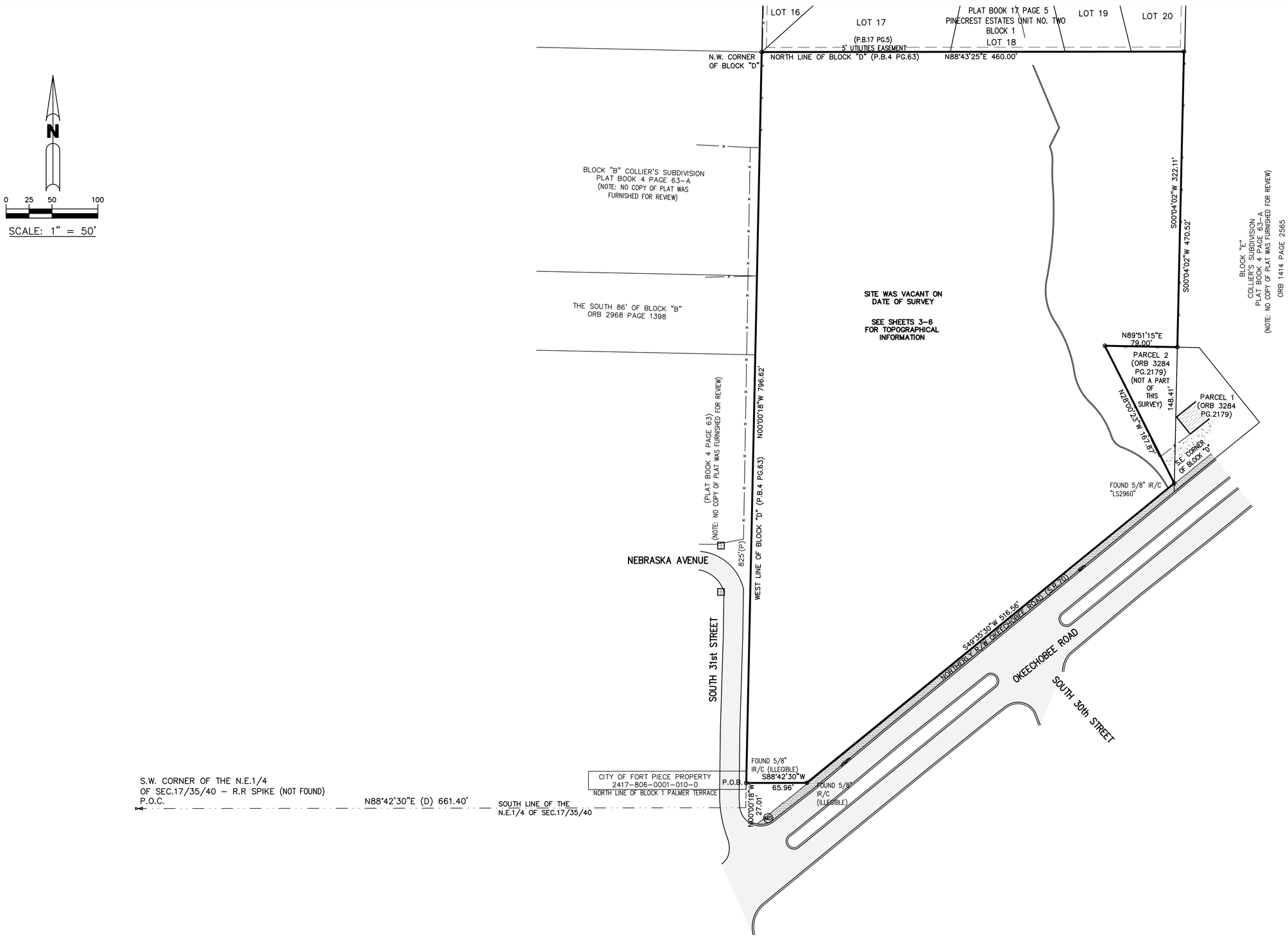
DATE	REVISIONS	#
12/19/19	ADD WETLANDS & TREE CHART	1
3/12/20	ADD'L WETLANDS DATA	2

DRAWN: JAO
CHECKED: JEP
F.B.ST. LUCIE CO.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: N.T.S.
DATE: SEPT 2019
SHT. 1 OF 6

JOHN E. PHILLIPS III
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA No. 4826
DATE: _____

C:\Projects\Brown & Phillips\2019\19-098\19-098 Fort Pierce North Property Boundary Survey.dwg, 3/12/2020 10:39:41 PM, AutoCAD PDF (Smallest File).pc3



BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=50'
DATE: SEPT. 2019
SHEET 2 OF 6

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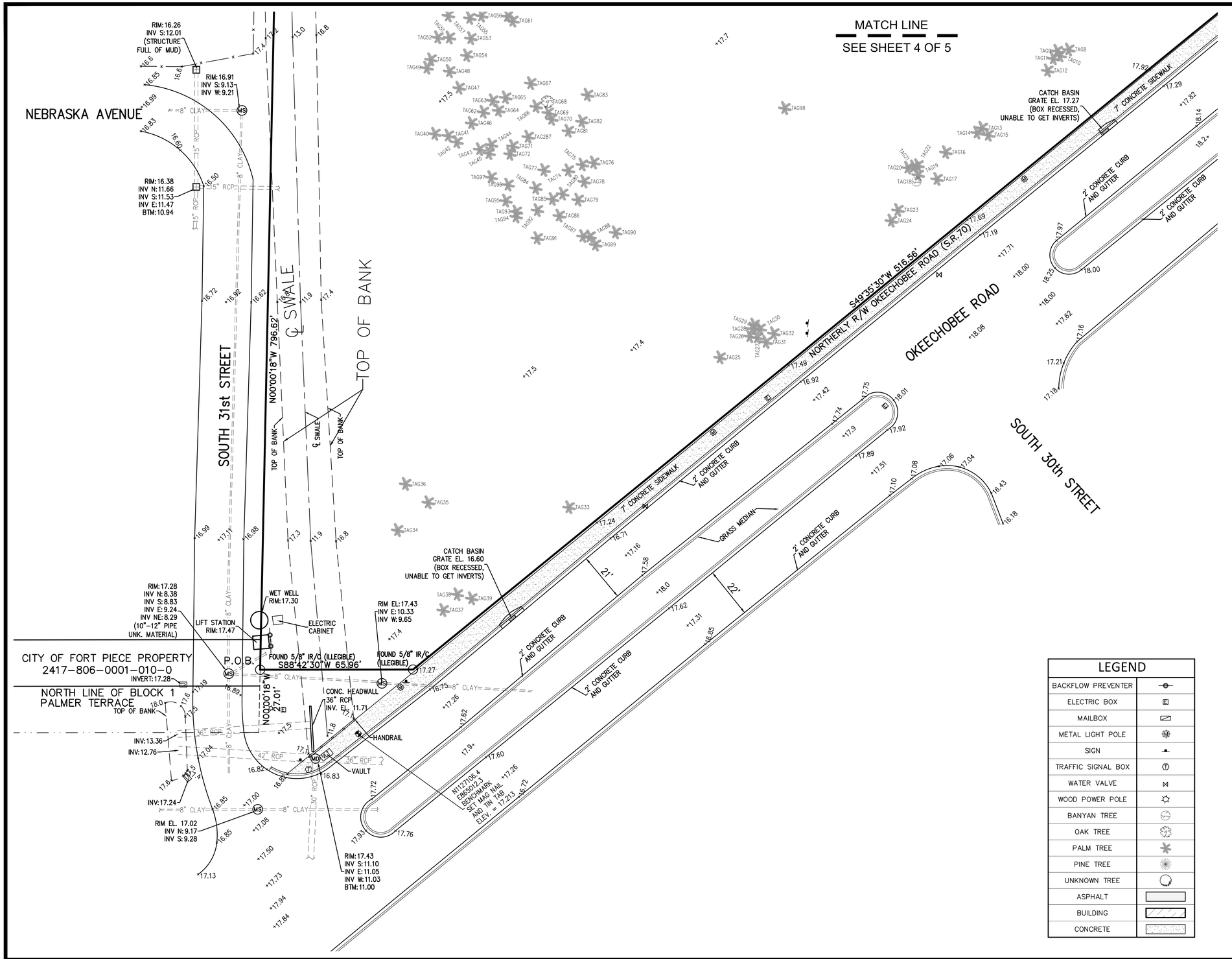

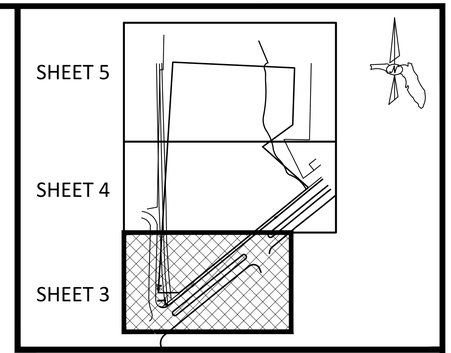

KEY MAP
NOT TO SCALE

N

0 10 20 40

SCALE: 1" = 20'

LEGEND	
BACKFLOW PREVENTER	
ELECTRIC BOX	
MAILBOX	
METAL LIGHT POLE	
SIGN	
TRAFFIC SIGNAL BOX	
WATER VALVE	
WOOD POWER POLE	
BANYAN TREE	
OAK TREE	
PALM TREE	
PINE TREE	
UNKNOWN TREE	
ASPHALT	
BUILDING	
CONCRETE	

ABBREVIATIONS:
P.O.C.- POINT OF COMMENCEMENT
P.O.B. - POINT OF BEGINNING
P.B. - PLAT BOOK
ORB - OFFICIAL RECORD BOOK
D.B. - DEED BOOK
PG. - PAGE
R/W - RIGHT-OF-WAY
R - RADIUS
Δ - CENTRAL ANGLE
A - ARC LENGTH
U.E. - UTILITY EASEMENT
D.E. - DRAINAGE EASEMENT
(P) - PLAT DIMENSION
(D) - DEED DIMENSION
(M) - MEASURED DIMENSION
℄ - CENTERLINE
IR - IRON ROD
IR/C - IRON ROD WITH CAP AS NOTED
C.M. - 4"x4" CONCRETE MONUMENT
PRM - PERMANENT REFERENCE MONUMENT
PCP - PERMANENT CONTROL POINT
N/D - NAIL & DISK
PK - PARKER KALON
NAD - NORTH AMERICAN DATUM
NAVD - NORTH AMERICAN VERTICAL DATUM
LB - LICENSED BUSINESS
WM - WATER MAIN
TOW - TOP OF WALL
INV - INVERT
DIP - DUCTILE IRON PIPE
PVC - POLYVINYL CHLORIDE PIPE
CMP - CORRUGATED METAL PIPE
CONC - CONCRETE
MON - MONUMENT
RCP - REINFORCED CONCRETE PIPE
HDPE - HIGH DENSITY POLYETHYLENE PIPE
EL. - ELEVATION

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 3 OF 6

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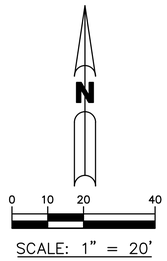

LEGEND			
BACKFLOW PREVENTER		BANYAN TREE	
ELECTRIC BOX		OAK TREE	
MAILBOX		PALM TREE	
METAL LIGHT POLE		PINE TREE	
SIGN		UNKNOWN TREE	
TRAFFIC SIGNAL BOX		ASPHALT	
WATER VALVE		BUILDING	
WOOD POWER POLE		CONCRETE	

ABBREVIATIONS:
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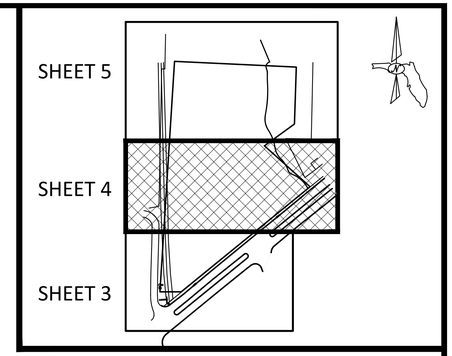
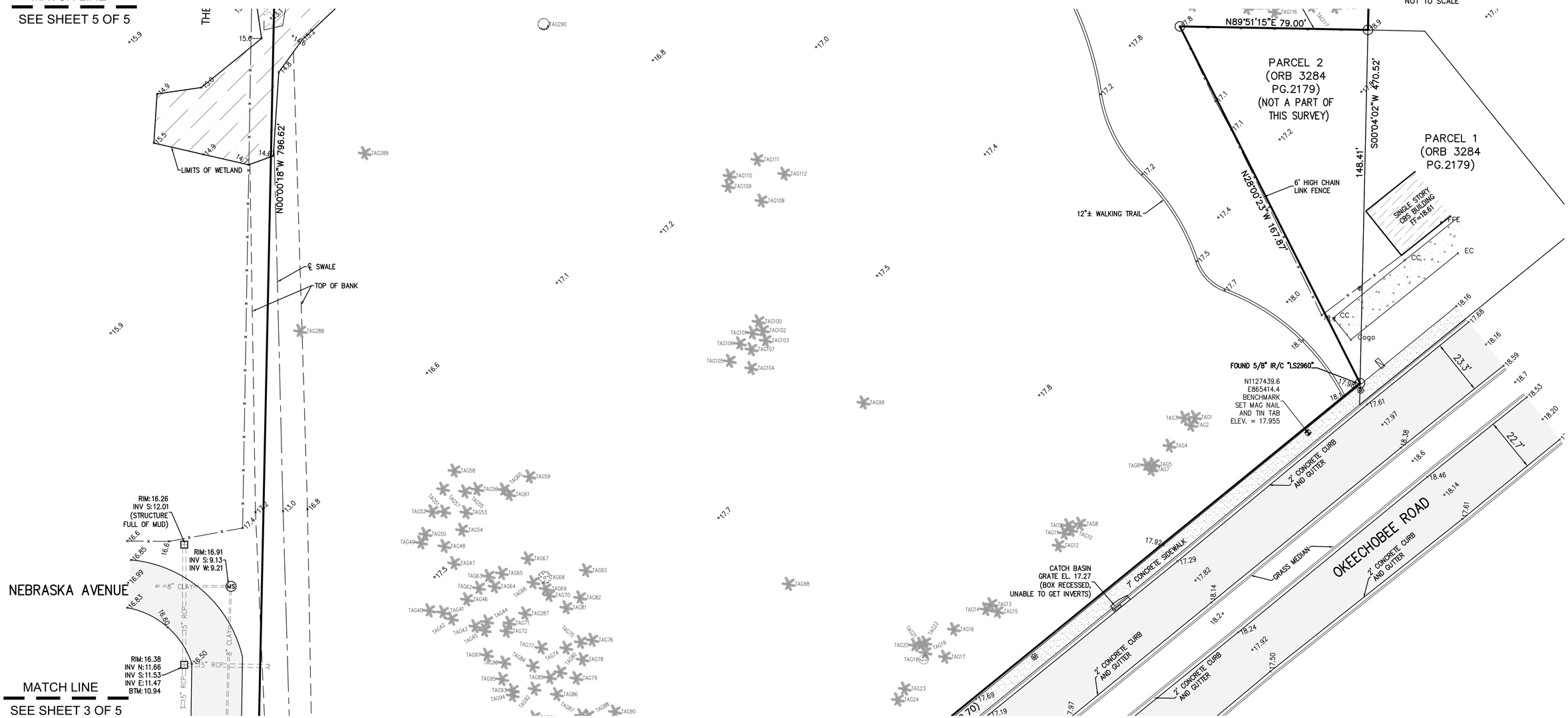


KEY MAP
NOT TO SCALE

MATCH LINE
SEE SHEET 5 OF 5



MATCH LINE
SEE SHEET 3 OF 5

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 4 OF 6

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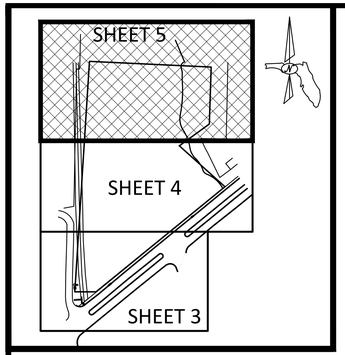

KEY MAP
NOT TO SCALE

LOTS VACANT ON DATE OF SURVEY

LOTS VACANT ON DATE OF SURVEY

℄ WALKING TRAIL

N88°43'25"E 460.00'

N00°00'18"W 796.62'

CHAINLINK FENCE

TOP OF BANK

TOP OF WATER
EL=14.6 ON 11/27/19

TOP OF BANK

EDGE OF WATER

EDGE OF WATER

LIMITS OF WETLAND

CHAINLINK FENCE

WETLAND
AREA=0.186ACRES
(WITHIN PROPOERTY)

TOP OF WATER
EL=13.7 ON 11/27/19

12"± WALKING TRAIL

6' HIGH CHAIN LINK FENCE

S00°04'02"W 322.11'

S00°04'02"W 470.52'

6' HIGH CHAIN LINK FENCE

N89°51'15"E 79.00'

PARCEL 2

MATCH LINE
SEE SHEET 4 OF 5

N

0 10 20 40

SCALE: 1" = 20'

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 5 OF 6

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TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
1	PALM	20	17'
2	PALM	16	17'
3	PALM	18	15'
4	PALM	14	22'
5	PALM	18	18'
6	PALM	16	14'
7	PALM	18	14'
8	PALM	20	18'
9	PALM	16	15'
10	PALM	24	15'
11	PALM	16	18'
12	PALM	16	19'
13	PALM	22	10'
14	PALM	24	15'
15	PALM	24	13'
16	PALM	16	14'
17	PALM	20	17'
18	BANYAN	48	
19	PALM	16	18'
20	PALM	14	18'
21	PALM	16	15'
22	PALM	16	10'
23	PALM	20	14'
24	PALM	18	15'
25	PALM	18	18'
26	PALM	16	15'
27	PALM	20	15'
28	PALM	16	17'
29	PALM	16	11'
30	PALM	18	14'
31	PALM	24	16'
32	PALM	16	7'
33	PALM	18	19'
34	PALM	16	17'
35	PALM	18	17'
36	PALM	18	18'
37	PALM	18	20'
38	PALM	16	21'
39	PALM	14	17'
40	PALM	20	18'
41	PALM	18	20'
42	PALM	16	19'
43	PALM	16	19'
44	PALM	16	21'
45	PALM	18	19'
46	PALM	20	22'
47	PALM	16	19'
48	PALM	16	18'
49	PALM	18	17'
50	PALM	16	20'
51	PALM	18	19'
52	PALM	10	18'
53	PALM	14	18'
54	PALM	18	18'
55	PALM	20	22'
56	PALM	14	19'
57	PALM	10	18'
58	PALM	14	19'
59	PALM	18	16'
60	PALM	16	16'
61	PALM	18	15'
62	PALM	16	23'
63	PALM	16	21'
64	PALM	20	18'
65	PALM	12	19'
66	PALM	18	21'
67	PALM	18	17'
68	OAKK	5	
69	PALM	20	18'
70	PALM	22	20'
71	PALM	20	20'
72	PALM	16	18'
74	PALM	14	18'
75	PALM	14	9'
76	PALM	24	19'
77	PALM	18	18'
78	PALM	18	17'
79	PALM	14	13'
80	PALM	18	18'
81	PALM	24	19'
82	PALM	18	16'
83	PALM	16	15'
84	PALM	16	19'
85	PALM	16	20'
86	PALM	18	17'
87	PALM	16	20'
88	PALM	16	18'
89	PALM	16	16'
90	PALM	18	22'
91	PALM	18	22'
92	PALM	16	19'
93	PALM	18	21'
94	PALM	14	20'
95	PALM	16	20'
96	PALM	18	20'

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
97	PALM	18	20'
98	PALM	18	19'
99	PALM	16	16'
100	PALM	18	17'
101	PALM	16	17'
102	PALM	18	19'
103	PALM	16	18'
104	PALM	16	18'
105	PALM	16	18'
106	PALM	14	15'
107	PALM	10	8'
108	PALM	18	19'
109	PALM	16	35'
110	PALM	14	20'
111	PALM	16	20'
112	PALM	18	18'
113	OAK	6	
114	PALM	14	13'
115	PALM	22	18'
116	PALM	20	20'
117	PALM	10	7'
118	UNKNOWN	12	
119	OAK	38	
120	PALM	14	18'
121	OAK	18	
122	OAK	12	
123	PALM	18	21'
124	PALM	18	16'
125	PALM	16	26'
126	PALM	18	29'
127	OAK	24	
128	PALM	16	32'
129	UNKNOWN	10	
130	PINE	28	
131	PALM	16	24'
132	UNKNOWN	24	
133	OAK	10	
134	OAK	28	
135	PALM	18	30'
136	OAK	40	
137	PALM	18	18'
138	PINE	10	
139	UNKNOWN	8	
140	OAK	36	
141	PALM	16	20'
142	PALM	14	25'
143	PALM	16	25'
144	OAK	20	
145	PALM	14	26'
146	PALM	16	21'
147	PALM	18	23'
148	OAK	16	
149	UNKNOWN	18	
150	PALM	22	18'
151	PALM	14	7'
152	PALM	22	22'
153	PALM	16	20'
154	PALM	22	18'
155	PALM	18	17'
156	PALM	18	16'
157	PALM	16	13'
158	PALM	12	10'
159	OAK	10	
160	OAK	16	
161	PALM	12	7'
162	PALM	18	24'
163	PALM	16	21'
164	OAK	36	
165	UNKNOWN	14	
166	UNKNOWN	10	
167	UNKNOWN	8	
168	OAKK	12	
169	OAKK	22	
170	OAKK	18	
171	PALM	16	17'
172	PALM	18	13'
173	PALM	12	6'
174	UNKNOWN	16	
175	OAKK	16	
176	UNKNOWN	20	
177	PALM	18	28'
178	PALM	8	8'
179	PALM	20	22'
180	PALM	12	6'
181	PALM	18	18'
182	PALM	18	16'
183	PALM	18	17'
184	OAKK	26	
185	PALM	16	28'
186	PALM	14	23'
187	PALM	16	14'
188	PALM	16	18'
189	PALM	16	20'
190	UNKNOWN	24	
191	PALM	16	14'
192	OAKK	36	
193	UNKNOWN	10	

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
194	OAK	36	
195	PALM	18	26'
196	OAK	18	
197	UNKNOWN	8	
198	UNKNOWN	8	
199	UNKNOWN	8	
200	OAK	10	
201	OAK	6	
202	OAK	6	
203	OAK	4	
204	OAK	6	
205	OAK	8	
206	OAK	8	
207	OAK	8	
208	OAK	6	
209	OAK	6	
210	UNKNOWN	10	
211	PALM	16	18'
212	PALM	18	18'
213	PALM	14	
214	OAK	20	
215	OAK	26	
216	OAK	30	
217	UNKNOWN	10	
218	OAK	14	
219	PALM	20	19'
220	OAK	30	
221	UNKNOWN	8	
222	UNKNOWN	12	
223	UNKNOWN	8	
224	PALM	18	20'
225	UNKNOWN	6	
226	UNKNOWN	6	
227	UNKNOWN	4	
228	UNKNOWN	6	
229	OAK	6	
230	UNKNOWN	12	
231	PALM	22	18'
232	UNKNOWN	30	
233	PALM	22	17'
234	OAK	12	
235	OAK	10	
236	UNKNOWN	8	
237	UNKNOWN	6	
238	UNKNOWN	6	
239	OAK	16	
240	OAK	10	
241	UNKNOWN	14	
242	UNKNOWN	8	
243	UNKNOWN	8	
244	UNKNOWN	10	
245	PINE	10	
246	PINE	10	
247	OAK	10	
248	OAK	10	
249	PALM	18	23'
250	PALM	18	20'
251	PINE	10	
252	PALM	16	22'
253	OAK	26	
254	OAK	16	
255	OAK	14	
256	OAK	12	
257	OAK	14	
258	PALM	22	28'
259	UNKNOWN	8	
260	PALM	12	6'
261	PALM	14	10'
262	UNKNOWN	10	
263	PINE	14	
264	OAK	18	
265	PALM	16	21'
266	PALM	18	20'
267	PALM	20	18'
268	PALM	20	20'
269	OAK	20	
270	OAK	10	
271	PALM	16	13'
272	OAK	36	
273	PALM	16	14'
274	UNKNOWN	6	
275	UNKNOWN	6	
276	PALM	16	25'
277	PALM	12	11'
278	PALM	18	18'
279	OAK	18	
280	OAK	18	
281	PALM	18	22'
282	PALM	18	18'
283	PALM	16	10'
284	PINE	16	
285	PINE	12	
286	PINE	10	
287	PALM	18	19'
288	PALM	16	18'
289	PALM	18	19'
290	UNKNOWN	30	

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUNKNOWNHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAKD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

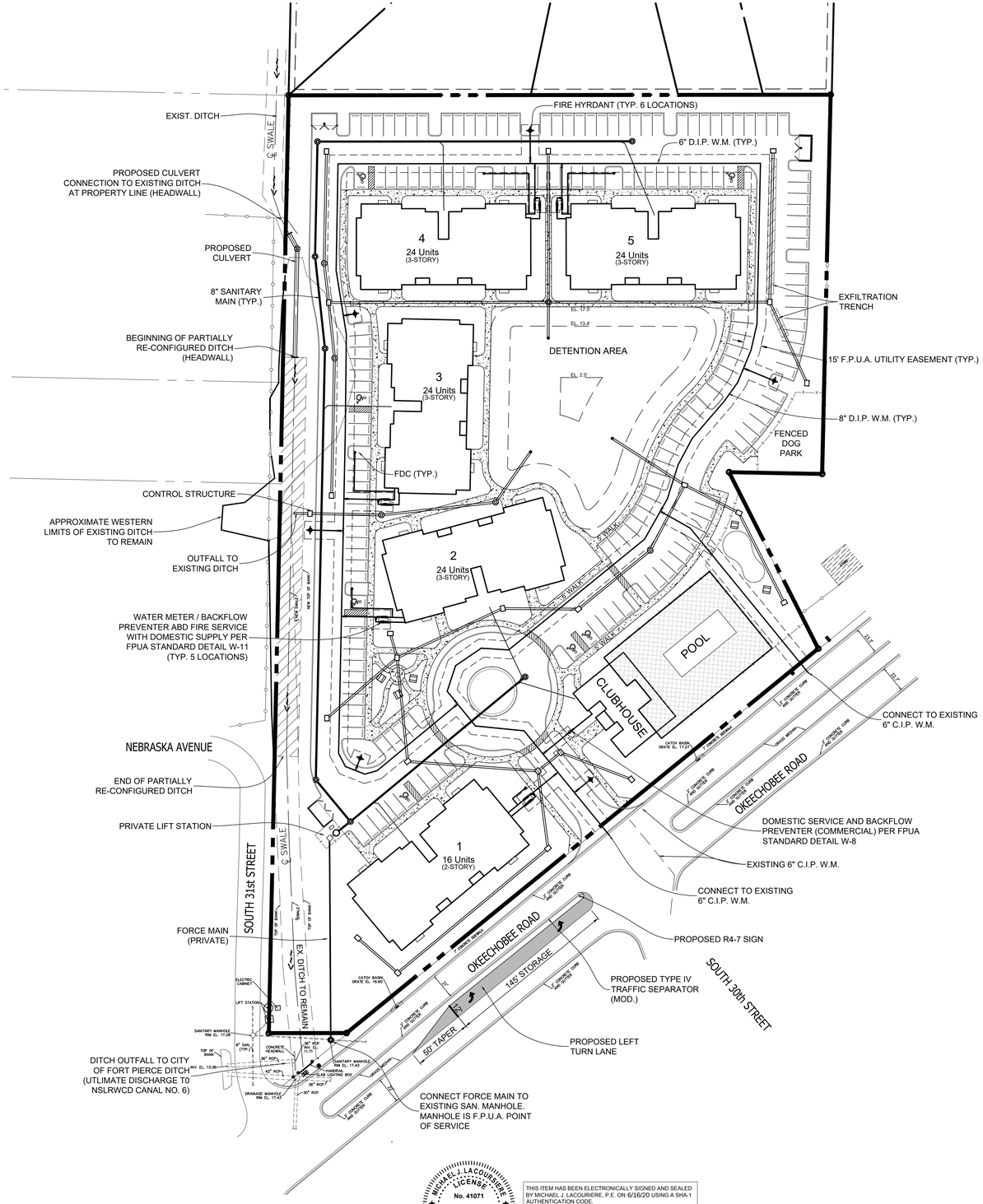
SKETCH OF
BOUNDARY SURVEY

FORT PINEERCE NORTH
PROPERTY
OKEECHOBEE ROAKD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 6 OF 6

C:\Projects\Brown & Phillips\2019\19-098\19-098 Fort Pierce North Property Boundary Survey.dwg, 3/12/2020 10:35:47 PM, AutoCAD PDF (Smallest File).pc3



GRAPHIC SCALE

0 25 50 100 150

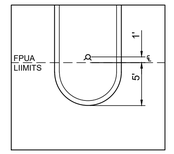
(IN FEET)
1 INCH = 50 FT.

LEGEND

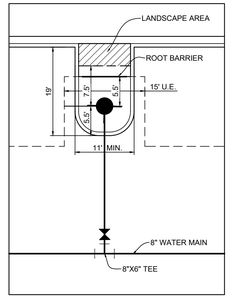
- DRAINAGE PIPE AND INLET (FINAL PIPE SIZES TO BE DETERMINED)
- SANITARY MAIN (8" PVC) AND MANHOLE (SANITARY SYSTEM TO BE PRIVATE)
- WATER MAIN (8" C-900 / D.I.P.)
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT
- RE-CONFIGURED DITCH

NOTES:

1. MINIMUM FINISHED FLOOR ELEVATION TO BE SET AT OR ABOVE 100 - YEAR, 3 - DAY STAGE (ZERO DISCHARGE)
2. MINIMUM PERIMETER ELEVATION TO BE SET AT OR ABOVE 25 - YEAR, 3- DAY STAGE.
3. RESIDENTIAL BUILDINGS TO BE FIRE SPRINKLED. FIRE DEPARTMENT CONNECTIONS TO BE LOCATED 100' MAXIMUM FROM A FIRE HYDRANT.
4. SANITARY SYSTEM TO BE PRIVATE.
5. WATER DISTRIBUTION SYSTEM TO BE PUBLIC, FORT PIERCE UTILITY AUTHORITY.
6. THIS DRAWING UTILIZES BASE SITE PLAN AND SURVEY INFORMATION PREPARED BY LITTERICK LANDSCAPE ARCHITECTURE AND BROWN AND PHILIPS. INC. USED WITH PERMISSION.

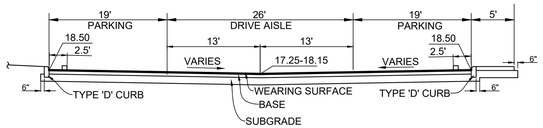


FDC NEAR UTILITY EASEMENT
NOT TO SCALE

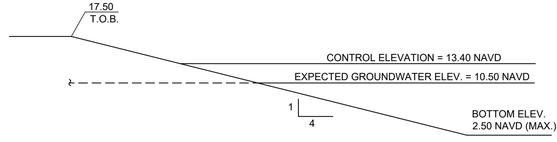


FIRE HYDRANT SHALL HAVE 5' CLEAR ON ALL SIDES
LANDSCAPE MATERIAL SHALL BE LIMITED TO SOD WITHIN 7.5' OF FIRE HYDRANT

HYDRANT LOCATION DETAIL
NOT TO SCALE



TYPICAL PARKING / DRIVE SECTION



DETENTION AREA BANK SECTION

100 YR - 3 D RAINFALL	12.23 INCHES
100 YR - 3 D FLOOD ELEV.	18.58' NAVD
MINIMUM FINISHED FLOOR	19.50' NAVD
25 YR - 3 D RAINFALL	9.5 INCHES
25 YR - 3 D FLOOD ELEV	17.76' NAVD
MINIMUM PERIMETER ELEVATION	17.90' NAVD
10 YR - 1 D RAINFALL	6.0 INCHES
10 YR - 1 D FLOOD ELEV	16.16 NAVD
MINIMUM ROADWAY ELEVATION	17.25' NAVD

CONCEPTUAL SURFACE WATER MANAGEMENT DATA

MICHAEL J. LACOURIERE
LICENSE
No. 41071
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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MICHAEL B. SCHORAH & ASSOCIATES, INC.
ENGINEERS ◆ SURVEYORS ◆ DEVELOPMENT CONSULTANTS
TEL. (561) 968.0080 LB# 2438
FAX. (561) 642-9726
www.schorah.com
EB# 2438
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FLORIDA 33406

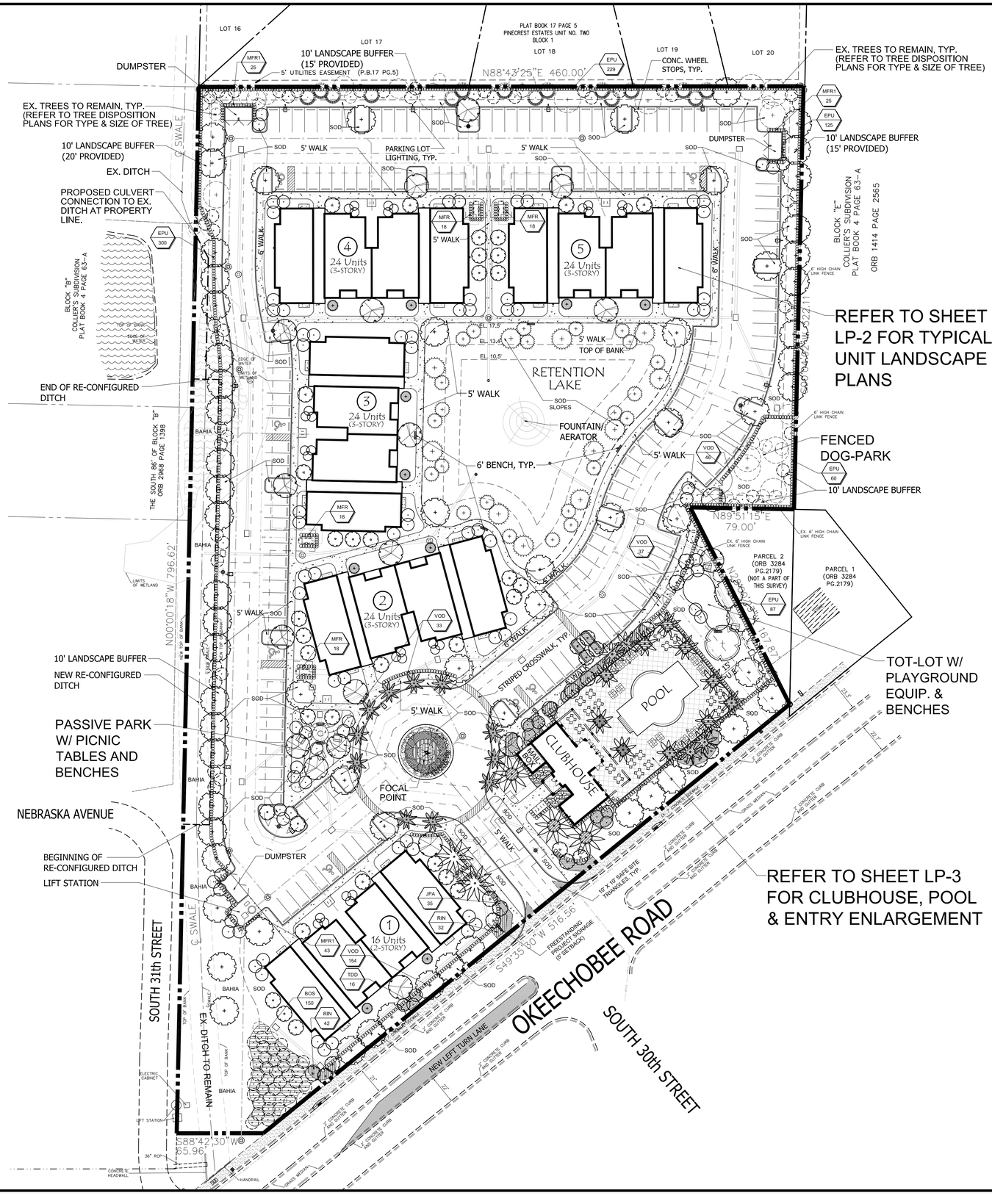
REVISIONS

DRAWN/CHECKED: AMG/MJL
SCALE: 1" = 50'
DATE: MARCH 2020
MICHAEL J. LACOURIERE, P.E. FLORIDA LICENSE NO. 41071 FOR MICHAEL B. SCHORAH AND ASSOCIATES, INC.
DATE:

PROJECT: ARIA APARTMENTS
DESCRIPTION: CONCEPTUAL ENGINEERING PLAN

JOB NO. 1769
SHEET NO. 1
OF 1C

Path\Name : P:\1769 FORT PIERCE NORTH\CIVIL\CAD\1769 SITE.dwg
Date\Time : Tue, 16 Jun 2020 - 8:51am



EXISTING TREE LEGEND

	SYMBOL	QUANTITY
EXISTING PALM TO REMAIN	ESP	20
RELOCATED PALM	RSP	155
EXISTING PINE TO REMAIN	EPE	5
EXISTING OAK TO REMAIN	EQL	11

PROPOSED TREE LEGEND

	SYMBOL	QUANTITY
SPECIMEN LIVE OAK, RANCH STYLE *(QUERCUS VIRGINIANA)*	QV1	1
ROYAL POINCIANA *(DELONIX REGIA)*	DR	1
LIVE OAK *(QUERCUS VIRGINIANA)*	QV	67
SYLVESTER PALM *(PHOENIX SYLVESTRIS)*	PS	5
YELLOW TABEBUIA *(TABEBUIA CARAIBA)*	TC	19
CRAPE MYRTLE (MULTI-TRUNK) *(LAGERSTROEMIA INDICA 'MUSKOGEE')*	LM	25
CRAPE MYRTLE (SINGLE TRUNK) *(LAGERSTROEMIA INDICA 'NATCHEZ')*	LI	33
CABBAGE PALM *(SABAL PALMETTO)*	SP	91
WASHINGTON PALM *(WASHINGTONIA ROBUSTA)*	WR	11
COCONUT PALM *(COCOS NUCIFERA)*	CN	14
JAPANESE BLUEBERRY *(ELAEOCARPUS DECIPIENS)*	ED	10
BALD CYPRESS (SMALL) *(TAXODIUM DISTICHUM)*	TD	23
BALD CYPRESS (LARGE) *(TAXODIUM DISTICHUM)*	TD1	11
CHRISTMAS PALM (TRIPLE) *(ADONIDIA MERRILLII)*	AM3	10
S. FLORIDA SLASH PINE *(PINUS ELLIOTTII 'DENSA')*	PE	15

LANDSCAPE DATA

SITE AREA:	296,012.97 S.F. (6.796 ACRES)
VEHICULAR USE AREA:	82,965.43 S.F. (28.0%)
INTERIOR LANDSCAPE AREA REQUIRED:	5,531 S.F. (1 S.F. PER 15 S.F. OF VEH, USE AREA)
INTERIOR LANDSCAPE AREA PROVIDED:	8,284.25 S.F.
INTERIOR TREES REQUIRED:	56 TREES (1 TREE PER 100 S.F. OF REQ'D. INT. LANDSCAPE AREA)
INTERIOR TREES PROVIDED:	166 TREES (110 ADDITIONAL TREES)

PERIMETER LANDSCAPING REQUIREMENTS

BUFFER (SIDE)	LENGTH (L.F.)	REQ'D. WIDTH	PROVIDED WIDTH	REQ'D. AREA (S.F.)	TREES REQ'D.	TREES PROVIDED
NORTH	460'	10'	15'	4,600	*23	33 TREES
SOUTH	582.52'	10'	25'	5,825.2	**20	25 TREES
EAST	568.98'	10'	10-15'	5,689.8	*29	33 TREES
WEST	796.62'	10'	10-20'	7,966.2	*40	46 TREES
				TOTALS:	112	***137 TREES

* REQUIRES 1 TREE PER 200 S.F. OF BUFFER
** REQUIRES 1 TREE PER 300 S.F. OF BUFFER
*** 25 ADDITIONAL TREES

REFER TO SHEET LP-4 FOR PLANT LIST

Landscape Plan

0 20' 40' 80' 120' 160'

Scale: 1" = 40'

NORTH

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LANDSCAPE NOTES

1. ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER AS DEFINED BY THE DIVISION OF PLANT INDUSTRY "GRADES AND STANDARDS" LATEST EDITION.
2. ALL LANDSCAPE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FT. PIERCE CODE.
3. THE LANDSCAPE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS CHANGES WITHOUT THE AUTHORIZATION OF THE CITY OF FT. PIERCE, THE OWNER AND THE LANDSCAPE ARCHITECT.
4. THE LANDSCAPE CONTRACTOR SHALL REVIEW THE PROJECT DRAINAGE AND UTILITY PLANS PRIOR TO CONSTRUCTION AND AVOID ALL CONFLICTS. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS.
6. ALL TREES SHALL BE LOCATED WITHIN A MULCH PLANTING BED WITH A MINIMUM OF TWO (2) FEET OF CLEARANCE TO THE EDGE OF THE BED.
7. ALL SOD SHALL BE STENOTAPHRUM SECONDATUM 'FLORITAM' (ST. AUGUSTINE SOD), UNLESS OTHERWISE NOTED.
8. ALL VEGETATION SHALL BE SELECTED AND POSITIONED SO THAT IT DOES NOT PRESENT OBSTRUCTIONS TO THE LINE OF SIGHT AT INTERSECTIONS PURSUANT TO FLORIDA DEPARTMENT OF TRANSPORTATION SIGHT LINE GUIDELINES.
9. CLEAR VISIBILITY SHALL BE MAINTAINED BETWEEN 30" AND 8' WITHIN SIGHT VISIBILITY TRIANGLES. 10' X 10' SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT THE INTERSECTIONS WITH THE PUBLIC RIGHT OF WAY. IN ADDITION, ALL LANDSCAPING SHALL CONFORM TO THE REQUIREMENTS OF FDOT INDEX 546.
10. ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS, EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN NATIVE SOILS AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.
11. ALL PROPOSED LANDSCAPE AREAS SHALL RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSING DEVICE ACCORDING TO LOCAL AND STATE CODES. IRRIGATION WATER SHALL BE PULLED FROM A WELL SOURCE AND CITY WATER WILL BE USED AROUND BUILDING.
12. ALL ABOVE GROUND UTILITIES SHALL BE SCREENED FROM VIEW ON THREE SIDES WITH AN APPROPRIATE HEDGE MATERIAL. HEIGHT OF PLANT MATERIAL AT TIME OF INSTALLATION SHALL BE AT LEAST AS TALL AS THE UTILITY BEING SCREENED AND SHALL BE SPACED APPROPRIATELY IN ORDER TO PROVIDE COMPLETE SCREENING OF UTILITY WITHIN ONE YEAR OF INSTALLATION.
13. ALL TREES NOT LOCATED WITHIN A LANDSCAPE BED SHALL RECEIVE A 4-5' DIA. MULCH RING.
14. ALL EXOTIC AND NUISANCE VEGETATION SHALL BE REMOVED FROM SUBJECT PROPERTY PRIOR TO ANY CERTIFICATE OF OCCUPANCY.
15. TREES ARE TO BE INSTALLED WITH A 10' SEPARATION FROM FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A 10' SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM. HOWEVER IN NO CASE SHALL A TREE ENCROACH CLOSER THAT 5' WITH A ROOT BARRIER PRESENT. ONLY SOD CAN BE INSTALLED WITHIN 7.5' OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHALL.
16. ALL PLANT MATERIAL SHALL BE INSTALLED AT THE HEIGHT, SPREAD AND DBH SHOWN ON THE PLANT LIST, CONTAINER SIZES ARE GIVEN AS A SUGGESTION ONLY.

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

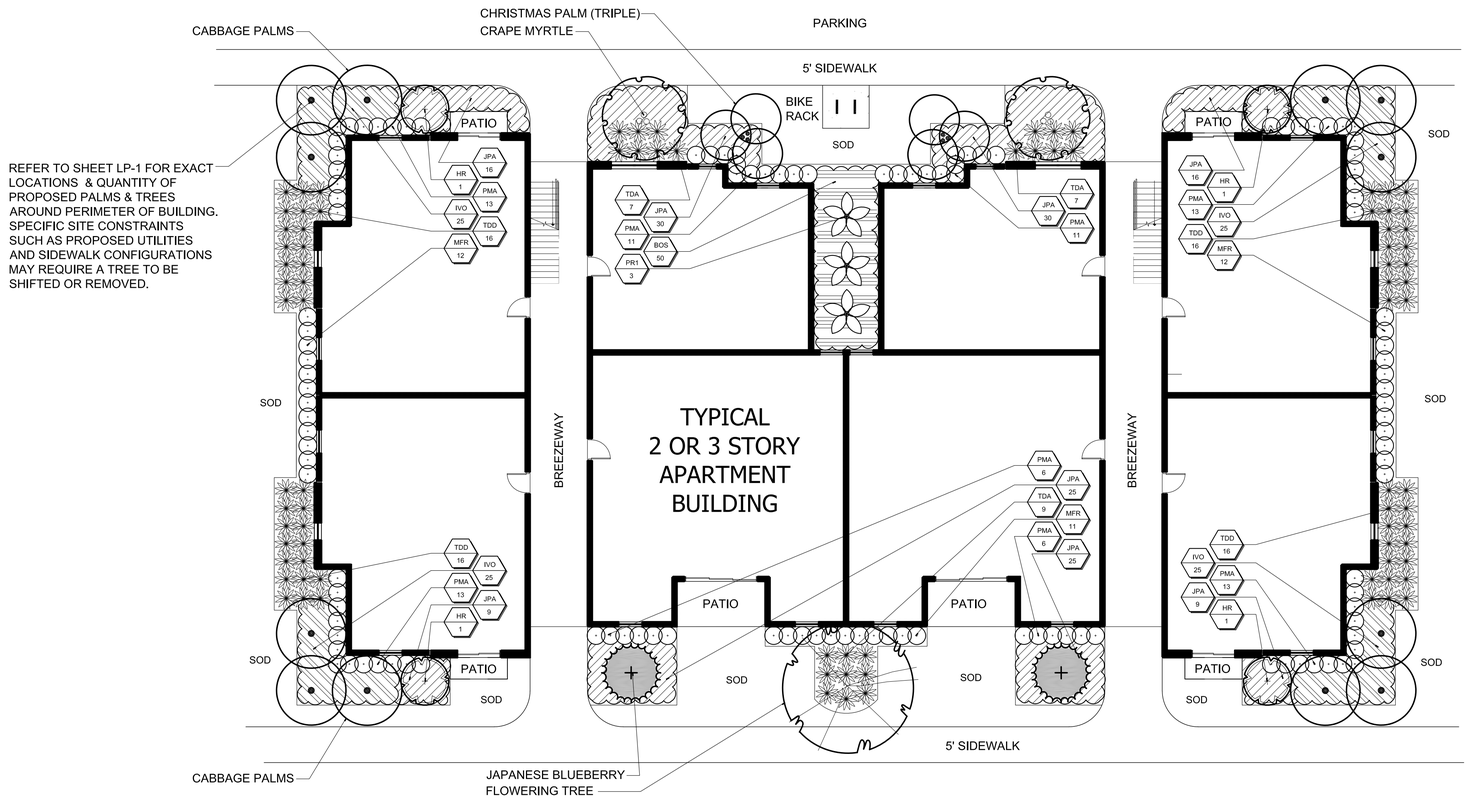
Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

LP-1

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045



TYPICAL UNIT PLANT LIST (5 BUILDINGS)

QUANTITIES ARE FOR EACH BUILDING

TREES

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
M	PR1	3	PHOENIX ROEBELENII	PYGMY DATE PALM (SINGLE)	7' O.A.	7'	FULL & THICK, SINGLE TRUNK SPECIMEN, MATCHED
M	HR	4	HIBISCUS ROSA-SINENSIS	PINK HIBISCUS STD.	6-7' O.A. STD.	3-4'	FULL & THICK, SINGLE TRUNK STD.

SHRUBS & GROUNDCOVERS

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	64	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
* V	TDA	23	TRIPSACUM DACTYLOIDES	FAKAHATCHEE GRASS	#3, 24" O.A.	48" O.C.	FULL & THICK
* V	BOS	50	NEPHROLEPIS EXALTATA	BOSTON FERN	#3, 16" O.A.	24" O.C.	FULL & THICK
M	PMA	86	PODOCARPUS MACROPHYLLUS	PODOCARPUS	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR	35	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	IVO	100	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" O.A.	24" O.C.	FULL & THICK
M	JPA	160	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

SOD: ST. AUGUSTINE 'FLORITAM'
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.

Typical Unit Landscape Plan

0 5' 10' 20' 30' 40'
NORTH
Scale: 1" = 10'

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

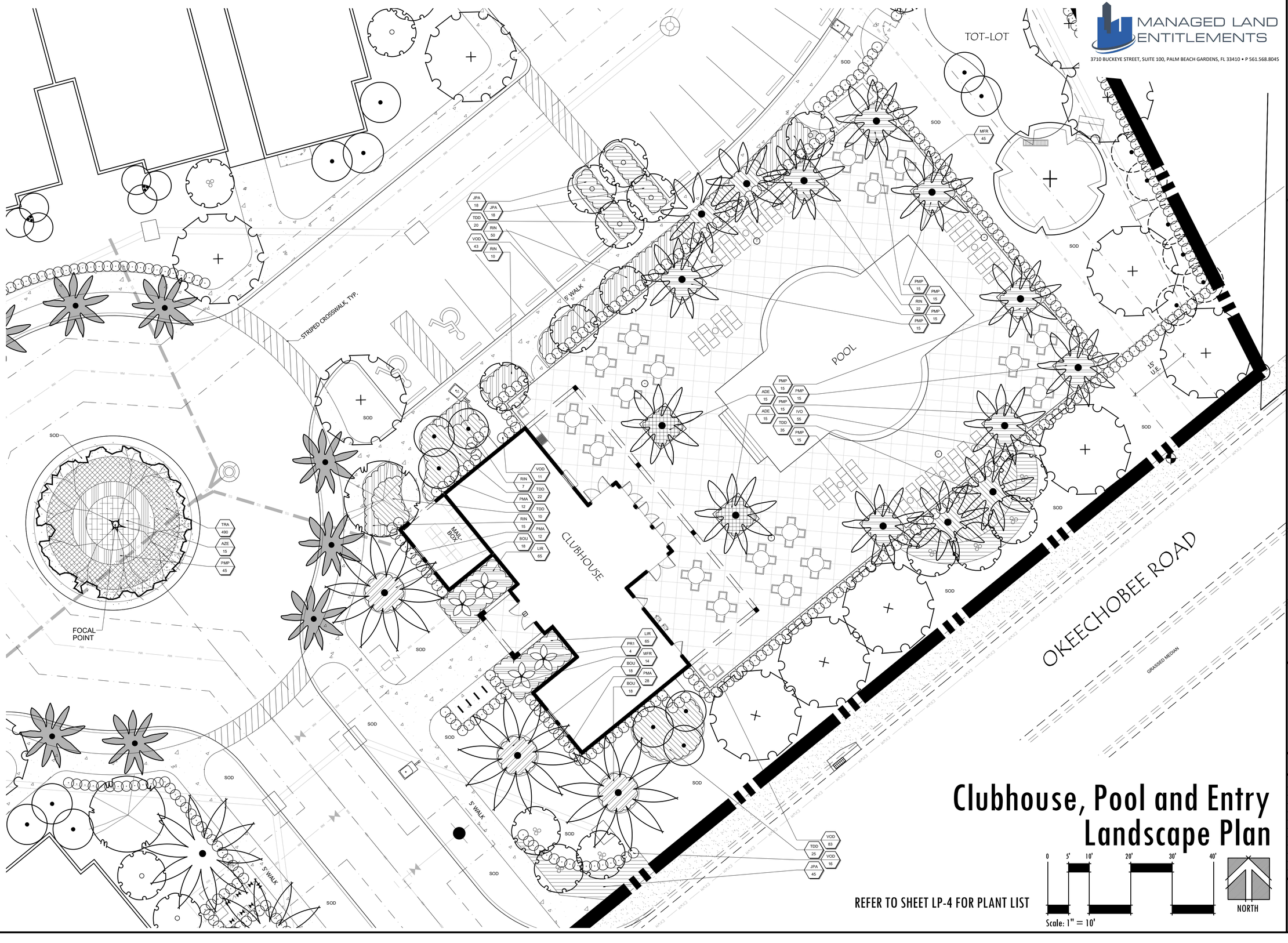
Ft. Pierce, Florida

Landscape Architect of Record
REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA
Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 10'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
LP-2


TOT-LOT
SOD
MFR 45
JPA 18
JPA 18
TDD 20
RIN 50
VOD 43
RIN 10
5' WALK
STRIPED CROSSWALK, TYP.
PMP 15
PMP 15
RIN 22
PMP 15
PMP 15
POOL
15' SET
PMP 15
ADE 15
PMP 15
PMP 15
ADE 15
IVO 55
TDD 35
PMP 15
SOD
SOD
SOD

PLANT LIST (LP-1 & LP-3)

NOTE: DOES NOT INCLUDE PLANTS SPECIFIED ON SHEET LP-2, TYPICAL UNIT LANDSCAPE PLAN

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
* V	RSP	155	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		RELOCATED CABBAGE PALM
* V	ESP	20	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		EXISTING CABBAGE PALM TO REMAIN
* V	EPE	5	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	SEE DISPOSITION CHART		EXISTING SLASH PINE TO REMAIN
* V	EQL	11	QUERCUS LAURIFOLIA	LAUREL OAK	SEE DISPOSITION CHART		EXISTING LAUREL OAK TO REMAIN
* V	PE	15	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
* V	SP	91	SABAL PALMETTO	CABBAGE PALM	12-22' C.T.	N/A	SLICK TRUNK, HURRICANE CUT, STAGGER HEIGHTS
M	DR	1	DELONIX REGIA	ROYAL POINCIANA	14-16' O.A., 3.5" DBH	7'	FULL & THICK, SINGLE TRUNK, 3" CAL.
* V	TD	23	TAXODIUM DISTICHUM	BALD CYPRESS	8' O.A., 1.5" DBH	4'	FULL & THICK, SINGLE TRUNK
* V	TD1	11	TAXODIUM DISTICHUM	BALD CYPRESS	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
M	WR	11	WASHINGTONIA ROBUSTA	WASHINGTON PALM	20' O.A.	N/A	FULL & THICK, MATCHED
* V	QV	67	QUESRCUS VIRGINIANA	LIVE OAK	14' O.A., 3" DBH	6'	FULL & THICK
* V	QV1	1	QUESRCUS VIRGINIANA	RANCH LIVE OAK	20' O.A., 8" DBH	20'	FULL & THICK, RANCH STYLE, MULTI-TRUNK SPECIMEN
V	PS	5	PHOENIX SYLVESTRIS	SYLVESTER PALM	12' WD	-	FULL & THICK, MATCHED SPECIMENS
M	ED	10	ELAEOCARPUS DECIPIENS	JAPANESE BLUEBERRY	14' O.A., 3" DBH	5'	FULL & THICK TO GROUND
M	LM	25	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE (LAVENDER)	14' O.A.	6'	FULL & THICK, MULTI-TRUNK, 5' C.T.
M	LI	33	LAGERSTROEMIA INDICA 'NATCHEZ'	CRAPE MYRTLE (WHITE)	12-14' O.A.	5'	FULL & THICK, SINGLE TRUNK STD., 2.5" DBH
M	TC	19	TABEBUIA CARAIBA	YELLOW TABEBUIA	14' O.A., 3" DBH	5'	FULL & THICK
M	AM3	10	ADONIDIA MERRILLII	CHRISTMAS PALM (TRIPLE)	14' O.A., TRIPLE	-	FULL & THICK, TRIPLE TRUNK
M	CN	14	COCOS NUCIFERA	COCONUT PALM	12' WD.	-	FULL & THICK, MATCHED HEIGHTS
M	PR1	4	PHOENIX ROEBELENII	PYGMY DATE PALM	7' O.A., SINGLE	7'	FULL & THICK, MATCHED HEIGHTS, SINGLE TRUNK

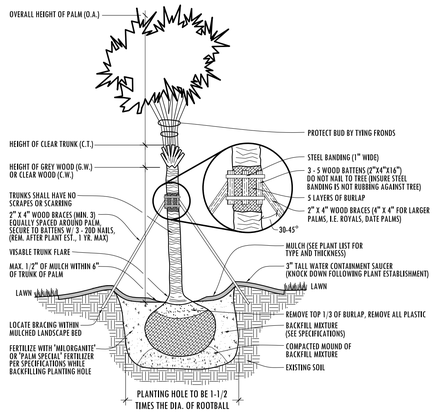
	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	128	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
V	PMA	52	PODOCARPUS MACROPHYLLUS	JAPANESE YEW	#7, 30" O.A.	24" O.C.	FULL & THICK
M	PMP	165	PODOCARPUS MACROPHYLLUS 'PRINGLES'	DWF. PODOCARPUS	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	IVO	55	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	MFR	131	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR1	93	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#7, 36" O.A.	24" O.C.	FULL & THICK
M	VOD	423	VIBURNUM ODORITISSIMUM	SWEET VIBURNUM	#3, 24" O.A.	24" O.C.	FULL & THICK
M	LIR	130	LIRIOPE MUSCARI	GREEN LIRIOPE	#3, 14" X 14"	18" O.C.	FULL & THICK
M	EPU	801	ELEAGNUS PUNGENS	SILVERTHORN	#3, 24" O.A.	24" O.C.	FULL & THICK
M	RIN	178	RAPHIOLEPIS INDICA	INDIAN HAWTHORN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	ADE	30	ASPARAGUS DENSIFLORUS 'MYERII'	FOXTAIL FERN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	JPA	116	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK
* V	BOS	150	NEPHROLEPIS BISSERATA	BOSTON FERN	#3, 16" O.A.	36-48" O.C.	FULL & THICK
V	BOU	54	BOUGAINVILLEA 'HELEN JOHNSON'	DWF. BUGAINVILLEA	#3, 16" X 16"	24" O.C.	FULL & THICK
M	AZE	15	ALPINIA ZERUMBET	VAR. SHELL GINGER	#3, 20" O.A.	36" O.C.	FULL & THICK
M	TRA	490	TRACHELOSPERMUM ASIATICUM 'MINIMA'	DWF. JASMINE	#1, 12" SPD.	12" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

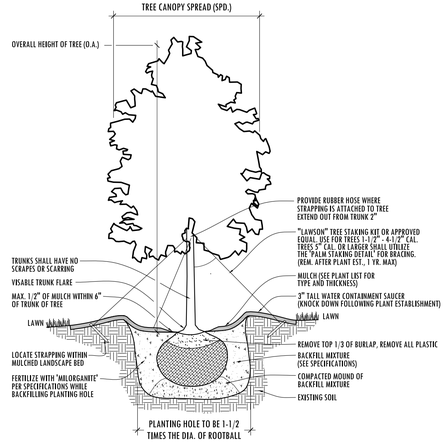
SOD: ST. AUGUSTINE 'FLORITAM' (BAHIA WHERE NOTED)
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.
IRRIGATION WATER SOURCE: WELL & PUMP

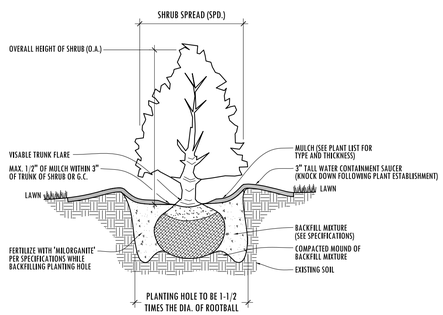
PLANTING DETAILS



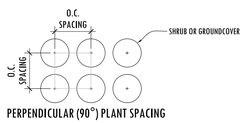
PALM PLANTING DETAIL



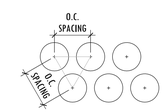
TREE PLANTING DETAIL



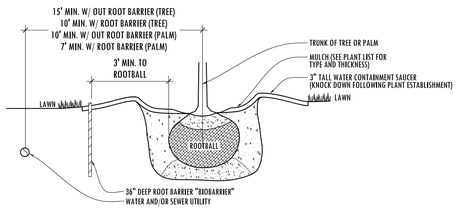
SHRUB & GROUNDCOVER PLANTING DETAIL



PERPENDICULAR (90°) PLANT SPACING



TRIANGULAR PLANT SPACING (RECOMMENDED)



ROOT BARRIER DETAIL

PLANTING SPECIFICATIONS

1. SCOPE OF WORK

LANDSCAPE CONTRACT WORK INCLUDES, BUT IS NOT LIMITED TO, SOIL PREPARATION, FINE OR FINISH GRADING, FURNISHING AND INSTALLING PLANT MATERIAL, WATERING, STAKING, GUYING AND MULCHING.

ALL LABOR AND MATERIAL FOR SOIL AMENDMENTS AND FERTILIZER THAT IS REQUIRED TO INSURE THE SUCCESSFUL ESTABLISHMENT AND SURVIVAL OF THE PROPOSED VEGETATION, AS WELL AS ALL THE COST FOR THE REMOVAL OF UNSUITABLE OR EXCESS BACKFILL MATERIAL, SHALL BE INCLUDED IN THE CONTRACTOR'S BID TO PERFORM THE WORK REPRESENTED IN THIS PLAN SET.

2. QUALITY ASSURANCE

LANDSCAPE CONTRACTOR MUST BE REGULARLY ENGAGED IN THE INSTALLATION OF LIVING PLANT MATERIAL. LABOR CREWS SHALL BE CONTROLLED AND DIRECTED BY A LANDSCAPE FOREMAN WELL VERSED IN LANDSCAPE INSTALLATION, PLANT MATERIALS, READING PLANS AND COORDINATION BETWEEN THE JOB AND NURSERY.

THE LANDSCAPE CONTRACTOR AND IRRIGATION CONTRACTOR SHALL REVIEW LAYOUT AND SCHEDULING PRIOR TO INSTALLATION OF MATERIAL. MINOR ADJUSTMENT TO IRRIGATION DESIGN MAY BE MADE IN RESPONSE TO THE NEEDS OF SPECIFIC PLANT MATERIAL. THE LANDSCAPE ARCHITECT MUST BE NOTIFIED OF SUCH CHANGES.

3. MATERIALS

PLANT SIZE AND QUALITY
PLANT SPECIES AND SIZES SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS, NOMENCLATURE SHALL CONFORM TO STANDARD PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I & II, LATEST EDITION PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE FLORIDA GRADE NUMBER 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. TIGHTLY KNIT PLANT, SO TRAINED OR FAVORED IN ITS DEVELOPMENT THAT FIRST APPEARANCE IS UNQUESTIONABLE AND IT IS OUTSTANDINGLY SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND FREE OF DISEASE AND INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES AND PALMS FOR PLANTING ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY AND FLORIDA NUMBER 1. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANTS SHALL BE FREE OF WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS OF GOOD QUALITY AND BE IN A HEALTHY GROWING CONDITION.

CONTAINER GROWN PLANTS SHALL HAVE A DEVELOPED ROOT STRUCTURE SO THAT THE ROOT MASS STAYS IN TACT WHEN REMOVED FROM CONTAINER. IN NO CASE SHALL THE PLANT CONTAIN CIRCLING ROOTS NOR BE ROOT-BOUND.

QUANTITIES
ALL QUANTITIES INDICATED ON THE PLANT LIST ARE INTENDED AS A GUIDE FOR THE BIDDERS AND DOES NOT RELIEVE THE BIDDER OF HIS RESPONSIBILITY TO DO A COMPREHENSIVE PLANT TAKE OFF. SHALL A DISCREPANCY OCCUR BETWEEN THE BIDDER'S TAKE OFF AN THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT IS TO BE NOTIFIED FOR CLARIFICATION PRIOR TO THE SUBMISSION OF THE BID.

MULCH
MULCH SHALL BE A SHREDDED VARIETY AS SPECIFIED IN THE PLANT LIST. ALL MULCH IS TO BE APPLIED TO A DEPTH OF 3" EXCEPT FOR THOSE SPECIFIC SITUATIONS SHOWN BELOW IN SECTION 4 AND IN PLANTING DETAILS.

FERTILIZER
FERTILIZER IN BACKFILL MIXTURE FOR ALL PLANTS SHALL CONSIST OF 'MILORGANITE' ACTIVATED SLUDGE MIXED WITH THE BACKFILL AT A RATE OF NOT LESS THAN 50 LBS. PER CUBIC YARD.

FERTILIZER FOR TREES AND SHRUBS MAY BE TABLET FORM OR GRANULAR. GRANULAR FERTILIZER SHALL BE UNIFORM IN COMPOSITION, DRY AND FREE-FLOWING. THIS FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED BAGS, EACH BEARING THE MANUFACTURER'S STATEMENT OF ANALYSIS. FERTILIZE ALL NEW PLANTINGS PER RATES SHOWN BELOW:

TREES:
FERTILIZE NEW TREES WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 8' AND SMALLER: 2-4 LBS.
- 8'-12' TALL: 4-6 LBS.
- 12' AND TALER: 6-8 LBS.

(3 CUPS = 1 LB.)

SHRUBS:
FERTILIZE NEW SHRUBS AND ACCENTS WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 4-6" POTS: ⅛ CUP
- 1 GAL.: ¼ CUP
- 3 GAL.: 1 CUP
- 7-10 GAL.: 2 CUPS
- 15 GAL. AND GREATER: 3 CUPS

PALM TREES:
FERTILIZE NEW PALM TREES WITH A "PALM SPECIAL" FERTILIZER IN SLOW RELEASE FORM. FERTILIZER SHALL CONTAIN AN ADDITIONAL MAGNESIUM AND MICRO-NUTRIENT AMENDMENT

SOIL
PLANTING SOIL SHALL BE SANDY LOAM AND SHALL CONTAIN A 25% MINIMUM AMOUNT OF DECOMPOSED ORGANIC MATTER. PLANTING SOIL SHALL BE FREE OF CLAY, STONES, PLANTS, ROOTS AND OTHER FOREIGN MATERIALS WHICH MIGHT BE A HINDRANCE TO PLANTING OPERATIONS OR BE DETRIMENTAL TO GOOD PLANT GROWTH. SOIL SHALL BE DELIVERED IN A LOOSE FRIABLE CONDITION AND APPLIED IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

WATER
WATER FOR PLANTING WILL BE AVAILABLE AT THE SITE AND WILL BE PROVIDED BY THE OWNER. LANDSCAPE CONTRACTOR SHALL NOT ASSUME THAT THE IRRIGATION SYSTEM WILL BE OPERATIONAL AT THE TIME OF PLANTING. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO PROVIDE ALL THE REQUIRED WATER NECESSARY TO MAINTAIN THE PLANT MATERIAL IN A HEALTHY GROWING CONDITION. THE WATERING MAY INCLUDE DEEP WATERING OF TREES ANT THE WATERING OF SHRUB AND GROUND COVER AREAS. ANY PLANT MATERIALS THAT DIE OR THAT ARE NOT IN A HEALTHY GROWING CONDITION DUE TO LACK OF WATER SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. EXECUTION

FIELD GROWN TREES AND PALMS PREVIOUSLY ROOT PRUNED SHALL OBTAIN A ROOT BALL WITH SUFFICIENT ROOTS FOR CONTINUED GROWTH WITHOUT RESULTING SHOCK.

CONTRACTOR SHALL NOT MARK OR SCAR TRUNK IN ANY FASHION.

PLANTS SHALL BE WATERED AS NECESSARY OR WITHIN 24 HOURS AFTER NOTIFICATION BY THE LANDSCAPE ARCHITECT.

THE LOCATIONS OF PLANTS, AS SHOWN IN THESE PLANS, ARE APPROXIMATE. THE FINAL LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS. MAJOR ADJUSTMENTS TO THE LAYOUT ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT.

ALL PLASTIC FABRIC SHALL BE REMOVED FROM PLANT MATERIAL AT TIME OF INSTALLATION.

ALL TREES MUST BE STAKED AS SHOWN ON THE PLANTING DETAILS WITHIN 24 HOURS OF PLANTING. STAKES TO REMAIN FOR A MINIMUM OF 9 MONTHS, BUT NO LONGER THAN 18 MONTHS. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF THE STAKES.

ALL TREES MUST BE PRUNED AS PER LANDSCAPE ARCHITECT'S DIRECTION. SABAL PALMS MAY BE HURRICANE CUT.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

AFTER FINAL SETTLING OF BALLED AND BURLAPED PLANTS, LOOSEN BURLAP WRAPPING EXPOSING THE TOP OF THE ROOTBALL, LEAVING THE BALL UNBROKEN. REMOVE EXCESS AMOUNTS OF BURLAP TO ELIMINATE VOIDS WHICH MAY BE CAUSED UPON DECOMPOSITION.

CONTAINER GROWN PLANTS SHALL, WHEN DELIVERED, SHALL HAVE SUFFICEINCY GROWTH TO HOLD EARTH INTACT WHEN REMOVED FROM CONTAINER AND SHALL NOT BE ROOT BOUND. PLANT PITS FOR CONTAINER MATERIALS SHALL BE FORMED FLAT ON THE BOTTOM TO AVOID AIR POCKETS AT THE BOTTOM OF ROOT BALLS AND CONTAINERS SHALL BE REMOVED CAREFULLY TO PREVENT DAMAGE TO THE PLANT OR ROOT SYSTEMS.

TEST TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE.PERCOLATION IS AVAILABLE. PITS WHICH ARE FOUND NOT TO BE ADEQUATELY DRAINING SHALL BE EXCAVATED TO A A DEPTH SUFFICIENT FOR DRAINAGE AND BACKFILLING WITH GRAVEL OR CRUSHED ROCK. NO ALLOWANCES WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE.

PLANTING BED PREPARATION
ALL PLANTING BEDS SHALL BE PROPERLY PREPARED PRIOR TO THE COMMENCEMENT OF ANY PLANTING. PLANTING AREAS, INCLUDING LAWNS SHALL BE FREE OF ALL WEEDS AND NUISANCE VEGETATION. IF TORPEDO GRASS (PANICUM REPENS) IS PRESENT OR ENCOUNTERED DURING PLANTING, THE LANDSCAPE CONTRACTOR SHALL STOP ALL PLANTING UNTIL IT CAN BE DEMONSTRATED THAT IT HAS BEEN COMPLETELY REMOVED OR ERADICATED. THERE SHALL BE NO EXCEPTIONS TO THIS PROVISION.

ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS AND WILL BE EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN, NATIVE SOIL AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.

PLANTING TREES

EXCAVATE PIT AS PER PLANTING DETAILS. COMPACT LAYER OF TOPSOIL IN PIT WITH A SLIGHTLY DISHED GRADE TO CENTER.

BACKFILL AROUND BALL WITH TOPSOIL AND SLIGHTLY COMPACT, WATER THOROUGHLY AS LAYERS ARE PLACED TO ELIMINATE VOIDS AND AIR POCKETS. BUILD A 6" HIGH BERM OF TOPSOIL BEYOND EDGE OF EXCAVATION. APPLY 3" (AFTER SETTLEMENT) OF MULCH.

PRUNE TREE TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES. DO NOT PRUNE BACK TERMINAL LEADER.

GUY AND STAKE TREE IN ACCORDANCE WIT THE STAKING DETAILS IMMEDIATELY AFTER PLANTING.

PLANTING SHRUBS

LAYOUT SHRUBS TO CREATE A CONTINUOUS SMOOTH FRONT LINE AND FILL IN BEHIND.

EXCAVATE PIT OR TRENCH TO 1-1/2 TIMES THE DIAMETER OF THE BALLS OR CONTAINERS OR 1'-0" WIDER THAN THE SPREAD OF ROOTS AND 3" DEEPER THAN REQUIRED FOR POSITIONING AT PROPER HEIGHT. COMPACT A LAYER OF TOPSOIL IN BOTTOM BEFORE PLACING PLANTS. BACKFILL AROUND PLANTS WITH PLANTING MIXTURE, COMPACTED TO ELIMINATE VOIDS AND AIR POCKETS. FORM GRADE SLIGHTLY DISHED AND BERMED AT EDGES OF EXCAVATION. APPLY 3" OF MULCH.

PRUNE SHRUBS TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES.

PLANTING GROUND COVER

LOOSEN SUBGRADE TO DEPTH OF 4" IN AREAS WHERE TOPSOIL HAS BEEN STRIPPED AND SPREAD SMOOTH.

SPACE PLANTS AS OTHERWISE INDICATED. DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS. COMPACT BACKFILL TO ELIMINATE VOIDS AND LEAVE GRADE SLIGHTLY DISHED AT EACH PLANT. WATER THOROUGHLY. APPLY 3" OF MULCH OVER ENTIRE PLANTING BED, LIFTING PLANT FOLIAGE ABOVE MULCH. PURPLE QUEEN GROUNDCOVER, IF SPECIFIED, SHALL ONLY RECEIVE 1" OF MULCH.

DURING PERIODS OF HOT SUN AND/OR WIND AT TIME OF PLANTING, PROVIDE PROTECTIVE COVER FOR SEVERAL DAYS OR AS NEEDED.

PLANTING SOD

SODDING: SOD TYPE SPECIFIED ON PLANT LIST SHALL BE MACHINE STRIPPED NOT MORE THAN 24 HOURS PRIOR TO LAYING. SOD SHALL BE FIRM, TOUGH TEXTURE, HAVING A COMPACT GROWTH OF GRASS WITH GOOD ROOT DEVELOPMENT, AND SHALL CONTAIN NO BERMUDA GRASS, WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

LOOSEN SUBGRADE TO DEPTH OF 4" AND GRADE WITH TOPSOIL EITHER PROVIDED ON SITE OR IMPORTED TO FINISH DESIGN ELEVATIONS. IF SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO FINISH GRADE ALL LANDSCAPE AREAS, ELIMINATING ALL BUMPS, DEPRESSIONS, STICKS, STONES AND OTHER DEBRIS. ROLL PREPARED LAWN SURFACE. WATER THOROUGHLY, BUT DO NOT CREATE MUDDY SOIL CONDITION.

FERTILIZE SOIL AT THE RATE OF APPROXIMATELY 10 LBS. PER 1,000 S.F. SPREAD FERTILIZER OVER THE AREA TO RECEIVE GRASS BY USING AN APPROVED DISTRIBUTION DEVICE CALIBRATED TO DISTRIBUTE THE APPROPRIATE QUANTITY. DO NOT FERTILIZE WHEN WIND VELOCITY EXCEEDS 15 M.P.H. THOROUGHLY MIX FERTILIZER INTO THE TOP 2" OF TOPSOIL.

LAY SOD STRIPS WITH TIGHT JOINTS, DO NOT OVERLAP, STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. WORK SIFTED SOIL MIX INTO MINOR CRACKS BETWEEN PIECES OF SOD AND REMOVE EXCESS SOIL DEPOSITS FROM SODDED AREAS. SOD ON SLOPES GREATER THAN 3:1 SHALL BE STAKED IN PLACE. ROLL OR STAMP LIGHTLY AND WATER THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING.

5. MISCELLANEOUS LANDSCAPE WORK

LANDSCAPE MAINTENANCE
MAINTAIN LANDSCAPE WORK IMMEDIATELY AFTER PLANTING AND UNTIL FINAL ACCEPTANCE IS ISSUED BY THE OWNER'S REPRESENTATIVE. INCLUDE WATERING, WEEDING, CULTIVATING, RESTORATION OF GRADE, MOWING AND TRIMMING GRASS, PRUNING TREES AND SHRUBS, PROTECTION FROM INSECTS AND DISEASES, FERTILIZING AND SIMILAR OPERATIONS AS NEEDED TO INSURE NORMAL GROWTH AND GOOD HEALTH FOR LIVE PLANT MATERIAL. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE, PLANTING SAUCERS RESTORED, AND DEFECTIVE WORK CORRECTED.

IN THE EVENT OF SERIOUS DAMAGE FROM INSECTS OR DISEASE PRIOR TO FINAL ACCEPTANCE, THE PLANTS SHALL BE TREATED BY PREVENTATIVE OR REMEDIAL MEASURES APPROVED FOR GOOD HORTICULTURAL PRACTICE AT NO ADDITIONAL COST TO THE OWNER.

CLEAN UP
THE LANDSCAPE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR DEBRIS CAUSED BY HIS CREWS DURING THE PERFORMANCE OF THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROMPTLY REMOVE ALL WASTE MATERIALS, DEBRIS, UNUSED PLANT MATERIAL, EMPTY PLANT CONTAINERS AND ALL EQUIPMENT FROM THE PROJECT SITE.

ANY SOIL, PEAT OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO ANY PAVED AREAS SHALL BE REMOVED PROMPTLY KEEPING THESE AREAS CLEAN AS THE WORK PROGRESSES. UPON COMPLETION OF THE PLANTING, ALL EXCESS SOIL, STONES AND DEBRIS WHICH HAS NOT BEEN PREVIOUSLY CLEANED UP SHALL BE REMOVED FROM THE SITE.

INSPECTION & ACCEPTANCE
THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT UPON COMPLETION OF THE WORK TO REQUEST A FINAL INSPECTION OF THE INSTALLATION AND PLANT MATERIALS. THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE WILL NOTIFY THE LANDSCAPE CONTRACTOR OF ANY DEFICIENCIES VIA A "PUNCH LIST" WHICH SHALL BE PROMPTLY CORRECTED BY THE LANDSCAPE CONTRACTOR. CONDITIONAL LANDSCAPE ACCEPTANCE OF ALL PLANT MATERIAL AND WORKMANSHIP WILL BE GIVEN IN WRITING BY THE LANDSCAPE ARCHITECT AFTER ALL "PUNCH LIST" ITEMS HAVE BEEN CORRECTED AND ANY PLANT REPLACEMENTS MADE. THIS ACCEPTANCE WILL BEGIN THE WARRANTEE PERIOD. DEFICIENCIES NOTED AFTER THE CONDITIONAL LANDSCAPE ACCEPTANCE SHALL BE RECTIFIED DURING THE WARRANTEE PERIOD AND PRIOR TO FINAL LANDSCAPE ACCEPTANCE.

GUARANTEE AND REPLACEMENT
ALL PLANT MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR FOR A PERIOD OF SIX (6) MONTHS FROM THE DATE OF CONDITIONAL LANDSCAPE ACCEPTANCE BY THE LANDSCAPE ARCHITECT. ANY PLANT MATERIAL OR WORKMANSHIP THAT IS DEFICIENT OR HAS DIED SHALL BE REPLACED AT THE SAME SPECIFICATION NOTED IN THE APPROVED LANDSCAPE PLANS. REPLACEMENTS SHALL BE MADE BY THE LANDSCAPE CONTRACTOR WITHIN TWO (2) WEEKS OF NOTIFECTION BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER. WARRANTEES OF REPLACEMENT MATERIAL SHALL BE SIX (6) MONTHS FROM THE DATE OF REPLACEMENT INSTALLATION. DEATH OR DAMAGE RESULTING FROM LIGHTNING, VANDALISM OR AUTOMOBILES OR BY NEGLIGENCE BY THE OWNER SHALL NOT BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. UNLESS OTHERWISE ARRANGED WITH THE OWNER, THE CONTRACTOR IS RESPONSIBLE FOR GENERAL PLANT MAINTENANCE INCLUDING WATERING AND MOWING UP UNTIL THE DATE OF CONDITIONAL ACCEPTANCE.

PLANT MATERIAL SUBSTITUTION

THERE WILL BE NO SUBSTITUTION OF PLANT MATERIAL UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND/OR OWNER. THIS INCLUDES SPECIES AND SIZE OF PLANT MATERIAL.

Landscape Specifications & Planting Details

ARROW FORT PIERCE NORTH

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
SA	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T3-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SB	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SC	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W-HSS-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SD	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T4-FINISH-S / ARPA2	UNV	LED	N/A	99W	13' POLE	NOTE 1, 3
SE	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T5-FINISH-S / ARPA2	UNV	LED	N/A	86W	13' POLE	NOTE 1, 3
SF	LED BOLLARD	ILP	BLDT-15WLED-UNIV-4000K	UNV	LED	N/A	16.5W	IN-GROUND	
SW	LED WALL PACK	McGRAW-EDISON	GWC-AF-01-LED-E1-T4FT-FINISH-600	UNV	LED	N/A	34W	WALL	NOTE 1

FIXTURE SCHEDULE NOTES

NOTE 1: ADVISE FINISH

NOTE 2: FIXTURE MOUNTED ON 20' CONCRETE POLE #: USI28TI+4-9666

NOTE 3: FIXTURE MOUNTED ON 13' DIRECT BURIAL ALUMINUM POLE #: 1208-30504TE TO ACHIEVE 15FT AFG

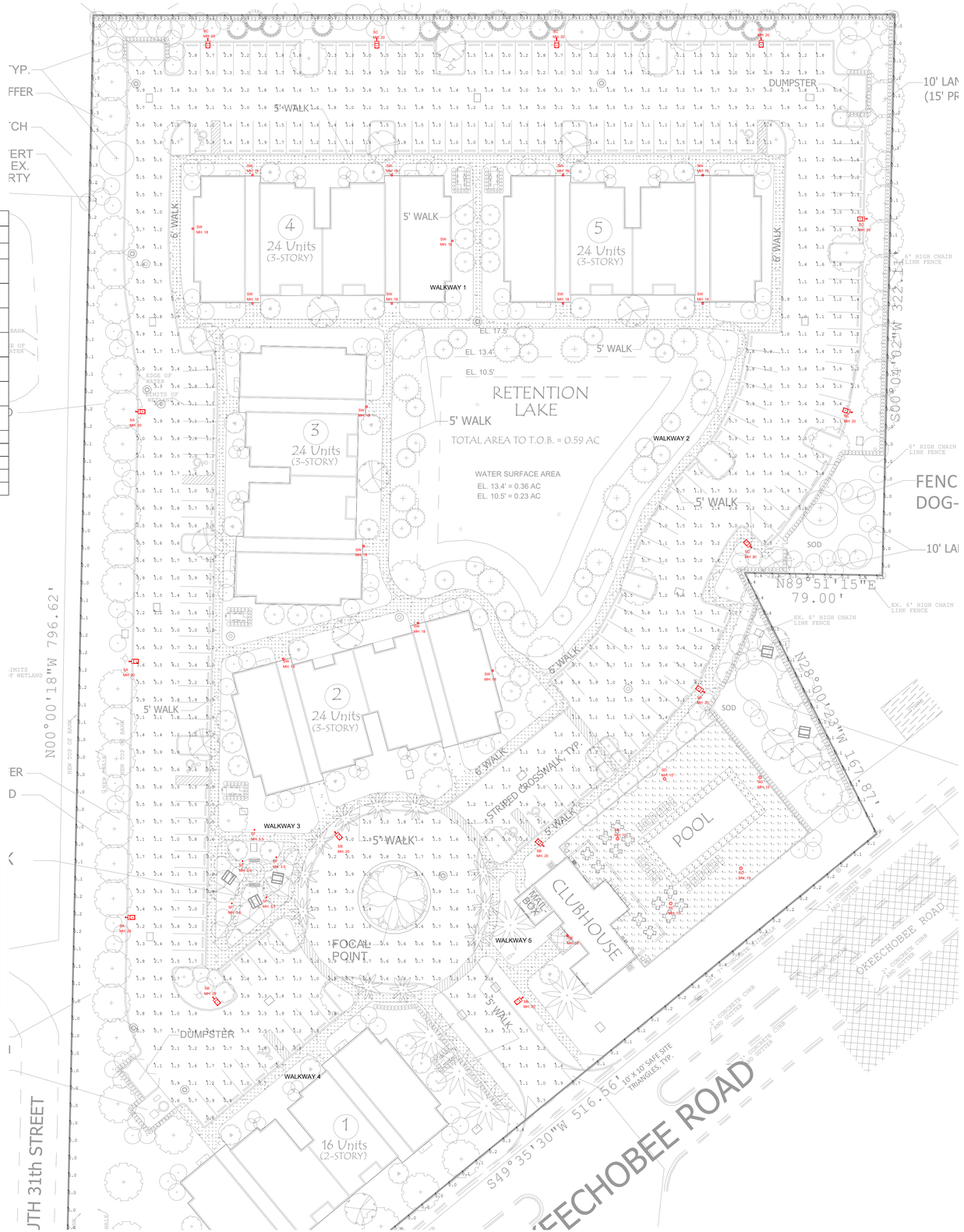
FOR QUESTIONS PERTAINING TO THIS FIXTURE SCHEDULE PLEASE CONTACT RYAN HUFF @ LIGHTING DYNAMICS- 772-285-7169

Photometrics Calculation Software Generated Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
	3	SA	SINGLE	15749	15749	0.900	112	112
	5	SB	SINGLE	15560	15560	0.900	112	112
	7	SC	SINGLE	11268	11268	0.900	112	112
	3	SD	SINGLE	8200	8200	0.900	99	99
	2	SE	SINGLE	9131	9131	0.900	86	86
	5	SF	SINGLE	1209	1209	0.900	16.5	16.5
	16	SW	SINGLE	4311	4311	0.900	34	34

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING & ROADWAY	Illuminance	Fc	1.65	4.5	0.5	3.30	9.00
POOL AREA	Illuminance	Fc	2.79	5.2	0.7	3.99	7.43
PROPERTY LINE	Illuminance	Fc	0.08	0.4	0.0	N.A.	N.A.
WALKWAY 1	Illuminance	Fc	1.10	2.0	0.4	2.75	5.00
WALKWAY 2	Illuminance	Fc	0.95	2.0	0.3	3.17	6.67
WALKWAY 3	Illuminance	Fc	1.29	15.1	0.4	3.23	37.75
WALKWAY 4	Illuminance	Fc	0.67	1.3	0.3	2.23	4.33
WALKWAY 5	Illuminance	Fc	2.11	4.4	0.3	7.03	14.67
WET DECK	Illuminance	Fc	3.65	5.3	3.0	1.22	1.77



LIGHTING DYNAMICS INCORPORATED

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine applicability of the layout to existing or future field conditions. This lighting pattern represents illumination levels calculated from laboratory data taken under controlled conditions utilizing current industry standard lamp ratings in accordance with Illuminating Engineering Society approved methods. Actual performance of any manufacturer's luminaire may vary due to variation in electrical voltage, tolerance in lamps and other variable field conditions.

NOTES:

No.	Revision/Issue	Date
3	UPDATE LFS	06/22/20
2	PHOTOMETRIC STUDY	06/19/20
1	PHOTOMETRIC STUDY	06/17/20

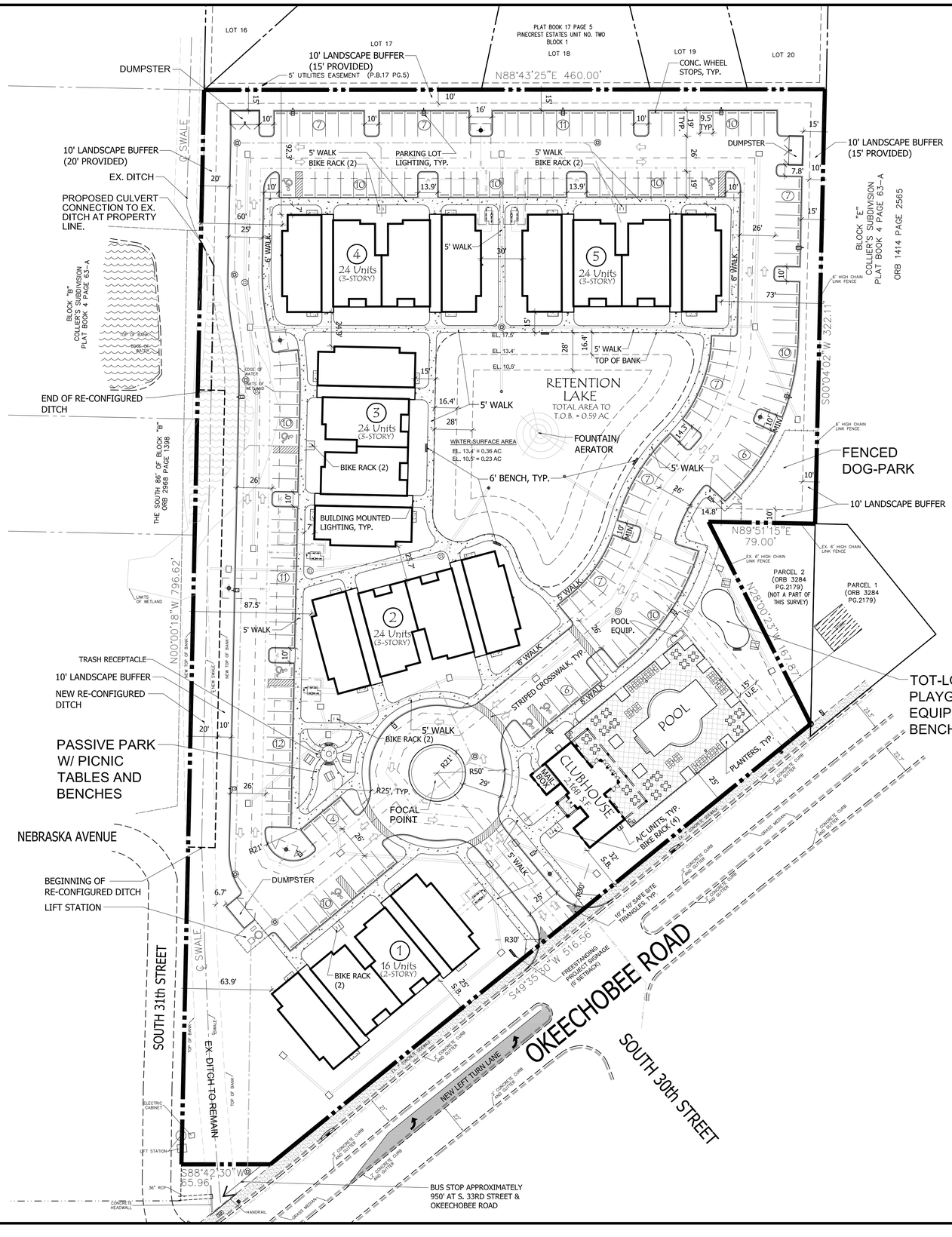
LIGHTING DYNAMICS, INC.
7835 West Commercial Blvd.
Tamarac, FL 33351
(954) 944-0286
www.lightingdynamics.com

Project Name and Address

ARROW FORT PIERCE
Site lighting layout
Fort Pierce, FL

FILE P:\PROJECTS\2020\MARCH
CLIENT Managed Land Entitlements

Project	Arrow Fort Pierce North
Date	06/22/2020
Scale	1/32" = 1'-0"
Sheet	L0
DRAWN BY	E.MONTERO



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (C3)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	102,259.94 S.F. (34.5%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	127,934.57 S.F. (43.2%)
MAX. BUILDING COVERAGE:	50% (148,006.5 S.F.)
BUILDING COVERAGE PROVIDED:	18.0% (53,184 S.F.)

SETBACKS

SETBACK	REQUIRED:	PROVIDED:
FRONT	25'	25'
SIDE:	10'	60'
REAR:	20'	92.3'

BUILDING HEIGHT

REQUIRED:	45' (MAX)
PROVIDED:	39'-0"

PARKING DATA:

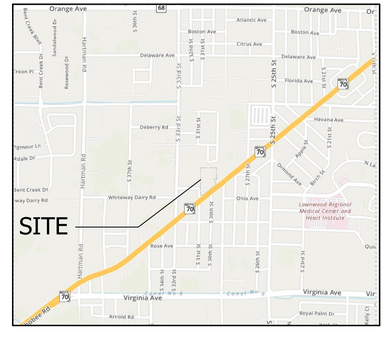
PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES

REFER TO SHEET SP-2 FOR SITE PLAN DETAILS

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champios, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Disher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
Michael B. Schorah & Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-968-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd., #199
Palm City, Florida 34990
Contact: Jason LItterick (561-719-3876)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-615-3988)

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-1

STANDARD LIGHTING POLE DETAIL

(1) LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 170 MPH WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.

(2) INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.

(3) LIGHT FIXTURE CONNECTIONS. REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C). CONDUCTORS TO BE UL LISTED "FIXTURE" CONDUCTORS. (UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED.) OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.

(4) CONDUITS. CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THWN CONDUCTORS.

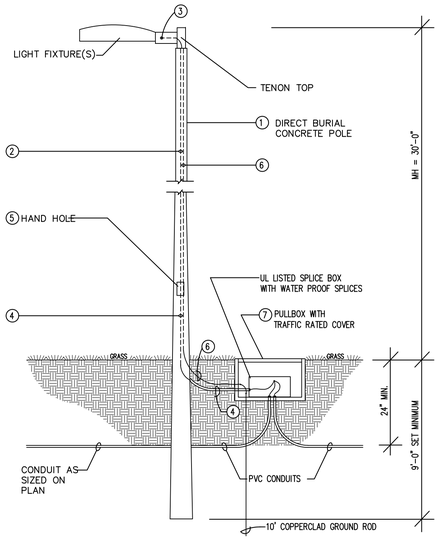
(5) HAND HOLE. HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES.

(6) GROUND WIRE IN POLE. CONNECT BOTTOM TO #4 BARE GROUND CONDUCTOR. CONNECT TOP TO GROUND LUG IN FIXTURES.

(7) TRAFFIC RATED PULL BOX. HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 5,000 LBS OVER A 10" SQUARE. COVER LETTERING = "LIGHTING". DO NOT PLACE IN PAVED AREA, KEEP IN GRASSED AREAS. QUAZITE COMPOSOLITE PX STYLE. 1-800-346-3067

(8) MUCK. IF SOFT SOILS ARE FOUND ON THE PROPERTY, THIS POLE DESIGN WILL BE MODIFIED TO ACCOMMODATE. NOTIFY ENGINEER IMMEDIATELY.

(9) SITE CONDITIONS. IF SITE CONDITIONS ARE DISCOVERED WHICH REQUIRE ANY POLE (S) TO BE MOVED OVER 4 FEET, NOTIFY THE ENGINEER IMMEDIATELY.



CONCRETE LIGHT POLE DETAIL

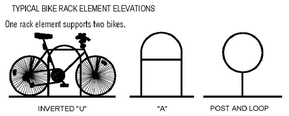
TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



"LANDSCAPEFORMS - CHASE PARK LITTER"

TRASH RECEPTACLE DETAIL

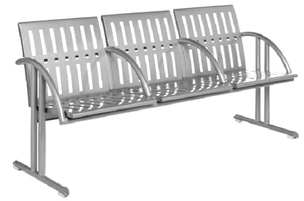
N.T.S.



- ELEMENT STYLE CONSISTENT WITH THE ABOVE TYPICAL ELEVATION TO BE SELECTED BY OWNER AT TIME OF BUILDING PERMIT, SUBJECT TO APPROVAL BY ZONING STAFF.
- A RACK IS ONE OR MORE ELEMENTS JOINED ON A COMMON BASE
- BIKE RACK AND RACK AREA DIMENSIONAL CRITERIA BASED ON RECOMMENDATIONS FROM THE ASSOCIATION OF PEDESTRIAN AND BICYCLE PROFESSIONALS (APBP)

BIKE RACK DETAIL

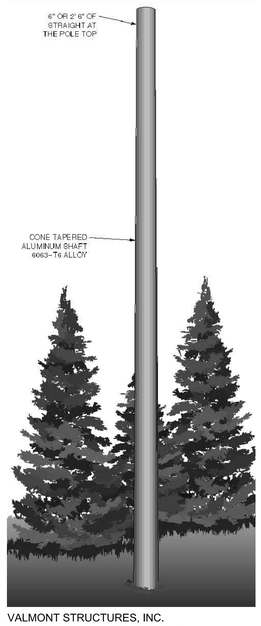
N.T.S.

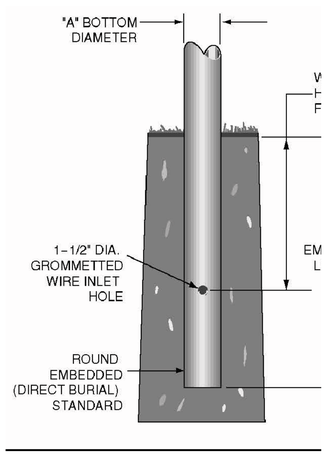


LANDSCAPE FORMS - CHASE PARK BENCH
CAST ALUM. W/ STEEL FRAMES & DIVIDER ARMS

BENCH DETAIL

N.T.S.

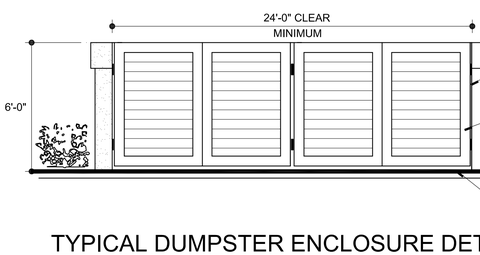




VALMONT STRUCTURES, INC.
DIRECT BURIAL ALUMINUM POLE

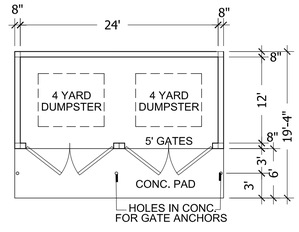
ALUMINUM LIGHT POLE DETAIL

TO BE USED ON ALL POOL LIGHTING (13' MOUNTING HEIGHT) N.T.S.

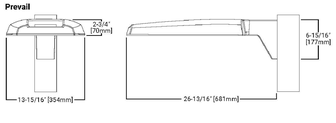


TYPICAL DUMPSTER ENCLOSURE DETAIL

N.T.S.







VALMONT STRUCTURES, INC.
DIRECT BURIAL CONCRETE POLE

PARKING LOT LIGHTING FIXTURE

TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



LXS LUXESCAPE COLLECTION

DECORATIVE LUMINAIRE

INVUE LED LIGHT FIXTURE
ON DIRECT BURIAL ALUMINUM POLE

POOL AREA LIGHTING FIXTURE

TO BE USED ON ALL POOL AREA POLE LIGHTING (13' MOUNTING HEIGHT) N.T.S.



ILP 15W LED BOLLARD

BOLLARD LIGHTS

N.T.S.



GWC GALLEON WALL

1-2 Light Squares
Solid State LED

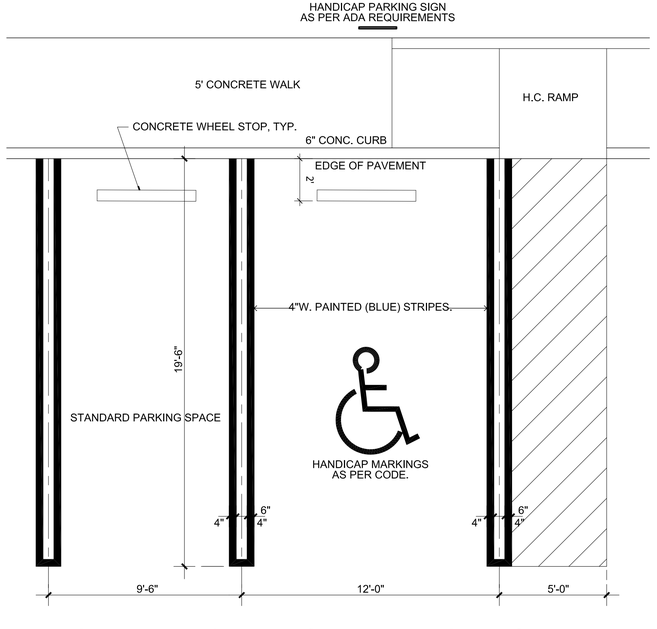
WALL MOUNT LUMINAIRE

WaveLinx

MCGRAW - EDISON WALL MOUNT LED LUMIERE

BUILDING MOUNTED LIGHTING

N.T.S.



STANDARD & HANDICAP PARKING LAYOUT

N.T.S.

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

Site Plan Details

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

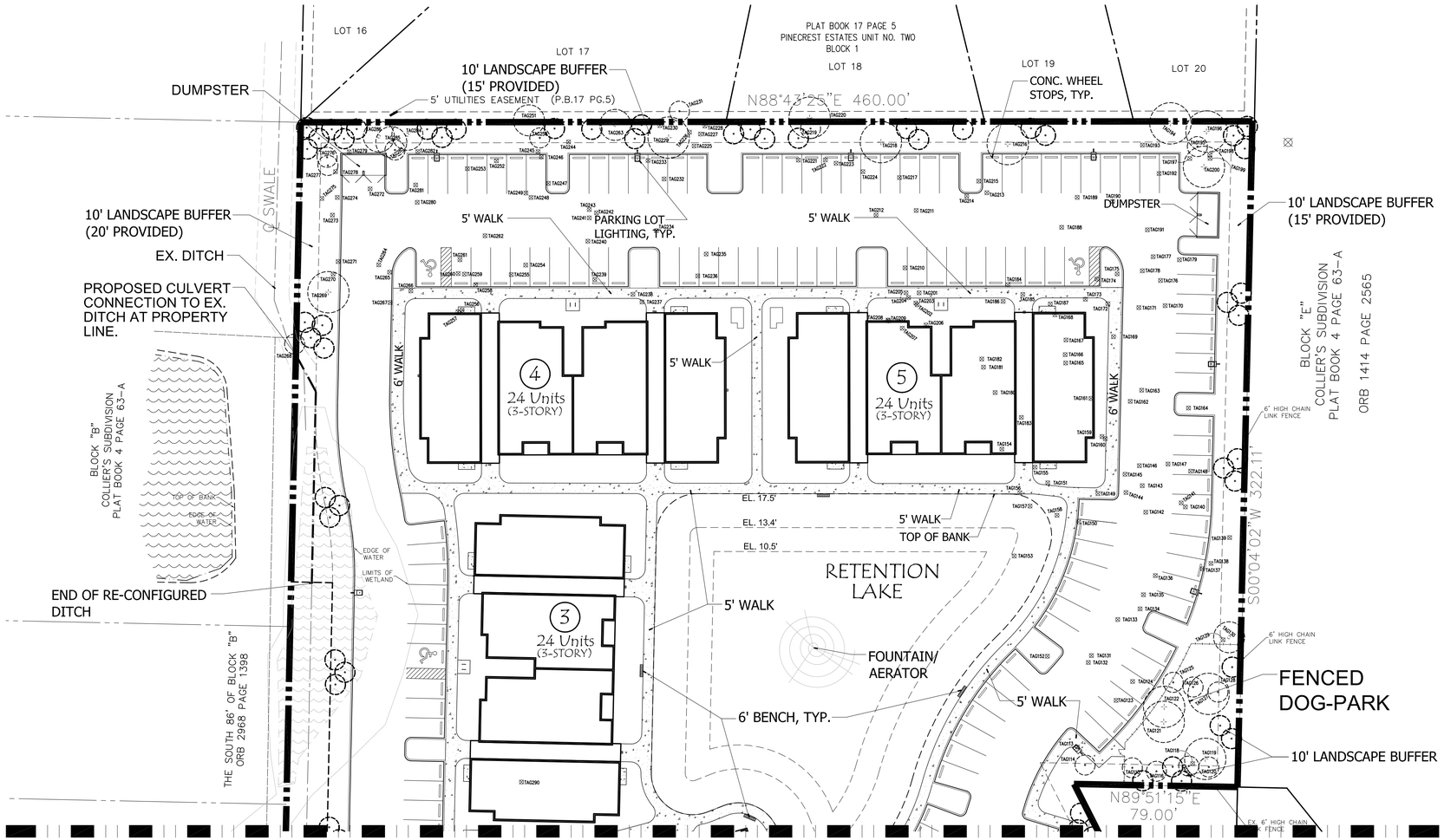
Jason M. Litterick, RLA
(LA0001677)

Scale: As Noted

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-2



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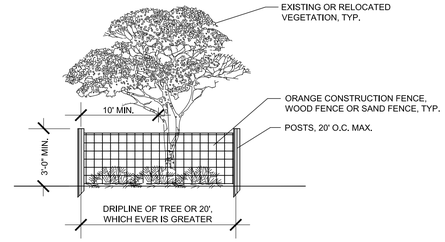


FENCING OF UNDISTURBED AREAS AND/OR EXISTING TREES:

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE ENTIRE UNDISTURBED AREA, OR TREE, WITHIN A FENCE OR SIMILAR BARRIER AS SHOWN. THE PLACEMENT OF SUCH BARRIER OR FENCE SHALL BE LOCATED NO CLOSER THAN THE DRIP LINE OF THE PRESERVED OR RELOCATED TREE OR A MIN. OF 10' FROM TRUNK, WHICHEVER IS GREATER. WOODEN (OR EQUIVALENT) POSTS AT LEAST 2 x 2 INCHES SHALL BE IMPLANTED IN THE GROUND DEEP ENOUGH TO BE STABLE AND WITH AT LEAST 3 FEET VISIBLE ABOVE THE GROUND. THE PROTECTIVE POSTS SHALL BE PLACED NOT MORE THAN 20 FEET APART, AND SHALL BE LINKED TOGETHER BY ORANGE NET FENCE FABRIC, OR OTHER. NO HEAVY EQUIPMENT, VEHICLES, STORAGE OF MATERIALS, ETC., SHALL OCCUR WITHIN THE VEG. PROTECTION ZONE. EXTREME CARE SHALL BE TAKEN WHEN WORKING NEAR THE BASE OF TREES. NO FINISH GRADE FILL SHALL BE PLACED WITHIN A ZONE OF 2/3 THE DIAMETER OF THE TREE CANOPY.

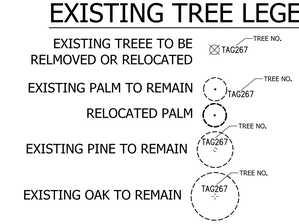
CONSTRUCTION WITHIN CANOPY & TREE BARRICADE SHALL BE BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL.

UTILITY WORK (TRENCHING) WITHIN THE CANOPY & TREE BARRICADE SHALL BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL. THE TREE BARRICADE WILL BE MODIFIED TEMPORARILY TO ALLOW ONLY THE MINIMUM WORK ZONE TRESPASS INTO THE CANOPY AREA, CONTINUING TO PROTECT THE REST OF THE CANOPY AREA WITH BARRICADE. NO FILL, EVEN TEMPORARY, SHALL BE PLACED IN ANY PROTECTED ZONE. AT THE CONCLUSION OF SAID ACTIVITY, THE WORKZONE SHALL BE CLEANED UP & TREE BARRICADES REPLACED TO THEIR ORIGINAL CONFIGURATION.

TREE PROTECTION DETAIL

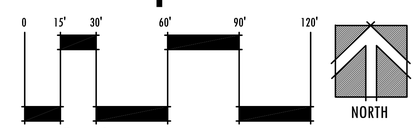
N.T.S.

EXISTING TREE LEGEND



REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

Tree Dispostion Plan



Scale: 1" = 30'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

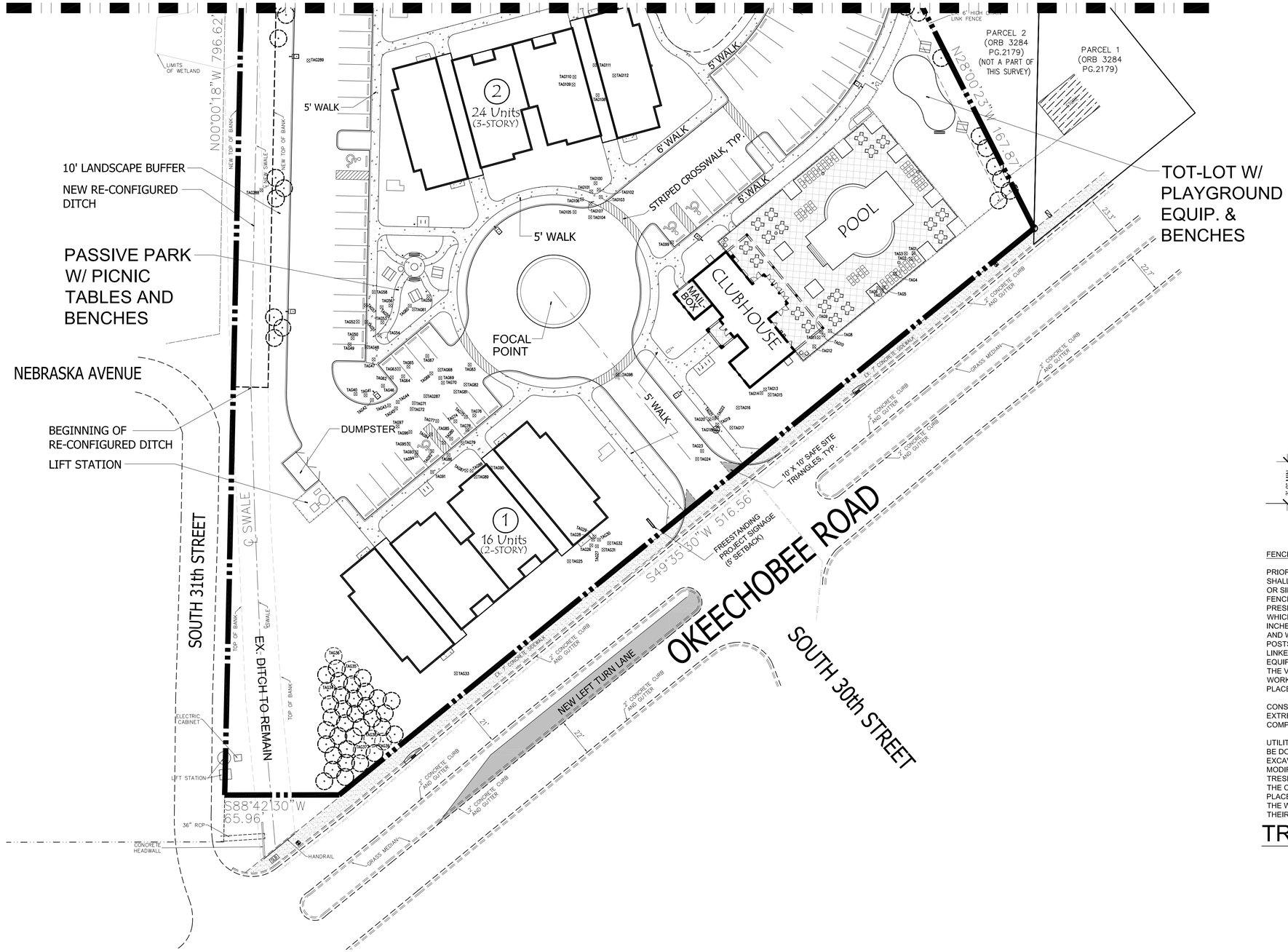
Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

TR-1

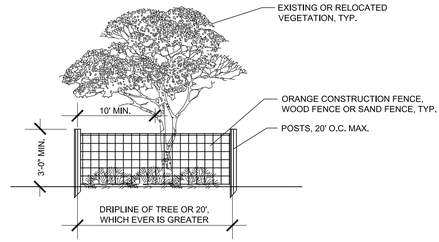
MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

MATCHLINE (SEE SHEET TR-1)



EXISTING TREE LEGEND

EXISTING TREEE TO BE RELMOVED OR RELOCATED — TREE NO. TAG267
EXISTING PALM TO REMAIN — TREE NO. TAG267
RELOCATED PALM — TREE NO. TAG267
EXISTING PINE TO REMAIN — TREE NO. TAG267
EXISTING OAK TO REMAIN — TREE NO. TAG267



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TREE PROTECTION DETAIL

N.T.S.

Tree Dispostion Plan

REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

0 15' 30' 60' 90' 120'
Scale: 1" = 30'

NORTH

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-2

TREE DISPOSITION CHART

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
1	PALM	YES	20	17'	RELOCATE	
2	PALM	YES	16	17'	RELOCATE	
3	PALM	YES	18	15'	RELOCATE	
4	PALM	YES	14	22'	RELOCATE	
5	PALM	YES	18	18'	RELOCATE	
6	PALM	YES	16	14'	RELOCATE	
7	PALM	YES	18	14'	RELOCATE	
8	PALM	YES	20	18'	RELOCATE	
9	PALM	YES	16	15'	RELOCATE	
10	PALM	YES	24	15'	RELOCATE	
11	PALM	YES	16	18'	RELOCATE	
12	PALM	YES	16	19'	RELOCATE	
13	PALM	YES	22	10'	RELOCATE	
14	PALM	YES	24	15'	RELOCATE	
15	PALM	YES	24	13'	RELOCATE	
16	PALM	YES	16	14'	RELOCATE	
17	PALM	YES	20	17'	RELOCATE	
18	BANYAN	NO	48		REMOVE	
19	PALM	YES	16	18'	RELOCATE	
20	PALM	YES	14	18'	RELOCATE	
21	PALM	YES	16	15'	RELOCATE	
22	PALM	YES	16	10'	RELOCATE	
23	PALM	YES	20	14'	RELOCATE	
24	PALM	YES	18	15'	RELOCATE	
25	PALM	YES	18	18'	RELOCATE	
26	PALM	YES	16	15'	RELOCATE	
27	PALM	YES	20	15'	RELOCATE	
28	PALM	YES	16	17'	RELOCATE	
29	PALM	YES	16	11'	RELOCATE	
30	PALM	YES	18	14'	RELOCATE	
31	PALM	YES	24	16'	RELOCATE	
32	PALM	YES	16	7'	REMOVE	NONE
33	PALM	YES	18	19'	RELOCATE	
34	PALM	YES	16	17'	REMAIN	
35	PALM	YES	18	17'	REMAIN	
36	PALM	YES	18	18'	REMAIN	
37	PALM	YES	18	20'	REMAIN	
38	PALM	YES	16	21'	REMAIN	
39	PALM	YES	14	17'	REMAIN	
40	PALM	YES	20	18'	RELOCATE	
41	PALM	YES	18	20'	RELOCATE	
42	PALM	YES	16	19'	RELOCATE	
43	PALM	YES	16	19'	RELOCATE	
44	PALM	YES	16	21'	RELOCATE	
45	PALM	YES	18	19'	RELOCATE	
46	PALM	YES	20	22'	RELOCATE	
47	PALM	YES	16	19'	RELOCATE	
48	PALM	YES	16	18'	RELOCATE	
49	PALM	YES	18	17'	RELOCATE	
50	PALM	YES	16	20'	RELOCATE	
51	PALM	YES	18	19'	RELOCATE	
52	PALM	YES	10	18'	RELOCATE	
53	PALM	YES	14	18'	RELOCATE	
54	PALM	YES	18	18'	RELOCATE	
55	PALM	YES	20	22'	RELOCATE	
56	PALM	YES	14	19'	RELOCATE	
57	PALM	YES	10	18'	RELOCATE	
58	PALM	YES	14	19'	RELOCATE	
59	PALM	YES	18	16'	RELOCATE	
60	PALM	YES	16	16'	RELOCATE	
61	PALM	YES	18	15'	RELOCATE	
62	PALM	YES	16	23'	RELOCATE	
63	PALM	YES	16	21'	RELOCATE	
64	PALM	YES	20	18'	RELOCATE	
65	PALM	YES	12	19'	RELOCATE	
66	PALM	YES	18	21'	RELOCATE	
67	PALM	YES	18	17'	RELOCATE	
68	OAK	YES	5		REMOVE	NONE
69	PALM	YES	20	18'	RELOCATE	
70	PALM	YES	22	20'	RELOCATE	
71	PALM	YES	20	20'	RELOCATE	
72	PALM	YES	16	18'	RELOCATE	
74	PALM	YES	14	18'	RELOCATE	
75	PALM	YES	14	9'	REMOVE	NONE
76	PALM	YES	24	19'	RELOCATE	
77	PALM	YES	18	18'	RELOCATE	
78	PALM	YES	18	17'	RELOCATE	
79	PALM	YES	14	13'	RELOCATE	
80	PALM	YES	18	18'	RELOCATE	
81	PALM	YES	24	19'	RELOCATE	
82	PALM	YES	18	16'	RELOCATE	
83	PALM	YES	16	15'	RELOCATE	
84	PALM	YES	16	19'	RELOCATE	
85	PALM	YES	16	20'	RELOCATE	
86	PALM	YES	18	17'	RELOCATE	
87	PALM	YES	16	20'	RELOCATE	
88	PALM	YES	16	18'	RELOCATE	
89	PALM	YES	16	16'	RELOCATE	
90	PALM	YES	18	22'	RELOCATE	
91	PALM	YES	18	22'	RELOCATE	
92	PALM	YES	16	19'	RELOCATE	
93	PALM	YES	18	21'	RELOCATE	
94	PALM	YES	14	20'	RELOCATE	
95	PALM	YES	16	20'	RELOCATE	
96	PALM	YES	18	20'	RELOCATE	

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	0"
TOTAL PRESERVED TREES (IN)	0"
TOTAL RELOCATED PALMS	86 PALMS

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
97	PALM	YES	18	20'	RELOCATE	
98	PALM	YES	18	19'	RELOCATE	
99	PALM	YES	16	16'	RELOCATE	
100	PALM	YES	18	17'	RELOCATE	
101	PALM	YES	16	17'	RELOCATE	
102	PALM	YES	18	19'	RELOCATE	
103	PALM	YES	16	18'	RELOCATE	
104	PALM	YES	16	18'	RELOCATE	
105	PALM	YES	16	18'	RELOCATE	
106	PALM	YES	14	15'	RELOCATE	
107	PALM	YES	10	8'	REMOVE	NONE
108	PALM	YES	18	19'	RELOCATE	
109	PALM	YES	16	35'	RELOCATE	
110	PALM	YES	14	20'	RELOCATE	
111	PALM	YES	16	20'	RELOCATE	
112	PALM	YES	18	18'	RELOCATE	
113	OAK	YES	6		REMOVE	NONE
114	PALM	YES	14	13'	REMAIN	
115	PALM	YES	22	18'	REMAIN	
116	PALM	YES	20	20'	REMAIN	
117	PALM	YES	10	7'	REMAIN	
118	UNKNOWN	NO	12		REMOVE	NONE
119	OAK	YES	38		REMAIN	
120	PALM	YES	14	18'	REMAIN	
121	OAK	YES	18		REMAIN	
122	OAK	YES	12		REMAIN	
123	PALM	YES	18	21'	RELOCATE	
124	PALM	YES	18	16'	RELOCATE	
125	PALM	YES	16	26'	REMAIN	
126	PALM	YES	18	29'	REMAIN	
127	OAK	YES	24		REMAIN	
128	PALM	YES	16	32'	REMAIN	
129	UNKNOWN	NO	10		REMOVE	NONE
130	PINE	YES	28		REMAIN	
131	PALM	YES	16	24'	RELOCATE	
132	UNKNOWN	NO	24		REMOVE	NONE
133	OAK	YES	10		REMOVE	NONE
134	OAK	YES	28		REMOVE	28"
135	PALM	YES	18	30'	RELOCATE	
136	OAK	YES	40		REMOVE	40"
137	PALM	YES	18	18'	RELOCATE	
138	PINE	YES	10		REMOVE	NONE
139	UNKNOWN	NO	8		REMOVE	NONE
140	OAK	YES	36		REMOVE	36"
141	PALM	YES	16	20'	RELOCATE	
142	PALM	YES	14	25'	RELOCATE	
143	PALM	YES	16	25'	RELOCATE	
144	OAK	YES	20		REMOVE	20"
145	PALM	YES	14	26'	RELOCATE	
146	PALM	YES	16	21'	RELOCATE	
147	PALM	YES	18	23'	RELOCATE	
148	OAK	YES	16		REMOVE	16"
149	UNKNOWN	NO	18		REMOVE	NONE
150	PALM	YES	22	18'	RELOCATE	
151	PALM	YES	14	7'	REMOVE	NONE
152	PALM	YES	22	22'	RELOCATE	
153	PALM	YES	16	20'	RELOCATE	
154	PALM	YES	22	18'	RELOCATE	
155	PALM	YES	18	17'	RELOCATE	
156	PALM	YES	18	16'	RELOCATE	
157	PALM	YES	16	13'	RELOCATE	
158	PALM	YES	12	10'	RELOCATE	
159	OAK	YES	10		REMOVE	NONE
160	OAK	YES	16		REMOVE	16"
161	PALM	YES	12	7'	REMOVE	
162	PALM	YES	18	24'	RELOCATE	
163	PALM	YES	16	21'	RELOCATE	
164	OAK	YES	36		REMOVE	36"
165	OAK	YES	14		REMOVE	14"
166	OAK	YES	10		REMOVE	NONE
167	POINCIANA	NO	8		REMOVE	NONE
168	OAK	YES	12		REMOVE	NONE
169	OAK	YES	22		REMOVE	22"
170	OAK	YES	18		REMOVE	18"
171	PALM	YES	16	17'	RELOCATE	
172	PALM	YES	18	13'	RELOCATE	
173	PALM	YES	12	6'	REMOVE	
174	UNKNOWN	NO	16		REMOVE	NONE
175	OAK	YES	16		REMOVE	16"
176	UNKNOWN	NO	20		REMOVE	NONE
177	PALM	YES	18	28'	RELOCATE	
178	PALM	YES	8	8'	REMOVE	NONE
179	PALM	YES	20	22'	RELOCATE	
180	PALM	YES	12	6'	REMOVE	
181	PALM	YES	18	18'	RELOCATE	
182	PALM	YES	18	16'	RELOCATE	
183	PALM	YES	18	17'	RELOCATE	
184	OAK	YES	26		REMOVE	26"
185	PALM	YES	16	28'	RELOCATE	
186	PALM	YES	14	23'	RELOCATE	
187	PALM	YES	16	14'	RELOCATE	
188	PALM	YES	16	18'	RELOCATE	
189	PALM	YES	16	20'	RELOCATE	
190	UNKNOWN	NO	24		REMOVE	NONE
191	PALM	YES	16	14'	RELOCATE	
192	OAK	YES	36		REMOVE	36"
193	UNKNOWN	NO	10		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	324"
TOTAL PRESERVED TREES (IN)	120"
TOTAL RELOCATED PALMS	49

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
194	OAK	YES	36		REMAIN	
195	PALM	YES	18	26'	REMAIN	
196	OAK	YES	18		REMAIN	
197	UNKNOWN	NO	8		REMOVE	
198	UNKNOWN	NO	8		REMOVE	
199	UNKNOWN	NO	8		REMOVE	
200	OAK	YES	10		REMAIN	
201	OAK	YES	6		REMOVE	NONE
202	OAK	YES	6		REMOVE	NONE
203	OAK	YES	4		REMOVE	NONE
204	OAK	YES	6		REMOVE	NONE
205	OAK	YES	8		REMOVE	NONE
206	OAK	YES	8		REMOVE	NONE
207	OAK	YES	8		REMOVE	NONE
208	OAK	YES	6		REMOVE	NONE
209	OAK	YES	6		REMOVE	NONE
210	UNKNOWN	NO	10		REMOVE	NONE
211	PALM	YES	16	18'	RELOCATE	
212	PALM	YES	18	18'	RELOCATE	
213	PALM	YES	14		RELOCATE	
214	OAK	YES	20		REMOVE	26"
215	OAK	YES	26		REMOVE	26"
216	OAK	YES	30		REMAIN	
217	SILK OAK	NO	10		REMOVE	NONE
218	OAK	YES	14		REMAIN	
219	PALM	YES	20	19'	REMAIN	
220	OAK	YES	30		REMAIN	OFF-SITE
221	UNKNOWN	NO	8		REMOVE	NONE
222	UNKNOWN	NO	12		REMOVE	NONE
223	UNKNOWN	NO	8		REMOVE	NONE
224	PALM	YES	18	20'	RELOCATE	
225	UNKNOWN	NO	6		REMOVE	NONE
226	UNKNOWN	NO	6		REMOVE	NONE
227	UNKNOWN	NO	4		REMOVE	NONE
228	UNKNOWN	NO	6		REMOVE	NONE
229	OAK	YES	6		REMAIN	
230	UNKNOWN	NO	12		REMOVE	NONE
231	PALM	YES	22	18'	REMAIN	OFF-SITE
232	UNKNOWN	NO	30		REMOVE	NONE
233	PALM	YES	22	17'	RELOCATE	
234	OAK	YES	12		REMOVE	NONE
235	OAK	YES	10		REMOVE	NONE
236	UNKNOWN	NO	8		REMOVE	NONE
237	UNKNOWN	NO	6		REMOVE	NONE
238	UNKNOWN	NO	6		REMOVE	NONE
239	OAK	YES	16		REMOVE	16"
240	OAK	YES	10		REMOVE	NONE
241	UNKNOWN	NO	14		REMOVE	NONE
242	UNKNOWN	NO	8		REMOVE	NONE
243	UNKNOWN	NO	8		REMOVE	NONE
244	UNKNOWN	NO	10		REMOVE	NONE
245	PINE	YES	10		REMOVE	NONE
246	PINE	YES	10		REMOVE	NONE
247	OAK	YES	10		REMOVE	NONE
248	OAK	YES	10		REMOVE	NONE
249	PALM	YES	18	23'	RELOCATE	
250	PALM	YES	18	20'	REMAIN	
251	PINE	YES	10		REMAIN	OFF-SITE
252	PALM	YES	16	22'	RELOCATE	
253	OAK	YES	26		REMOVE	26"
254	OAK	YES	16		REMOVE	16"
255	OAK	YES	14		REMOVE	14"
256	OAK	YES	12		REMOVE	NONE
257	OAK	YES	14		REMOVE	14"
258	PALM	YES	22	28'	RELOCATE	
259	UNKNOWN	NO	8		REMOVE	NONE
260	PALM	YES	12	6'	REMOVE	NONE
261	PALM	YES	14	10'	RELOCATE	
262	UNKNOWN	NO	10		REMOVE	NONE
263	PINE	YES	14		REMAIN	
264	OAK	YES	18		REMOVE	18"
265	PALM	YES	16	21'	RELOCATE	
266	PALM	YES	18	20'	RELOCATE	
267	PALM	YES	20	18'	RELOCATE	
268	PALM	YES	20	20'	REMAIN	OFF-SITE
269	OAK	YES	20		REMAIN	
270	OAK	YES	10		REMOVE	NONE
271	PALM	YES	16	13'	RELOCATE	
272	OAK	YES	36		REMOVE	36"
273	PALM	YES	16	14'	RELOCATE	
274	UNKNOWN	NO	6		REMOVE	NONE
275	UNKNOWN	NO	6		REMOVE	NONE
276	PALM	YES	16	25'	REMAIN	
277	PALM	YES	12	11'	REMAIN	
278	PALM	YES	18	18'	RELOCATE	
279	OAK	YES	18		REMOVE	18"
280	OAK	YES	18		REMOVE	18"
281	PALM	YES	18	22'	RELOCATE	
282	PALM	YES	18	18'	RELOCATE	
283	PALM	YES	16	10'	REMAIN	
284	PINE	YES	16		REMAIN	
285	PINE	YES	12		REMAIN	
286	PINE	YES	10		REMAIN	
287	PALM	YES	18	19'	RELOCATE	
288	PALM	YES	16	18'	RELOCATE	
289	PALM	YES	18	19'	RELOCATE	
290	UNKNOWN	NO	30		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	228"
TOTAL PRESERVED TREES (IN)	196"
TOTAL RELOCATED PALMS	20

TOTAL RELOCATED PALMS: 155 PALMS
TOTAL MITIGATION REQUIRED (IN.): 552"
TOTAL PRESERVED TREES (IN.): 316"
TOTAL MITIGATION: 236"

ADDITIONAL TREES PROVIDED ON LANDSCAPE PLANS: 135 TREES OR 337.5" @ 2.5" PER TREE

SINCE THE ADDITIONAL TREES PROVIDED AMOUNT TO MORE DBH INCHES THAN IS REQUIRED TO BE MITIGATED, NO ADDITIONAL MITIGATION IS NEEDED.

Tree Dispostion Plan

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential
Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: Not to Scale

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-3

ORDINANCE NO. 20-0xx

AN ORDINANCE BY THE CITY COMMISSION OF THE CITY OF FORT PIERCE, FLORIDA; **AMENDING THE FUTURE LAND USE MAP OF THE COMPREHENSIVE PLAN TO CHANGE THE DESIGNATION OF PROPERTY GENERALLY LOCATED AT PARCEL ID: 2417-504-0020-001-6, FROM GENERAL COMMERCIAL, GC, TO MEDIUM DENSITY RESIDENTIAL, RM;** PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR REPEAL OF ORDINANCES OR PARTS THEREOF IN CONFLICT; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the subject properties are generally located at Parcel ID: 2417-504-0020-001-6, within the City of Fort Pierce, Florida, representing approximately 6.796 acres of land; and

WHEREAS, the subject property is included in a proposed site plan for a multi-family development; and

WHEREAS, the subject property is also included in a zoning atlas amendment for the proposed multi-family development; and

WHEREAS, Parcel ID: 2417-504-0020-001-6 is presently designated GC, General Commercial; and

WHEREAS, the applicant seeks a future land use amendment of the subject parcel, Parcel ID: 2417-504-0020-001-6, from GC, General Commercial to RM, Medium Density Residential; and

WHEREAS, the proposed future land use amendment is consistent with the comprehensive plan, and will not have an adverse effect on the ability of the city to satisfy land and water use needs, and meet transportation demands and provide community facilities and services, and will promote and protect the public health, safety and general welfare as required by City Code section 22-131; and

WHEREAS, the City of Fort Pierce Planning Board, at their August 11th, 2020 meeting, voted _____ to recommend approval of the proposed Future Land Use Amendment for this parcel; and

WHEREAS, the City of Fort Pierce has adopted a Comprehensive Plan known as the City of Fort Pierce Comprehensive Plan adopted by Ordinance No. L-136, as subsequently amended; and

WHEREAS, changing the future land use designation requires an amendment to the Comprehensive Plan, pursuant to section 163.3187, Florida Statutes; and

WHEREAS, the City of Fort Pierce Planning Board having been duly designated as the Local Planning Agency pursuant to section 163.3174 et seq., Florida Statutes, and having held a public hearing thereon, has considered this proposed amendment to the Comprehensive Plan and submitted its recommendations thereon to the City Commission; and

WHEREAS, two (2) public hearings with due notice have been held by the City Commission to inform the public and receive comments and objections; and

WHEREAS, the City of Fort Pierce desires to hereby formally adopt this amendment to the City's Comprehensive Plan.

NOW, THEREFORE, BE IT ORDAINED by the City Commission of the City of Fort Pierce, Florida as follows:

SECTION 1. The preceding "whereas" clauses are ratified and incorporated as the legislative intent of this ordinance.

SECTION 2. The Comprehensive Plan of the City of Fort Pierce is hereby amended as follows:

From and after the effective date hereof, the following property legally described as:

Generally Located at Parcel ID: 2417-504-0020-001-6

LEGAL DESCRIPTION:

BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA; THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING; THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D; THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET; THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET; THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING, ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE, NORTH 28°001/23" W, A DISTANCE OF 167.87 FEET; THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D; THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.

SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST,

CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

Said property being generally located at Parcel ID: 2417-504-0020-001-6, in Fort Pierce, Florida shall be and the Future Land Use Designation is hereby changed from General Commercial, GC, to Medium Density Residential, RM, as depicted on Exhibit "A", attached hereto and incorporated herein.

SECTION 3. The provisions of this Ordinance are declared to be severable and if any section, sentence, clause, or phrase of this Ordinance shall, for any reason, be held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining sections, sentences, clauses, and phrases of this Ordinance but shall remain in effect, it being the legislative intent that this Ordinance shall stand notwithstanding the invalidity of any part.

SECTION 4. All ordinances or parts of ordinances in conflict herewith are and the same shall be repealed and shall be of no further force or effect whatsoever.

SECTION 5. This Ordinance is and the same shall become effective immediately upon final passage.

APPROVED AS TO FORM & CORRECTNESS:

_____
Peter J. Sweeney, Esq.
City Attorney

STATE OF FLORIDA

COUNTY OF ST. LUCIE

WE, THE UNDERSIGNED, Mayor Commissioner and the City Clerk of the City of Fort Pierce, Florida, do hereby certify that the foregoing and above Ordinance No.20-0xx was duly advertised accordance with section 163.3187, Florida Statutes by display advertising in the St. Lucie News Tribune on September 6th, 2020 and on September 13th, 2020; copy of said Ordinance was made available at the office of the City Clerk to the public upon request; said Ordinance was duly introduced, read by title only, and passed on first reading by the City Commission of the City of Fort Pierce, Florida, on September 21st, 2020; and was duly introduced, read by title only, and passed on second and final reading October 5th, 2020, by the City Commission of the City of Fort Pierce, Florida.

IN WITNESS HEREWITH, we hereunto set our hands and affix the Official Seal of the City of Fort Pierce, Florida, this 6th day of October 2020.

_____
Linda Hudson
Mayor Commissioner

ATTEST:

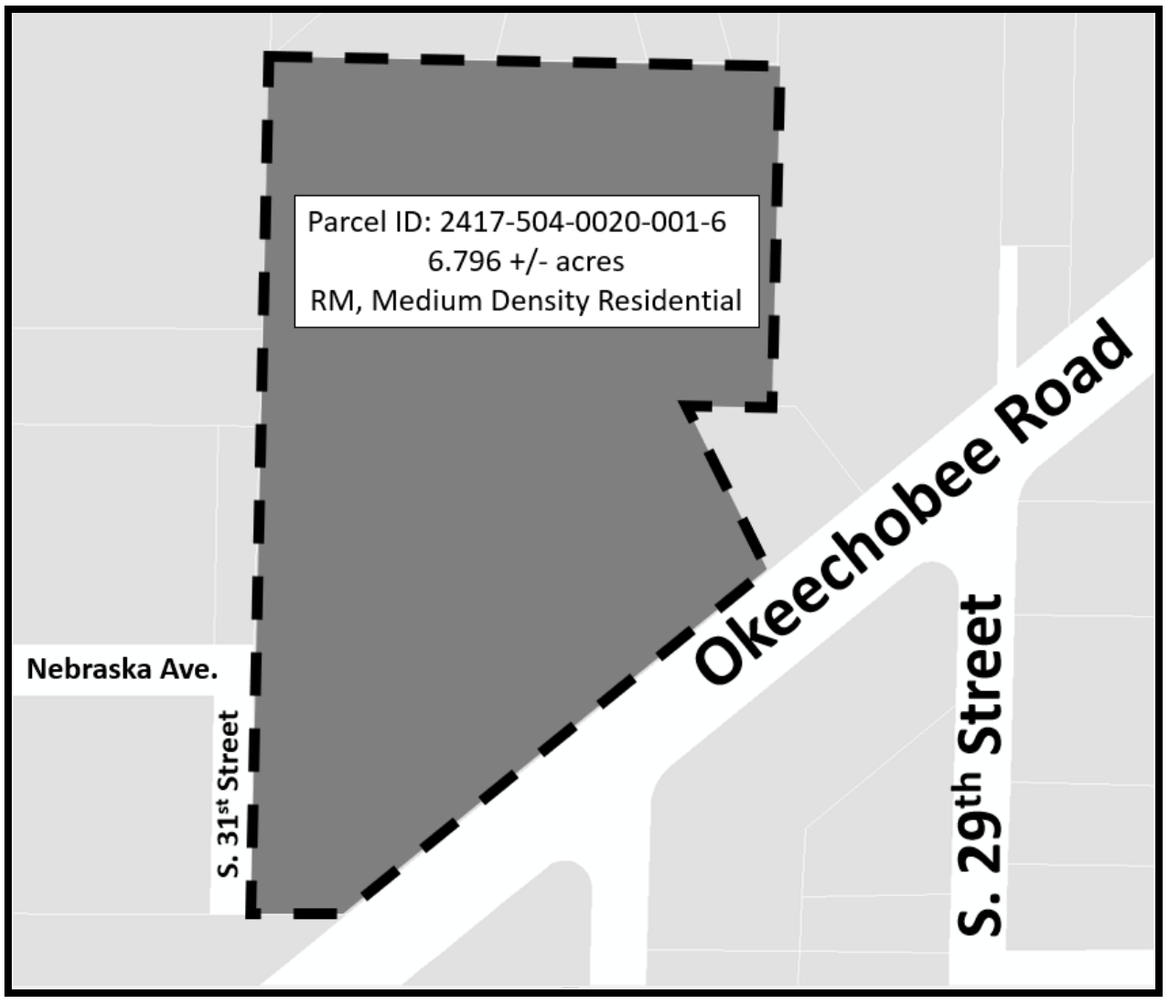
_____
Linda W. Cox
City Clerk

(City Seal)

EXHIBIT A

Proposed Future Land Use

Medium Density Residential, RM



THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

July 16, 2020

Michael Sanchez/Managed Land Entitlements
3710 Buckeye Street, Suite 100
Palm Beach Gardens, FL 33410

Subject: 3000 Okeechobee Road – TRC Comments for July 16th, 2020 conference call

City of Fort Pierce Planning Department

1. Install a landscaped area around the proposed monument sign base which extends a minimum distance of three (3) feet in all directions. Such landscaped area shall be completely covered by ground cover and shrubs, hedges or similar vegetative materials. Vegetation in the area surrounding said sign shall be maintained at a height of less than twelve (12) inches.

2. Provide a separate gated entrance to the refuse collection areas for resident and employee access.

3. Pursuant to City Code Section 22-62(b)(4) Sidewalks. In order to provide continual access for pedestrians, sidewalks and sidewalk linkages shall be required to be provided by the property owner or permit applicant, when plans are submitted for condition use applications or pay a payment into the city sidewalk fund pursuant to City Code Section 22-62(g).

   Please submit payment in-lieu for sidewalks that would be otherwise required along S. 31st Street and the Southwest corner of the subject property to the City of Fort Pierce within ninety (90) days of Conditional Use Approval.

4. Please note that the City of Fort Pierce will have a new Code of Ordinances effective July 20, 2020. This new code represents a renumbering and reshuffling of code sections from what the current code reflects. The new Planning sections will start with Chapter 111, which is Historic Preservation through Chapter 125, which is Zoning. Should you have any questions; the new proposed code can be found on the City Website, under Agenda & Minutes, City Commission 7/6/2020, Item 12(i).

Fort Pierce Engineering Department

Recommends approval.

Advisory Comment: 1. The drainage plan was reviewed as a conceptual plan and will be further reviewed at time of Building Permit submittal.

Fort Pierce Utility Authority

FPUA W/WW Engineering: Water and sewer services are available to serve this location. Please Submit 3 complete sets of utility construction plan along with a completed commercial service application to Water and Wastewater Engineering for review at 1701 S 37th Street Fort Pierce Florida. For more information, please contact John Biggs at 772 466 1600 ext. 3474 or click on the following link below: https://www.fpua.com/Business/StartStopNewServices/DevelopmentServicesResponsibilitiesWWW.asp

FPUA Electric & Gas Engineering: Approved - Electric service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide electric load information for the AutoCAD drawing. Customer will be responsible for all transformer pads, conduits and secondary conductors. For more information and project coordination, please contact Sal Scimeca. Engineering Technician II Electric and Gas Engineering 1701 S. 37th Street, Fort Pierce, FL 34947 sscimeca@fpua.com Office: (772)466-1600 Ext. 6957

Gas service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide a copy of the gas riser diagram with the anticipated load (if developer is interested in natural gas service to the propose complex). For more information and incentive available, please contact Billy Dupre. Business Development Representative Gas Operations 1701 S. 37th Street, Fort Pierce, FL 34947 Bdupre@fpua.com Office: (772)-466-1600 Ext.4705

Utility easement will be required for all propose FPUA electric and gas facilities within the site. If the developer should have any questions, please have them contact individuals listed above. Attached are copies of the FPUA GIS Maps (Electric and Gas).

Please see attached utility maps of the area.

Fort Pierce Building Department

The Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

Fort Pierce Police Department

Overall, a very nice project and site plan that would, once finished, bring "substantial enhancement to the area" as stated in the project narrative.
I do, however, have one concern. It is to do with the "indented, mini-courtyard like" area in the center of each of the apartment structures. That indented area is part of the building's design and is shown on the "front elevation" and floor plans. Specifically, it is the open courtyard like space that is between the two "one bedroom" apartment units. Even though there are a total of four (or six in the 3 story building) windows (located in "bedroom 3" of the

3 bedroom apartment units) which allow residents to see into that courtyard like area, it is still an area that may have potential use for nefarious activity as it offers a fair amount of concealment. The "indent" creates an area that may offer cover for abnormal users and unwanted activities.
One suggestion to mitigate this concern is to place an additional window in each of the one bedroom apartment's bedroom on the wall that currently does not feature a window. This will allow for greater levels of natural surveillance by residents into that courtyard area which would aide in the deterrence of unwanted activities. Additionally, consider some form of pedestrian scale illumination to ensure that courtyard area receives adequate illumination to deter (or identify) unwanted activities (but with consideration to light trespass into the bedrooms)

Officer Damian Spotts
Crime Prevention Practitioner
Fort Pierce Police Department.

City of Fort Pierce Arborist

Please contact Paul Bertram for further review. He will need to send the Planning Department his comments as well.

Paul Bertram
Office: 772-467-3821
Email: PBertram@cityoffortpierce.com

St. Lucie County Planning Department

No Comments

St. Lucie County PW/Engineering

1. A County Roadway Improvement Agreement, Right-of-Way permit, and bond will be required for turn lane construction to Okeechobee Road. Plans and cost estimates should be provided to Grant Chambers, P.E. at chambersg@stlucieco.org .
2. The County asks to be copied on the correspondence regarding the City's review of the traffic impact analysis.

City Clerk Office

No Comments

St Lucie County Fire District

This entity had issues opening your file packet, please contact Lieutenant Wayne Boyer:

Lieutenant Wayne Boyer, M.S., FO, C.F.E.I.
Water Supply Officer
Community Risk Reduction Bureau
St. Lucie County Fire District
Office: 772-621-3322 Mobile: 772-631-8877
Email: WBoyer@slcfd.org

Lieutenant Boyd will need to send the Planning Department his comments as well.

Code Enforcement

No Comments

Florida Department of Transportation

No Comments



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
  - Pad Mount
- Valves
  - Gas
  - Water
  - Raw Water
  - Waste Water
- Fire Hydrant
- Well
- Lift Station

Disclaimer:

The data contained herein is offered "as is", with no claim or warranty as to its accuracy or completeness. The data is for reference only and should not be considered to be of survey precision. Due to formatting restrictions, the information provided in the map may not be represented in the legend.

811 Know what's below. Call before you dig.

Date: 7/6/2020

FPUA COMMUNITY PROUD

N

1 inch = 181 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
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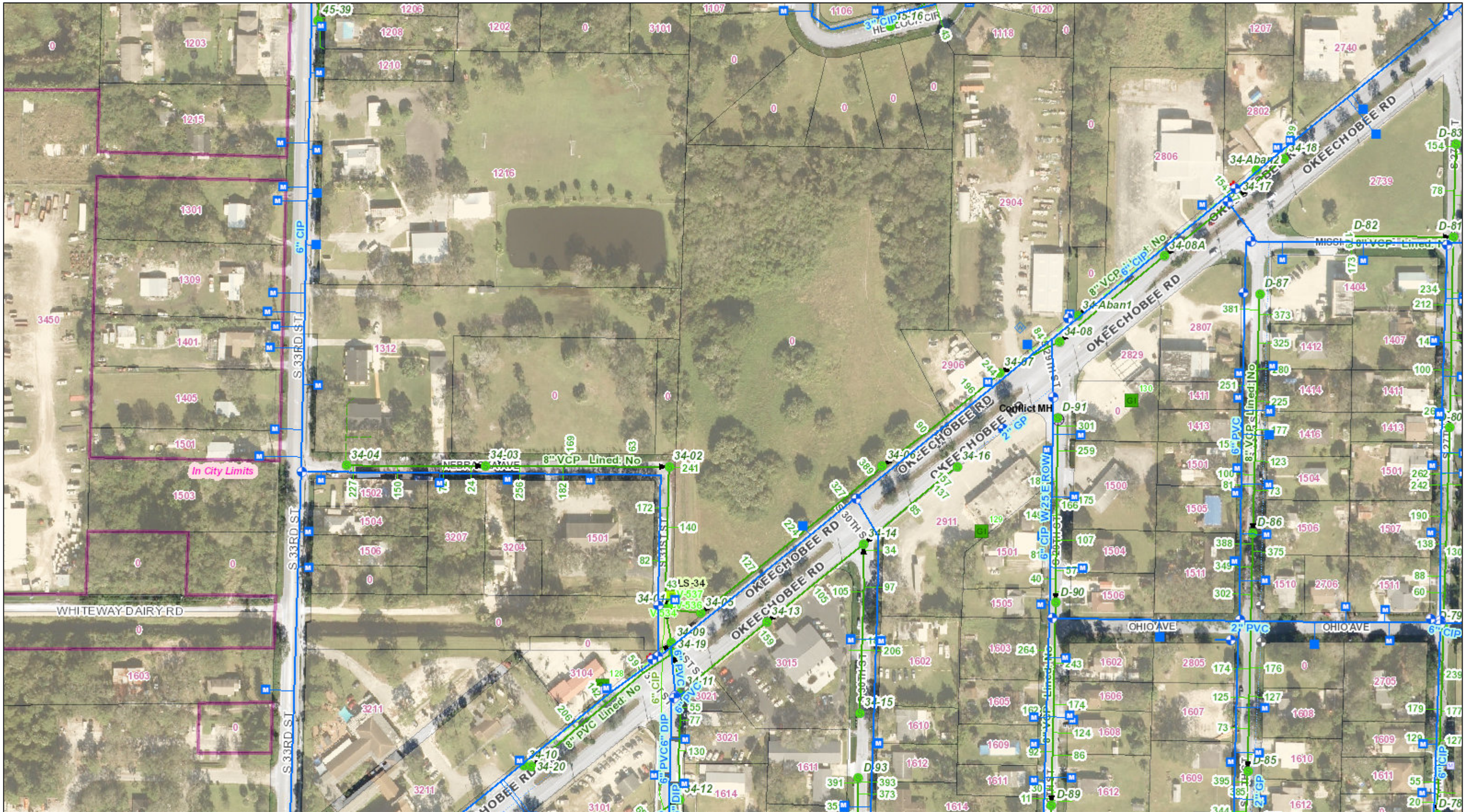

Legend

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811 Know what's below. Call before you dig.

Date: 7/7/2020

FPUA COMMUNITY PROUD

N

1 inch = 170 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938

Planning Board - 2 PM **7. a.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Rezoning - Aria Apartments - 3000 Okeechobee Road

LOCATION

3000 Okeechobee Road

RESPONSIBLE STAFF

Vennis Gilmore, Planner
Technical Review Committee

RECOMMENDATION

The requested Application for Zoning Atlas Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Zoning Designation from General Commercial (C-3) to Medium Density Residential (R-4).

Attachments

Staff Report
Aerial Map
FLU Maps
Zoning Maps
Application & Supporting Documents
Draft Ordinance
TRC Comments

Form Review

Form Started By: Vennis Gilmore Started On: 08/03/2020 08:22 PM
Final Approval Date: 08/05/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director for JH
FROM:	Vennis Gilmore, Planner VG
RE:	**Application for Future Land Use Map Amendment** **Application for Zoning Atlas Map Amendment** **Aria Apartments**
BOARD DATE:	August 11, 2020

STAFF REPORT

Property Owner/Applicant:	Arrow Investment Group, LLC 4512 N. Flagler Drive, Suite 2056 West Palm Beach, FL 33407
Requested Action:	Approval to amend the Future Land Use Map designation for one (1) parcel from General Commercial (GC) to Medium Density Residential (RM) Approval to Rezone one (1) parcel from General Commercial (C-3) to Medium Density Residential (R-4).
Site Location:	3000 Okeechobee Road
Parcel IDs:	2417-504-0020-001-6
Existing Use:	Vacant
Parcel Size:	6.796 +/- Acres
Current Future Land Use:	General Commercial (GC)
Current Zoning:	General Commercial (C-3)
Proposed Future Land Use:	Medium Density Residential (RM)
Proposed Zoning:	Medium Density Residential (R-4)

	North	East	South	West
Surrounding FLU:	Low Density Residential (RL)	General Commercial (GC)	General Commercial (GC)	(GC) and Medium Density Residential (RM)
Surrounding Zoning:	Single-Family Intermediate (R-2)	General Commercial (C-3)	General Commercial (C-3)	(C-3) and Medium Density Residential (R-4)

Staff Analysis

Request

The subject Future Land Use Map Amendment from General Commercial (GC) to Medium Density Residential (RM) will provide for a land use that is consistent with the applicant's proposed vision of an Innovative Residential Multi-Family Development and the City's desired development pattern for the subject site and surrounding area. The RM Future Land Use Category, as defined in the Future Land Use Element of the City's Comprehensive Plan, calls for parcels that are best suited for multi-family residential uses. As the City's Zoning Map and Land Development Regulations must be consistent with the Future Land Use and accompanying land use category specifications contained in the Future Land Use Element, the subject application also includes a rezoning for the same subject parcel from General Commercial (C-3) to Medium Density Residential (R-4).

Subsequent to the subject map amendments, separate applications for Development Review, Design Review, and Conditional Use (Innovative Residential Development) will be submitted for review and approval that will include a request for density bonuses specific to the subject property.

Future Land Use and Zoning Designation Comparison

The subject property currently has a Future Land Use and Zoning designation of Commercial, which was, at a point in time, an appropriate designation as the site abuts Okeechobee Road, a major east/west corridor in the City. More recently, however, the development pattern has shifted to a horizontal mix of both residential and commercial uses as this corridor transitions into Delaware Avenue, a corridor that transverses the Peacock District. The Peacock Overlay District is envisioned as a destination for neighborhood serving uses. The proposed land use and zoning map amendments will promote the City's vision for this corridor and the surrounding area.

As the development of the subject parcel is a vital component to the redevelopment effort of this targeted area, it is staff's professional opinion that the proposed land use and zoning for the

subject property of Residential Medium (RM) and Medium Density Residential (R-4), respectfully, is appropriate and supported.

Standards for Review

Pursuant to Chapter 163.3187, F.S., a small-scale development amendment may be adopted under the following conditions:

a) The proposed amendment involves a use of 10 acres or fewer; and
b) The proposed amendment does not involve a text change to the goals, policies, and objectives of the local government's comprehensive plan, but only proposes a land use change to the future land use map for a site-specific small-scale development activity. However, text changes that relate directly to, and are adopted simultaneously with, the small-scale future land use map amendment shall be permissible under this section.

Small scale development amendments adopted pursuant to this section require only one public hearing before the governing board, which shall be the adoption hearing.

Regarding the requested rezoning, pursuant to Article IX, City Code of Ordinances, a proposed change of district or text may be initiated by the City Commission, the City Planning Board or by petition of one or more of the property owners or affected residents within the area proposed to be changed or affected by a change in the district map or text.

The following standards must be satisfied per Section 125-136 of the City Code prior to the approval of the requested amendment:

(1) The amendment is consistent with the Comprehensive Plan.
(2) The amendment will not have an adverse effect on the ability of the City to:

    a. Satisfy land and water use needs; and
    b. Meet transportation demands and provide community facilities and services.

(3) The amendment will promote and protect the public health, safety, and general welfare.

The proposed amendment is consistent with and furthers the Goals, Objectives, and Policies of the City's Comprehensive Plan. The Zoning Atlas Map Amendment promotes and protects the public health, safety, and general welfare as the request as proposed is in character and similar with the surrounding area, land uses and zoning designations.

Technical Review Committee (TRC)

All affected City and County Departments have reviewed the proposed Future Land Use Map and Zoning Atlas Map Amendments and there were no comments from the TRC.

Staff Recommendation Future Land Use Map Amendment

The requested Application for Future Land Use Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience, and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Future Land Use Designation from General Commercial (GC) to Medium Density Residential (RM).

Staff Recommendation Zoning Atlas Map Amendment

The requested Application for Zoning Atlas Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare. Therefore, Staff recommends **APPROVAL** of the request to change the Zoning Designation from General Commercial (C-3) to Medium Density Residential (R-4).



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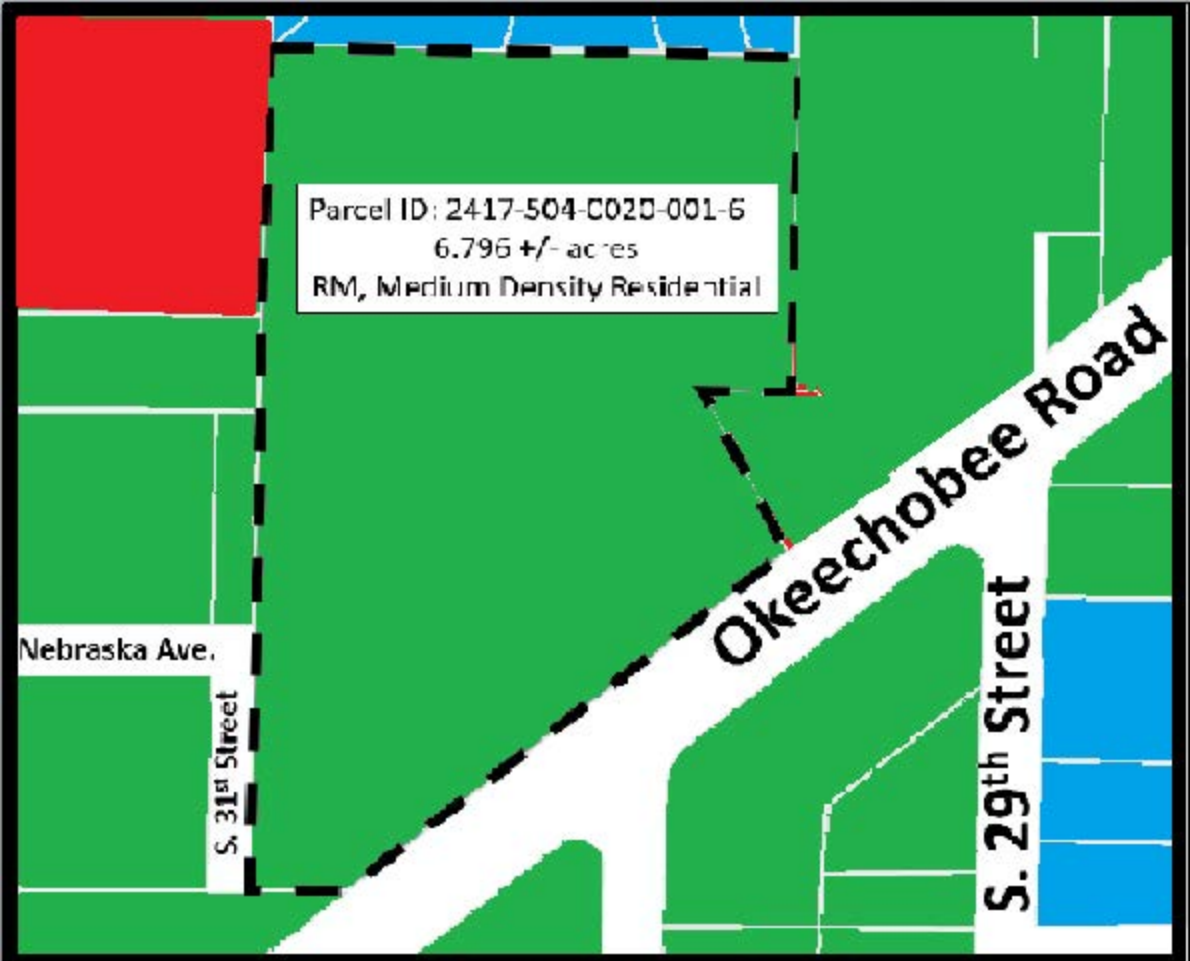
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY
FORT PIERCE
Florida

Aerial Map



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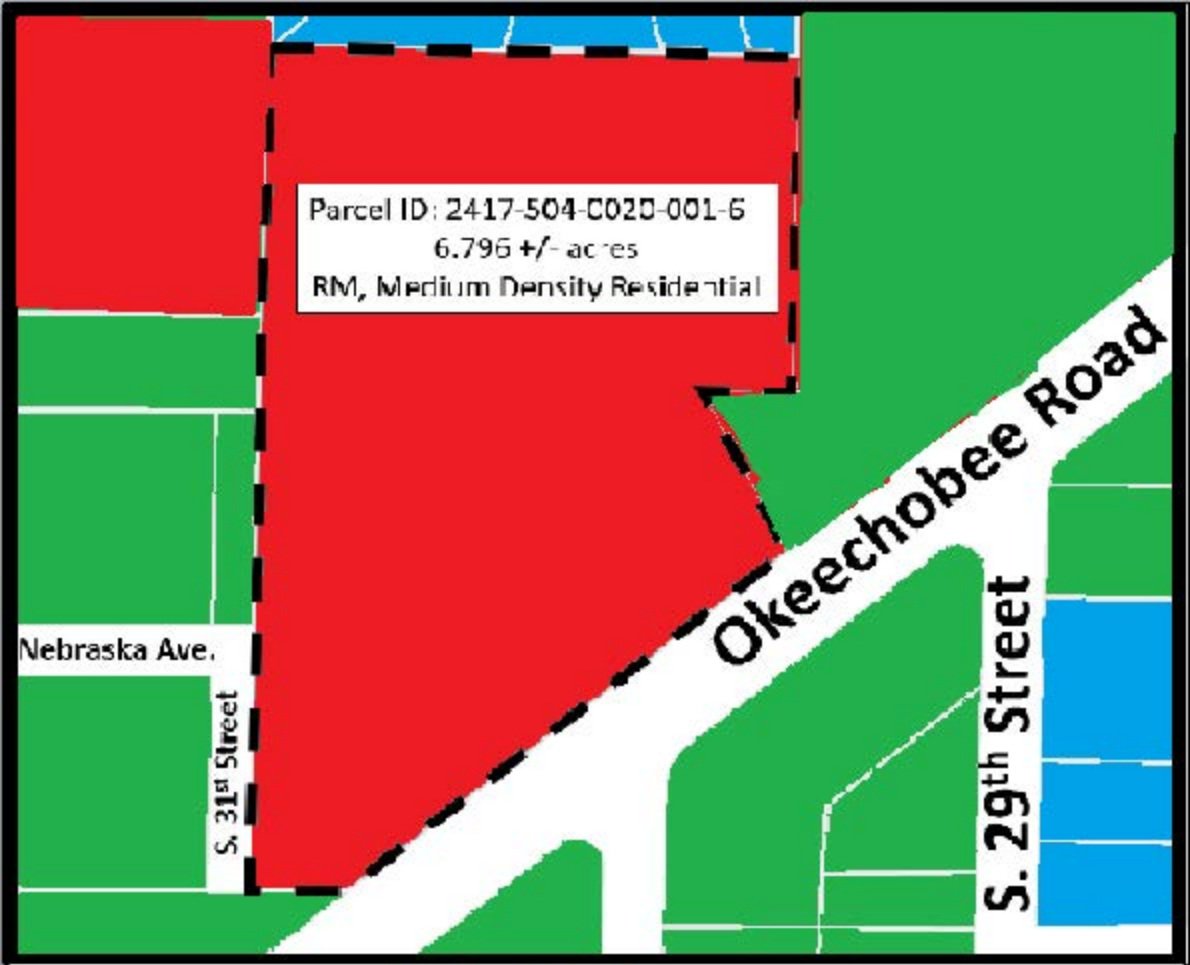
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Existing FLU Map



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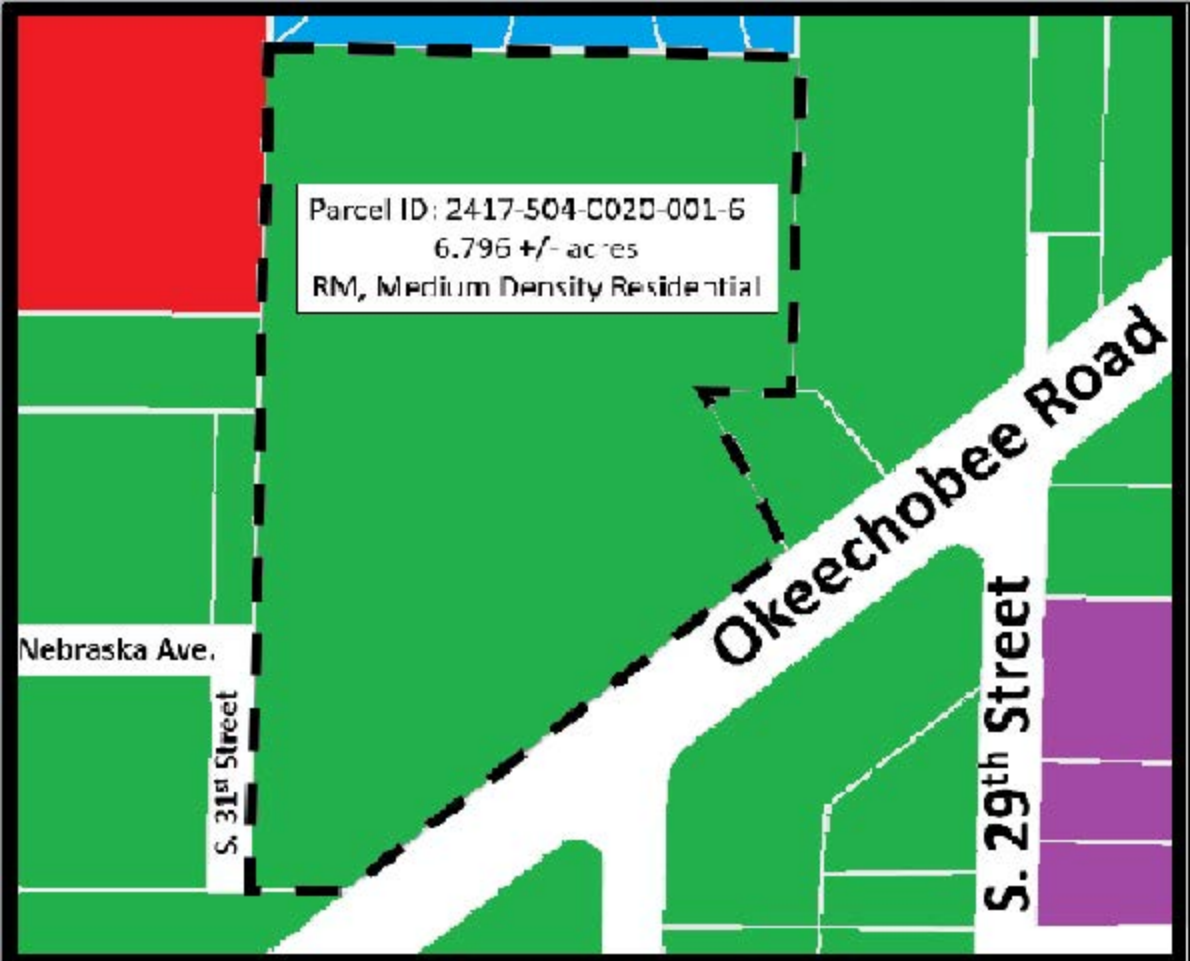
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Proposed FLU Map



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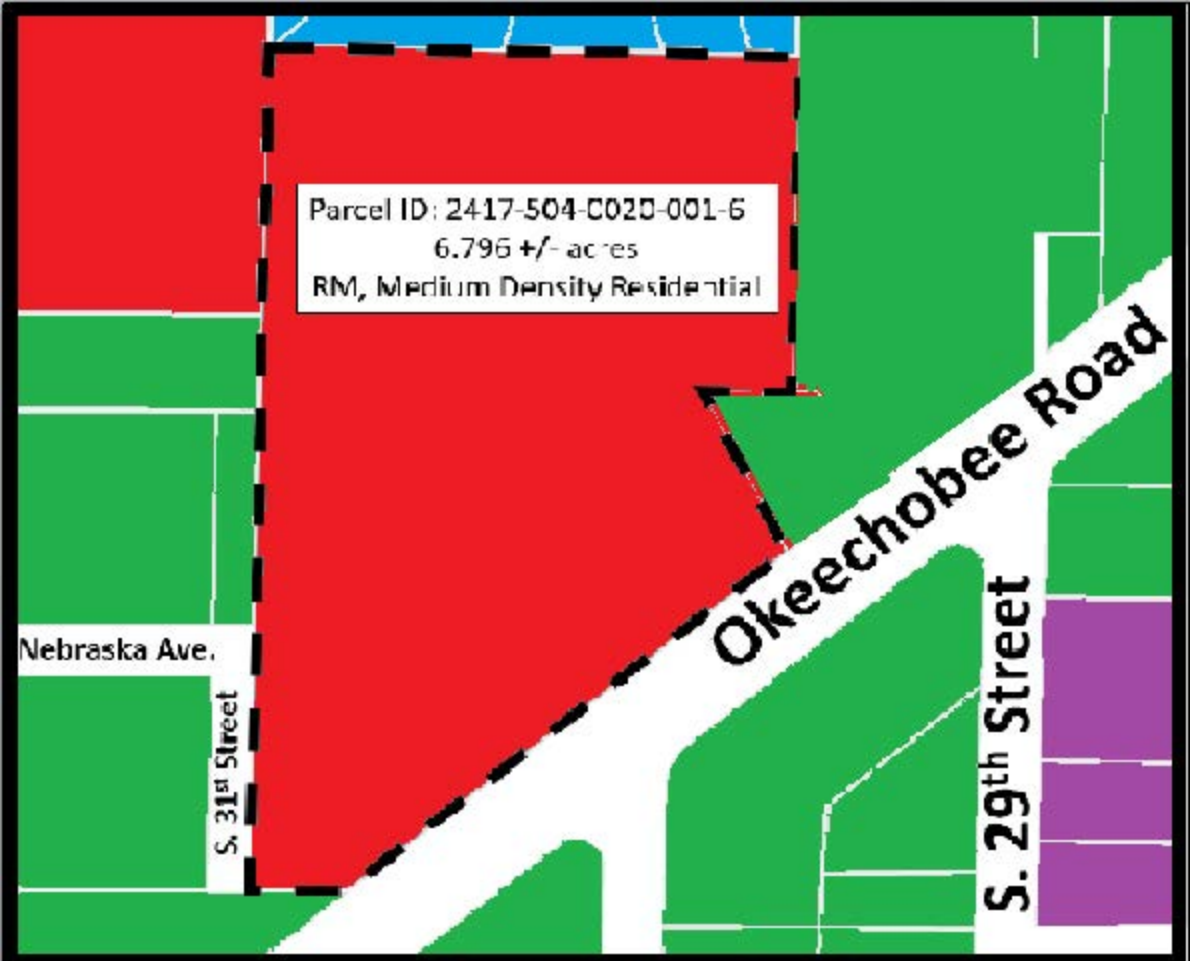
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: :

Existing Zoning Map



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Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: : Proposed Zoning Map

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

DEVELOPMENT REVIEW

Property address or Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street

Parcel ID #(s): 2417-504-0020-001-6

Project description: Aria Apartments

Arrow Investment Group, LLC	Michael Sanchez/Managed Land Entitlements
Property Owner(s)	**Applicant/Representative, Title, Company**
4512 N. Flagler Drive, Suite 2056	3710 Buckeye Street, Suite 100
Street Address	Street Address
West Palm Beach, FL 33407	Palm Beach Gardens, FL 33410
City State Zip	City State Zip
(561) 324-4439	561-568-8045
Phone Number	Phone Number
capitalinvestments@usa.com	michael@mylandentitlements.com
Email Address	Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below sholl also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Alnok who is personally known to me or has produced FLDL as identification.

Signature of Notary (seal)

NOTARY PUBLIC
MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____ Fees_____ Control #_____ B. Permit #_____

Intake Planner_____

Planner Assigned_____

Approved By_____ Date _____

Comments_____

Intake Date Stamp

❑ DEVELOPMENT REVIEW

General Information

- ❑ Incomplete application packets cannot be accepted.
- ❑ Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type		
☒ Site Plan	☒ Conditional Use with New Const.	❑ Major Amendment
❑ Conceptual Development Plan		❑ Minor Amendment

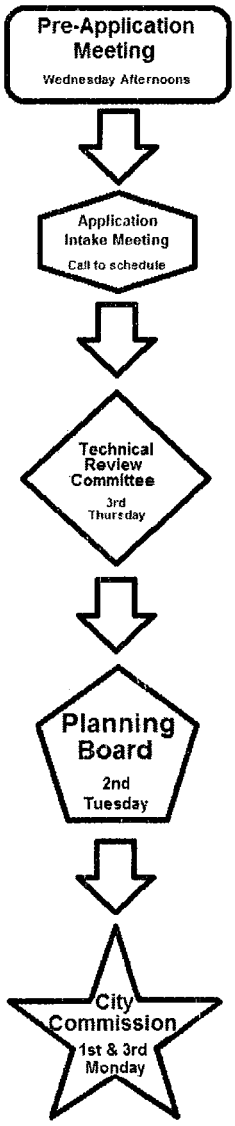
Site Information:

Non-Residential: Proposed Sq. Ft.: _____ Residential: Proposed Units: 112 Units

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West
Single Family	Commercial	Commercial	Multifamily/Commercial

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- ❑ Complete notarized application
- ❑ Warranty Deed
- ❑ SLC Property Record Card
- ❑ Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- ❑ General location map (see Section 22-58.d.2)
- ❑ Survey (see Section 22-58.d.3)
- ❑ Site Plan (see Section 22-58.d.4)
- ❑ Landscaping Plan (see Section 22-187)
- ❑ Storm Drainage Plan (see Section 22-58.d.6)
- ❑ Environmental Impact Report
- ❑ Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- ❑ Lighting Plan (see Section 22-58.d.8)
- ❑ Design Review submittals (see Design Review application)
- ❑ Traffic Impact Report
- ❑ Concurrency Review submittals (see Concurrency Review application)

ARIA APARTMENTS

CITY OF FORT PIERCE

FUTURE LAND USE MAP AMENDMENT, REZONING, CONDITIONAL USE AND SITE PLAN APPROVAL

PROJECT NARRATIVE/JUSTIFICATION STATEMENT

JUNE 26, 2020

REQUEST SUMMARY

Arrow Investments Group, LLC (the "Applicant"), hereby respectfully requests approval from the City of Fort Pierce (the "City") of the following applications related to the Aria Apartments project proposed on a 6.796-acre property located on the north side of Okeechobee Road approximately ¼ mile east of S. 33rd Street (the "Property"):

- Future Land Use Map Amendment to change the land use designation of the Property from General Commercial (GC) to Medium Density Residential (RM);
- Zoning Map Amendment to change the zoning designation of the Property from General Commercial (C3) to Medium Density Residential (R-4);
- Site Plan Approval to allow the construction of a 112-unit luxury rental apartment project on the Property to be referred to as the "Aria" apartment complex (the "Project"); and
- Conditional Use Approval to allow for an "Innovative Residential Development" for the Project.

PROPERTY DETAILS

The Property is currently vacant and, to the best knowledge of the Applicant, has never been developed. Limited clearing had previously occurred on the Property, and the Property is currently dominated by cleared land with some remnant forest communities consisting of Cabbage Palm and Brazilian Pepper (please see "Environmental" section of this narrative for additional information regarding existing vegetation and a small, isolated wetland). A drainage ditch exists along the west perimeter of the Property.

The Property contains a General Commercial (CG) Future Land Use Designation and a General Commercial (C3) zoning designation.

ADJACENT PROPERTIES DETAILS

Details regarding the land use, zoning and existing uses of the properties adjacent to the Property are noted below:

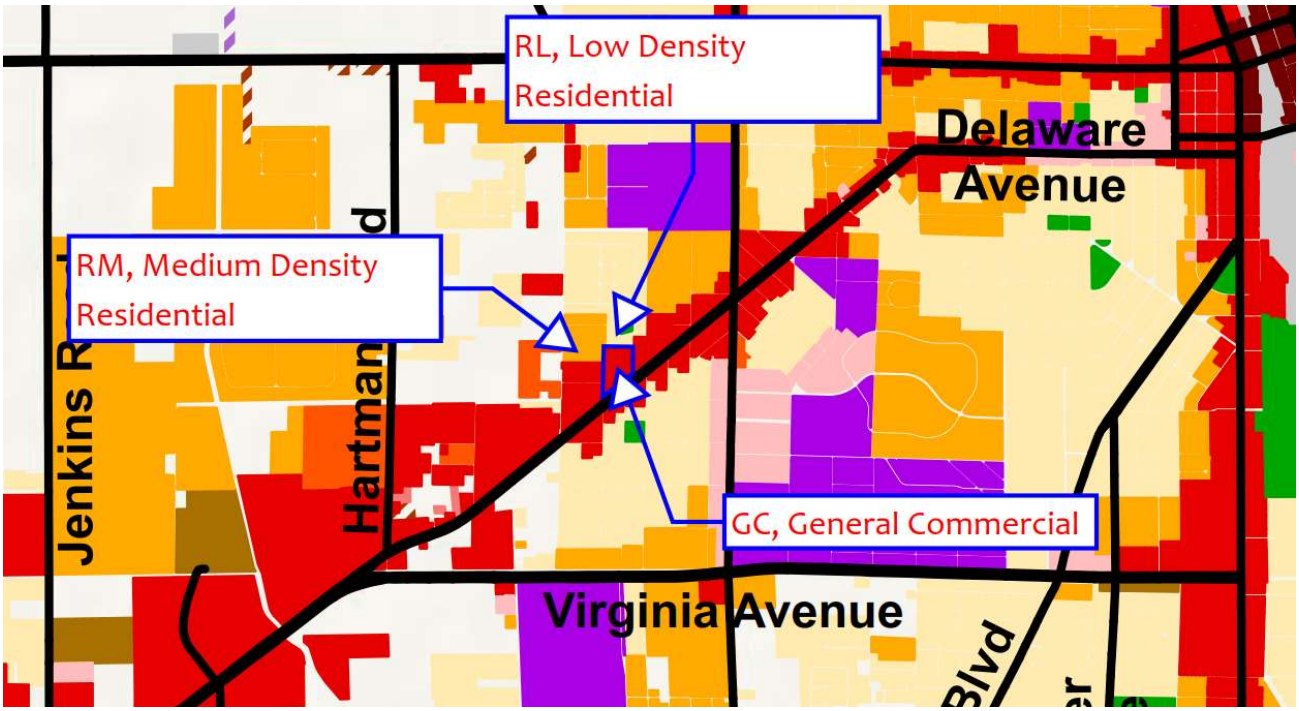
	Current FLU	Current Zoning	Existing Uses
North	RL, Residential Low Density	R2, Single Family Intermediate Residential	Vacant single family
South	GC, General Commercial	C3, General Commercial	Funeral home; grocery store
East	GC, General Commercial	C3, General Commercial	Used car sales; Habitat for Humanity
West	GC, General Commercial; RM, Medium Density Residential	C3, General Commercial; R4, Medium Density Residential	Contractor's Office; Religious Institutions

The graphic below identifies the Property in red and identifies the existing uses of the adjacent properties:

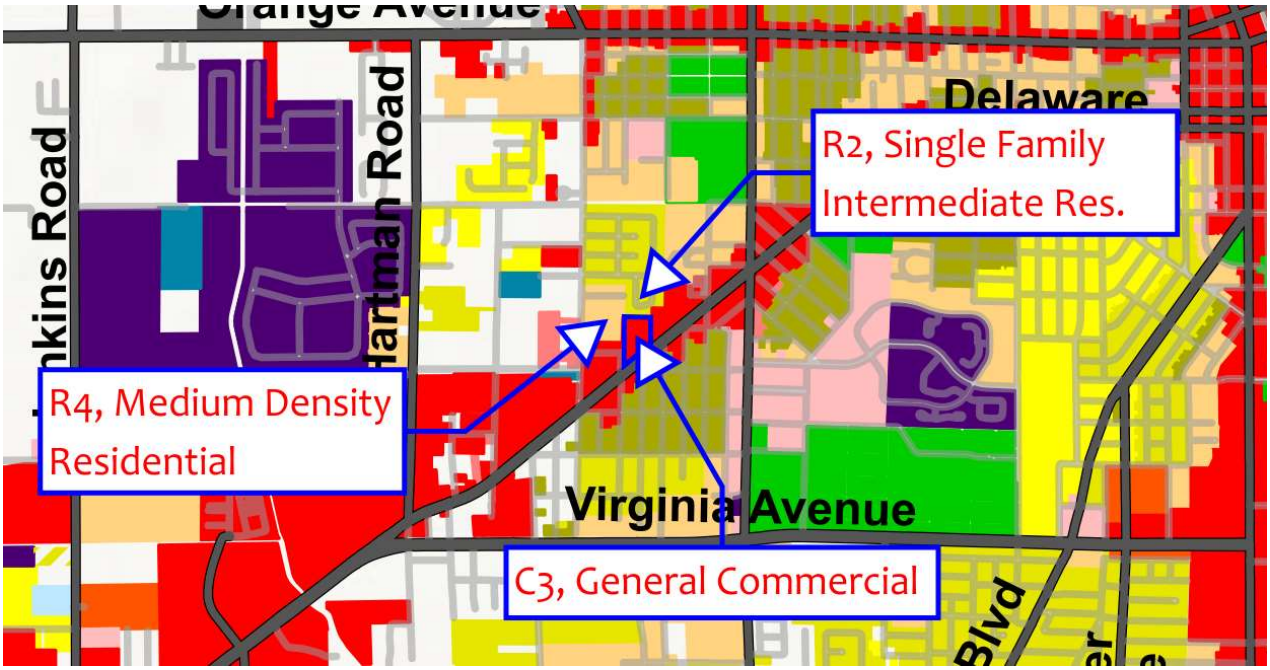


The graphics below identify the Future Land Use and Zoning of the subject property and adjacent properties:

FUTURE LAND USE



ZONING



GENERAL DESCRIPTION OF SUBJECT REQUEST AND NARRATIVE FORMAT

The Applicant is proposing to change the future land use designation of the Property to Medium Density Residential (RM) and rezone the Property to Medium Density Residential (R4) in order to allow for the development of a 112-unit residential apartment project consisting of five (5) residential buildings of between two (2) and three (3) stories in height, a clubhouse, a pool and other amentities.

The balance of this Narrative will provide (1) discussion regarding the proposed change from commercial to residential future land use and zoning designations; (2) discussion regarding the proposed density within the Project; (3) descriptions of the physical improvements proposed for the Project and related issues; and (4) demonstration of compliance with the Innovative Residential Development criteria.

FUTURE LAND USE MAP AMENDMENT AND REZONING FROM COMMERCIAL TO RESIDENTIAL

The Property currently has commercial land use and zoning designations similar to other properties that front along the north and south sides of Okeechobee Road. The portion of Okeechobee Road extending from Virginia Avenue to Delaware Avenue is developed on both sides of the road with an eclectic mix of uses including, but not limited to, smaller retail strip centers, automobile repair, used auto sales, small restaurants, small personal service uses, small office uses, day care, convenience stores, gas stations, bank, religious institutions and other uses. There are no large-scale commercial developments within said stretch of Okeechobee Road since those developments would typically locate on a road with a higher traffic volume such as Virginia Avenue.

It is the Applicant's opinion that (1) an approximately 6.8-acre property such as the Property is not suitable for large scale commercial development given its location along a lesser traveled roadway, and (2) a much more suitable and feasible use for the Property would be medium-scale multifamily development that would be appropriate along a four-lane divided roadway such as the section of Okeechobee Road in front of the Property and which would provide a logical transition from the single family and multi-family residential uses to the north to Okeechobee Road.

The requested Medium Density Residential (RM) future land use designation is consistent with the land use designation of properties to the west and northwest of the Property, provides for a logical transition from the Low Density Residential (RL) land use designation of the properties to the north to Okeechobee Road and is compatible with the General Commercial (GC) land use designations to the west, east and south.

The same logic as above applies to the requested Medium Density Residential (R4) zoning district as it relates to the zoning designations of surrounding properties.

Consistency with Comprehensive Plan

The following are excerpts from the Future Land Use Element of the County's Comprehensive Plan as it relates to the requested Medium Density Residential (RM) designation, each followed by the Applicant's demonstration of the proposed Project's compliance with the referenced provisions of the Comprehensive Plan:

- Section A: *The Medium Density Residential designation is intended for parcels that are best suited for multifamily residential uses ranging in density from 6.5 to 12 du/ac. This category allows small-lot single family units and multifamily dwellings including duplexes, condominiums and townhouses. Limited*

commercial uses intended to serve the residential uses shall be allowed. Compatible public, quasi-public, and special uses including parks, churches, non-profit clubs, schools, and daycare facilities shall be allowed.

Demonstration of compliance: *The proposed land use designation is consistent with the intended use of the property as multi-family apartments, and uses allowed with the RM future land use designation are consistent with other uses existing along Okeechobee Road based on the allowable uses within the RM designation noted above.*

- Objective 1.2: *The City shall use innovative Land Development Regulations to encourage flexibility in development to support compact, mixed-uses compatible with local context and character.*

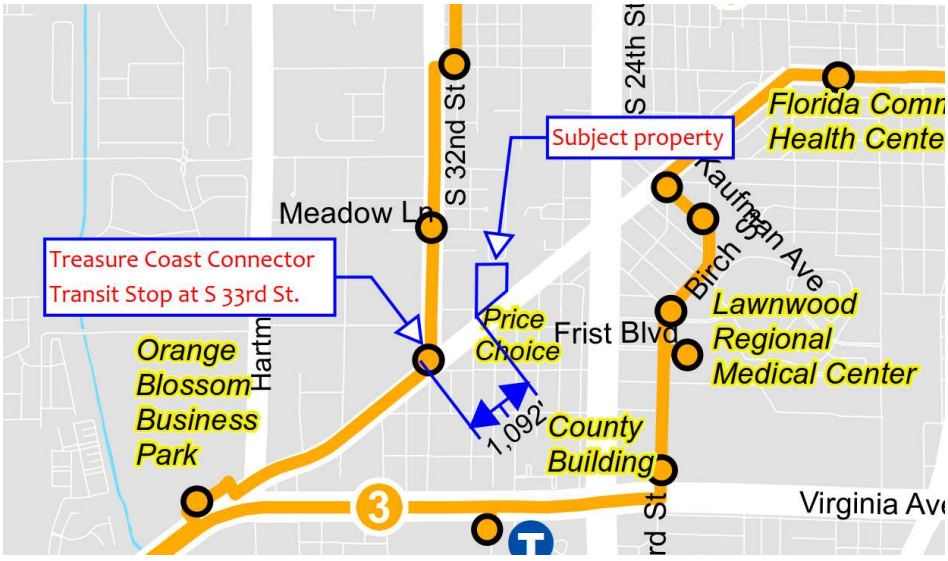
  Demonstration of compliance: *The proposed Project will be a compact development providing new, high-quality apartment housing for residents of the City which is compatible with the local context and character of the area. The increased residential density in the area will help to support the neighboring commercial uses along Okeechobee Road, and the Project's compact, walkable design will help to further the interrelationship between the residential and commercial uses in the area.*

Density

The proposed Project provides for a density of 16.48 du/ac.

The County's Comprehensive Plan provides that the Medium Density Residential (RM) future land use designation allows for between 6.5-12 du/ac. However, Policy 1.1.5 states "The City will allow a density bonus of 5 dwelling units per acre above the maximum density for developments within ¼ mile of a rail station, multimodal transit center or transit stop."

As demonstrated the map below, the Property is located less than ¼ mile from a transit stop for the County's Treasure Coast Connector bus system that is located at the northwest corner of the intersection of Okeechobee Road and S. 33rd Avenue. Accordingly, the Applicant intends to utilize the additional five (5) du/ac authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan bringing the total density permitted under the RM future land use designation to 17 du/ac.



With respect to zoning, the Medium Density Residential Zone (R-4) allow for a maximum density of ten (10) du/ac for conventional developments and twelve (12) du/ac for innovative developments. The Applicant is requesting approval of a Conditional Use to allow an "Innovative Residential Development" as demonstrated in the "Innovative Residential Development/Conditional Use Approval" section of this narrative and, thus, will be utilizing the additional density allowed for such developments (12 du/ac) for the purposes of this application. The maximum density for the Project with respect to zoning has been calculated at 17 du/ac based on the 12 du/ac allowed with an innovative development + the additional five (5) du/ac density bonus authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan for developments within a ¼ mile of a transit stop.

The proposed density of 16.48 du/ac per acre complies with the 17 du/ac maximum allowed by the future land use and zoning designations noted above.

PROJECT DETAILS

General Project Improvements

A summary of proposed Project improvements depicted in the development plans provided with this submittal is contained below:

- Development program: The Project comprises a multifamily apartment project consisting of 112 dwelling units ranging from one (1) to three (3) bedrooms in five (5) buildings. Four (4) of the buildings will be three (3) stories in height; and the fifth building will be two (2) stories in height. A clubhouse, pool area and other amenities listed below are also proposed.

- General design intent/summary: The design intent of the Project was to create an innovative, walkable and compact apartment project with high quality architecture, landscaping and amenities that raise the bar for new development in the area, increase property values and create an inviting sense of place for its residents. Four (4) of the residential building are placed around a central retention lake which has been provided an amenity for the Project. The lake will have a fountain and littoral plantings to enhance the amenity, and a sidewalk has been provided around the entire lake with benches so that residents can enjoy the lake views and recreate/exercise around the lake. A palm tree-lined roundabout is proposed at the entrance into the Project which will have a specimen tree as a focal point and will provide for an aesthetically pleasing entry into the Project. Parking and dumpsters are evenly and conveniently distributed throughout the Project. Other amenities include a clubhouse with a fitness center, kitchen, multipurpose room, restrooms and a covered area over the pool deck for shade lounging; a passive park with picnic tables, benches and shade trees; a large pool with seating areas and planters; a tot lot with playground equipment and fenced dog park. Additionally, Building 1 and the clubhouse have been placed against the street to add visual interest and to help screen the parking area from the adjacent roadway.

- Parking: Parking is provided within the Project based on a rate of 1.5 spaces/unit. 168 spaces are required, and 172 spaces are provided.

- Open Space/Outdoor Amenities: Section 22-27(b)(3) of the City's Land Development Code requires that buildings within multi-family housing developments in the Medium Density Residential (R-4) zoning district not cover more than 50% of the lot area. The Project proposes a building coverage of only 18.0% and a total open space of 127,934 square feet or 43.2% of the project site. Outdoor amenities include

walking paths throughout the site including around the retention lake, seating areas around the lake; a passive park with benches, tables and shade trees; a large pool; a fenced dog park and a tot lot.

Architecture

Both the two story and three buildings are designed in a contemporary style that mirrors current trends in many residential projects. The building footprints allow the building mass to be broken up reducing overall scale and creating a more visually interesting facade. The fenestration utilizes contemporary features and materials including cantilevered balconies, horizontal railing, variations in roof types and heights, metal eyebrow shades, faux horizontal wood siding, and smooth stucco broken into different wall panels by the building mass and vinyl stucco joints. The color and material palette is contemporary and brings good contrast for visual interest using white for trim, window frames, walls, sun shades and railings; light grey for wall panels, medium grey for the faux wood siding and dark grey for the flat concrete roof tiles.

The maximum height allowed in the Medium Density Residential (R-4) zoning district is 45'-0". The maximum height of the tallest building is 39'-0".

Mechanical equipment will be located on the roof and screened from view.

A monument sign is proposed on the south side of the Project entrance, and details regarding said sign are provided with this submittal on the "Sheet A-1 – Entry Monument" plan. The design of the monument sign incorporates the same colors and materials as the buildings on site and has been sized in accordance with the City's requirements for residential development signage.

Landscaping/Tree Mitigation

The Applicant has gone to every effort to save and/or relocate existing native trees on site which include Pine, Live Oak and Cabbage Palm. The Tree Mitigation Plans provided with this submittal provide that (1) 155 cabbage palms will be relocated on site; (2) 552" of trees will be removed in order to allow for the Project; and (3) 316" of trees will be preserved in place. The total mitigation requirement is 236".

The Applicant is proposing an very dense landscape design in order to satisfy the minimum landscape requirements of the City, provide additional trees to satisfy the mitigation requirement and provide additional landscaping to satisfy the "Innovative Residential Development" requirements as further discussed in the "Innovative Residential Development/Conditional Use Approval" section of this narrative.

The Project requires 56 interior trees, where 166 interior trees are being provided (110 additional trees or 196% additional). The project requires 112 buffer trees, where 137 trees are being provided (25 additional trees or 22.3% additional). A total of 137 additional trees are proposed on the Project. Additionally, the height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.

The Applicant has increased the landscape buffers along the west, north and east sides beyond the minimum 10-foot requirement to 20', 15' and 15', respectively in order to further justify the Project and provide additional buffering for adjacent properties.

The proposed landscape palette provides native vegetation and careful placement of trees to provide shade in open spaces areas, screening where required, planting of the littoral areas of the retention pond for aesthetics and enhanced aesthetics at the Project entrance, residential buildings, clubhouse and other areas.

A cabbage palm hammock is proposed at the southwest corner of the Project, and a "Range Live Oak" is proposed at the roundabout at the Project entrance to serve as a focal point and enhance the Project.

Site Lighting

A photometric plan has been provided with this submittal which depicts the proposed exterior lighting within the Project. Pole mounted lights and building lights are proposed to provide lighting within the parking areas and pedestrian walks, bollard lighting is provided at the passive park and pedestrian scale pole-mounted lights are provided within the pool area. All lighting will be high efficiency LED lighting.

Drainage

The proposed surface water management system will collect stormwater runoff and direct it to the on-site detention area via a network of underground pipes. Stormwater will be stored in the detention area and on surface for large, infrequent storm events. A small exfiltration system is provided to assist with pre-treatment prior to discharge. Finished floors will be protected from the 100-year 3-day storm event. Roadways will be protected from the 10-year 1-day storm event. A perimeter berm will be established and retain the 25-year 3-day storm event on-site.

The drainage ditch along the west side of the property will lie outside the storage basin and act as the receiving body for controlled discharge. Water from the ditch will exit to the west via a culvert under South 31st Street into a City of Fort Pierce drainage ditch that runs west to and under South 33rd Street. At that point, the drainage system becomes part of North St. Lucie River Water Control District Canal 6 and stormwater flows west to Five Mile Creek.

Utilities

Domestic and Fire Water supply will be provided through an 8" water main loop through the project with two connection points to the existing water main located within Okeechobee Road right-of-way. This system will be constructed to Fort Pierce Utility Authority standards and be turned over to the utility for operation and maintenance.

Sanitary sewage will be collected via a service from each building that connects to a sanitary main. The main directs flow to an on-site private lift station located near Building 1 at the southwest corner of the site. The lift station will pump flow to an existing manhole operated and maintained by Fort Pierce Utility Authority. The on-site sanitary system is proposed to be privately operated and maintained.

Traffic Concurrency and Capacity Analysis

Included with this submittal are (1) a future land use amendment traffic analysis (the "FLUA Analysis"), and (2) a traffic impact analysis for the Project (the "TIA").

The FLUA Analysis concludes that the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project and, therefore, the proposed change in future land use for the Project meets applicable criteria for an amendment to the City's Comprehensive Plan.

The TIA concludes that (1) the roadway links are sufficient to accommodate the Project traffic in the AM and PM peak hours; (2) the existing geometry at the intersections of S 25th Street & Okeechobee Road and Okeechobee Road and Virginia Avenue are expected to operate acceptably under existing, background and future total conditions; and (3) an eastbound left turn lane is required. The Project plans provided with this submittal include the required eastbound left turn lane.

INNOVATIVE RESIDENTIAL DEVELOPMENT/CONDITIONAL USE APPROVAL

Section 22-82 of the City's Land Development Code contains the following standards applicable to a multifamily residential developments that shall be satisfied in order to qualify for the two (2) additional dwelling units per acre and the related Conditional Use approval by the City. The Applicant's demonstration of compliance with said criteria is contained below in *italics* typeface:

(a) Purpose. Innovative residential developments are developments which achieve a more creative and imaginative housing environment than normally occurs by use of the clustering technique, by employing various other methods to achieve distinctiveness and excellence in siting, design and/or landscaping. Density bonuses and reductions in various building restrictions are used to encourage these developments.

Demonstration of Compliance: *The Project has been thoughtfully and carefully designed to create a more innovative project than normally occurs. Factors that, in the opinion of the Applicant, qualify the Project as an innovative residential development that are above-and-beyond a "normal" apartment building project and the minimum requirements of the City are listed below:*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*
- *The central lake will have a fountain and a walking trail with sitting areas.*
- *A passive park is proposed as a project amenity with picnic tables, benches and shade trees.*
- *A luxurious clubhouse with a multipurpose room, kitchen, fitness center, etc. is proposed.*
- *A large pool with a large pool deck area decorated with planters is proposed.*
- *A fenced dog park is being provided as an extra amenity.*
- *A fenced tot lot is provided as an extra amenity.*
- *Pedestrian paths are provided throughout the Project.*
- *A central roundabout with a large Oak Tree will serve as a focal point upon entry into the Project.*
- *A high quality of architecture is proposed as discussed in the "Architecture" section of this narrative.*
- *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- *A large number of trees and palms are either being preserved or relocated on site.*
- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*

- *Significant enhancements to landscaping beyond the minimum requirements are provided as further discussed in the "Landscaping" section below.*

(e)(1) Landscaping. Landscaping. The gross density may be increased up to one unit per acre for landscaping plans which provide for effective use of existing vegetation and/or for approved landscape plans for streetscapes, pedestrian ways, bicycle paths, areas near buildings, open spaces and/or recreation areas. This increased density may only be awarded if the landscaping of the innovative residential development will exceed the requirements in section for landscaped area by ten (10) per cent, for amount of trees by ten (10) per cent and/or in terms of qualitative characteristics of the landscaping.

Demonstration of Compliance: *As depicted on the landscape plans provided with this submittal, the Applicant is proposing a carefully designed, very dense landscape design and substantial additional landscaping in order to create an aesthetically pleasing project and to satisfy the innovative residential development criteria. Details regarding the "extra" landscaping proposed are noted below:*

- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*
- *The passive park has been densely landscaped to create an inviting and shaded sitting area for enjoyment of the tenants.*
- *The Project entry and roundabout are lined with palms typical of a luxury development.*
- *The residential buildings, clubhouse and pool are densely landscaped typical of a luxury development.*
- *43.2% open space is provided where only 40% is required.*
- *166 interior trees are provided where only 56 are required (196% additional).*
- *137 buffer trees are provided where only 112 trees are required (25 additional trees = 22.3% additional).*
- *Littoral plantings are proposed around the lake as an added aesthetic enhancement for the Project.*
- *The height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.*

(e)(2) Siting. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-5 zone) for creative placement of buildings and/or other facilities in terms of visual focal points, use of existing physical features such as topography, views, sun and wind orientation, the circulation pattern, variation in building setbacks and/or building and facility groupings.

Demonstration of Compliance: *As demonstrated below, the site design and placement of buildings have been creatively designed in order to establish an innovative residential development by use of visual focal points and physical features as much as possible on a 6.796-acre property.*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*

The placement of the buildings around the lake will enhance views from both the residential units and from tenants recreating/exercising/sitting around the lake.

- ❖ *A central roundabout lined with palm trees and with a large Oak Tree in the center will serve as a focal point upon entry into the Project.*
- ❖ *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- ❖ *Pedestrian pathways are provided throughout the development to create a walkable community.*

(e)(3) Design. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-S zone) for imaginative design features including architectural styles, harmonious use of building materials, varied use of housing types and/or other design elements of the innovative residential development.

Demonstration of Compliance: *The Applicant is proposing enhanced architectural features beyond a standard multi-family housing project as demonstrated in the "Architecture" section of this narrative.*

(g) Open Spaces. Innovative residential developments which receive density bonuses in accordance with subsection (e) of this section shall comply with the following provisions: (1) In all such innovative residential developments, at least forty (40) percent of the site, exclusive of aquatic areas, shall be devoted to open space. Of this required open space area, no more than twenty-five (25) percent may be utilized privately by individuals or users of the innovated residential development. At least seventy-five (75) per cent of the required open space area must be common open space.

Demonstration of Compliance: *Open space is provided at 43.2% of the site where only 40 is required. Additionally, all open space on site will be for the enjoyment of all residents of the community.*

CLOSING

The Applicant respectfully requests the City's consideration and approval of the subject application based on the justification provided herein. The Applicant believes that the Project will provide a substantial enhancement to the area and help to spur other redevelopment in the area. The Applicant looks forward to working with the City to bring a high-quality project to the City.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Future Land Use Map Amendment

☐ Future Land Use Map Amendment – Large Scale (>10 acres)

☒ Future Land Use Map Amendment – Small Scale (<10 acres)

In accordance with Chapter 163.3187, Florida Statutes, The City of Fort Pierce will consider applications for land use changes on parcels in excess of 10 aces ("Large Scale Amendments") only twice each calendar year. The City Commission will consider applications for land use changes on parcels less than or equal to 10 acres with a maximum density of 10 units per acres or less at any time during the calendar year. You are encouraged to schedule a pre-application meeting with the planning staff and to submit your application up to three months in advance of the application deadline.

Application submission shall include the following:

•**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**Planning Board**: One (1) original and (13) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**City Commission**: One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

In addition to a complete application, packets shall include:

- ☐ Warranty Deed & Legal Description
- ☐ St. Lucie County Property Record Card
- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (FLU) RM - Medium Density Residential (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: Zoning Map Amendment, Design Review
8. Describe the existing uses, improvements and structures on the amendment lands: Vacant
9. Are there any identified or possible historical structures on the amendment lands? No
10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. **Capacity Analysis:**

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
South	Commercial	GC - General Commercial	C3 - General Commercial
East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 37,004
Change in Demand	**Total gallons per day** -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 29,603
Change in Demand	**Total gallons per day** +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning Enrollment Demand	N/A	N/A
Proposed Zoning Enrollment Demand	34.01	79.35
Change in Demand	+34.01	+79.35

E. Solid Waste:
2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units

Demand Analysis	Maximum
Current Zoning	Demand for commercial not listed above.
Proposed Zoning	16 yards
Change in Demand	Need demand for commercial

F. Stormwater: Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)	
Impact	See drainage report provided with submittal.

G. Transportation Analysis: Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. Applicant Acknowledgements (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

_____

Same as Owner

Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature(s) below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC

by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by MUSTAFA ACUNOK who is personally known to me or has produced FL DL as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:		
DATE RECEIVED:	Signed:	
File Number:	Check No:	Receipt No:
TRC Review:	Planning Board Review:	City Commission:
Ordinance No:	Date Approved:	

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
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East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

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Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
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	K-8	High
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F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See drainage report provided with submittal.

III. Transportation Analysis: *Complete ITE Trip Generation Form (Attached)*

G. Transportation Analysis: Complete ITE Trip Generation Data Form Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning/FLU	8,300	65/83
****Proposed Zoning/FLU**	609	38/49
***Change in Demand**	Trips	Trips
Impact to Capacity	-7,691	-27/-34

IV. Project Description

PHASING
Is this project (phase) part of a larger project? [ ] Yes [X] No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: 112 Single Family: Multifamily: 112
Non-residential (square footage):
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total)

RESIDENTIAL DATA					
Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached					
Single-family, attached					
Multi-family		112	6.796	03/21	03/22
Other (specify)					

NON-RESIDENTIAL DATA					
Type(s) specify	**Phase**	**Square footage**	**Acres**	**Expecting beginning date**	**Expected completion date**

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. [ ] Yes [X] No

B. 1. Does this application involve demolition or re-use of any structure(s)? [ ] Yes [X] No
If yes, what is the size of the structure(s) to be demolished or re-used? _____
2. What is the current use of the structure to be demolished or re-used? _____
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? [ ] Yes [ ] No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Zoning Atlas Map Amendment

Application submission shall include the following:

•**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

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- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: FLU Amendment, Design Review

8. Describe the existing uses, improvements and structures on the amendment lands: Vacant

9. Are there any identified or possible historical structures on the amendment lands? No

10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
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	Future Land Use	Zoning Classification	Maximum Intensity **Residential: Dwelling Units per Acre** **Other: Square Footage**	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 37,004
Change in Demand	**Total gallons per day** -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 29,603
Change in Demand	**Total gallons per day** +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning Enrollment Demand	N/A	N/A
Proposed Zoning Enrollment Demand	34.01	79.35
Change in Demand	+34.01	+79.35

E. Solid Waste:
2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units

Demand Analysis	Maximum
Current Zoning	Demand for commercial not listed above.
Proposed Zoning	16 yards
Change in Demand	Need demand for commercial

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See drainage report provided with submittal.

III. Transportation Analysis

G. Traffic Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. **Applicant Acknowledgements** (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

Same as Owner
Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC
by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

6/24/20

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Altinok who is personally known to me or has produced _____ as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:

DATE RECEIVED:_____ Signed:_____

File Number:_____ Check No: _____ Receipt No: _____

TRC Review:_____ Planning Board Review: _____ City Commission: _____

Ordinance No:_____ Date Approved: _____

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

GENERAL ADDRESS REQUEST

[X] Assigned [ ] Corrected [ ] Changed

Property Owner(s): Arrow Investment Group, LLC

Parcel Identification(s): 2417-504-0020-001-6

Legal Description: See attached survey

Current Address: No address assigned

Use of Property: Proposed 112 unit multifamily apartment project

Reason for Request: New development.

Applicants Signature: _____ **Date:** 6/24/20

Arrow Investment Group, LLC

Printed Name: by: MUSTAFA ALTINOK

_____I am not the owner of the described property; however, the owner(s) authorizes me to act as agent for the owner(s) of record. (Provide copy of authorization).

Contact Information: Phone: (561) 324-4439 Email: capitalinvestments@usa.com

Office Use Only

PROPOSED NEW ADDRESS: _____

Signature of City Representative: _____

LOCATION MAP



Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	OKEECHOBEE RD
Parcel ID:	2417-504-0020-001-6
Account #:	26668
Map ID:	24/17N
Use Type:	1000
Zoning:	General Co
City/County:	Fort Pierce

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)



Current Values

Just/Market Value:	$732,700
Assessed Value:	$732,700
Exemptions:	$0
Taxable Value:	$732,700

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this parcel: Download PDF

Sale History

Date:	Sep 26, 2019
Book/Page:	4327 / 0333
Sale Code:	0002
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$450,000
Date:	May 27, 2010
Book/Page:	3204 / 0743
Sale Code:	0112
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$100
Date:	Dec 17, 2008
Book/Page:	3049 / 2156

Sale Code:	XX01
Deed:	CT
Grantor:	Mid South Acquisitions LLC
Price:	$299,000
Date:	Mar 9, 2006
Book/Page:	2511 / 0830
Sale Code:	XX00
Deed:	WD
Grantor:	Zog Limited Partnership
Price:	$1,728,800
Date:	Mar 25, 2004
Book/Page:	1936 / 0579
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$448,500
Date:	Sep 16, 1999
Book/Page:	1251 / 1882
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$260,000
Date:	Sep 14, 1998
Book/Page:	1171 / 1672
Sale Code:	XX01
Deed:	WD
Grantor:	SCOTTY`S INC
Price:	$95,700
Date:	Jan 1, 1986
Book/Page:	0489 / 2883
Sale Code:	XX00
Deed:	CV
Grantor:	
Price:	$725,000

Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	Sprinkled %: 0%



Image or Sketch unavailable for display

Special Features and Yard Items

Current Year Values

Current Values Breakdown

Building:	$0
Land:	$732,700
Just/Market:	$732,700
Ag Credit:	$0
Save Our Homes or 10% Cap:	$0
Assessed:	$732,700
Exemption(s):	$0
Taxable:	$732,700

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2006	0041	18.1	Fort Pierce Stormwater Charge	$1,248.90

This does not necessarily represent the total Special Assessements that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

Historical Values

Permits

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in Fort Pierce

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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LEGAL DESCRIPTION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4623280 OR BOOK 4327 PAGE 333, Recorded 10/01/2019 12:37:51 PM Doc Tax: $3150.00

Prepared by and return to:
James H. Ryan
Attorney at Law
Gary, Dytrych & Ryan, P.A.
701 U. S. Highway One Suite 402
North Palm Beach, FL 33408
561-844-3700
File Number: **84101**

[Space Above This Line For Recording Data]

Special Warranty Deed

This Special Warranty Deed made this **30th** day of **September, 2019** between **Cypress Trust Company, a Florida corporation**, as Trustee under Special Purpose Revocable Trust Agreement dated November 22, 2013, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated May 18, 2004, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 8, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 2, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated October 17, 2003; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated March 23, 2005; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated February 21, 2006; and Cypress Trust Company, as Trustee under IRA Self-directed Trust Agreement dated February 13, 2005, whose post office address is **251 Royal Palm Way, Suite 500, Palm Beach, FL 33480**, grantor, and **Arrow Investment Group LLC, a Florida limited liability company**, whose post office address is **4512 North Flagler Dr., #2056, West Palm Beach, FL 33407**, grantee:

(Whenever used herein the terms grantor and grantee include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Saint Lucie County, Florida**, to-wit:

Block "D", Less rights-of-way, COLLIER'S SUBDIVISION, according to the Plat thereof, recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida, being more particularly described as follows:
Commence at a railroad spike at the Southwest corner of the Northeast 1/4 of Section 17, Township 35 South, Range 40 East, St, Lucie County, Florida; thence run N 88°42'30"E, along the South line of the said Northeast 1/4, a distance of 661.40 feet to the West line of Block "D" of Collier's Subdivision, as recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida; thence run N 00°00'18" W, along the West line of said Block D, a distance of 27.01 feet, to the POINT OF BEGINNING; thence continue N 00°00'18" W, a distance of 796.62 feet, to the Northwest corner of said Block D; thence run N 88°43'25" E, along the North line of said Block D, a distance of 460.00 feet; thence run S 00°04'02" W, a distance of 470.52 Feet, to the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence run S 49°35'30" W, along the said Northerly right-of-way line, a distance of 516.56 feet; thence run S 88°42'30" W, a distance of 65.96 feet, to the POINT OF BEGINNING, all lying and being in Section 17, Township 35 South, Range 40 East, St. Lucie County, Florida.
Less and excepting the following:
A portion of Block "D", COLLIER'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 4, Page 63, of the Public Records of St. Lucie County, Florida.
Being more particularly described as follows:

Begin at the Southeast corner of said Block "D", said corner being situated on the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence, North 28°00'23" W, a distance of 167.87 feet; thence, North 89°51'15" E, a distance of 79.00 feet to the East line of said Block D; thence,
South 00°04'02" W, along said East line, a distance of 148.41 feet to the Point of Beginning of the herein described parcel of land.
Said lands situate, lying and being in Section 17, Township 35 South, Range 40 East, City of Fort Pierce, St. Lucie County, Florida.

Parcel Identification Number: 2417-504-0020-001-6

Subject to taxes for 2019 and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

Grantor is an institutional lender and is acting solely in a fiduciary capacity.

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

To Have and to Hold, the same in fee simple forever.

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

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Witness Name: Donna Pfister

Witness Name: Jamie Reid

Cypress Trust Company, a Florida corporation, as Trustee

By: _____
Roxanne Ertle, Vice President

(Corporate Seal)

State of Florida
County of Palm Beach

The foregoing instrument was acknowledged before me this 26 day of September, 2019 by Roxanne Ertle, Vice President of Cypress Trust Company, a Florida corporation, as Trustee, on behalf of the corporation. He/she [ ] is personally known to me or [ ] has produced a driver's license as identification.

[Notary Seal]

JAMIE REID
Notary Public - State of Florida
Commission # FF 936732
My Comm. Expires Jan 21, 2020
Bonded through National Notary Assn.

Notary Public

Printed Name: Jamie Reid

My Commission Expires: 01 | 21 | 2020

DoubleTime®

CONCEPTUAL SURFACE WATER MANAGEMENT REPORT AND CALCULATIONS

For

ARIA APARTMENTS

June 2020

SINCE 1979

Prepared by:

Michael B. Schorah and Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
(561) 968-0080
EB#2438

MICHAEL J. LACOURSIERE LICENSE No. 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Michael J. LaCoursiere, P.E.
Florida Registration No. 41071
for Michael B. Schorah and Associates, Inc.

Date

MICHAEL J. LaCOURSIERE LICENSE 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER 6/16/2020

INTRODUCTION

This drainage report is prepared and presented as a support document for an application being submitted to City of Fort Pierce Technical Review Committee. The application proposes development of 112 multi-family residential units located in five (5) two- and three-story buildings on approximately 6.8 acres. The site is located on Okeechobee Road at the intersection with South 30th Street. A clubhouse and pool amenity are also proposed. The site is currently undeveloped. An existing ditch runs along the west side of the property. This on-stie ditch appears to provide conveyance of off-site water south to an existing culvert located off-site near the southwest corner of property. Water from the ditch passes through the culvert, under South 31st Street, and into a City of Fort Pierce (CFP) drainage ditch. Flow from the CFP ditch continues westward under South 33rd Avenue and into the North St. Lucie River Water Control District (NSLRWCD) Canal 6 and ultimately to Five Mile Creek (NSLRWCD Canal 29). Therefore, the subject parcel has legal positive outfall.

PROPOSED SURFACE WATER MANAGEMENT SYSTEM

The proposed surface water management design considers the existing on-site ditch as the receiving body (receiving ditch) for stormwater discharge. Discharge from the receiving ditch into the CFP ditch is controlled by an existing 36" RCP pipe with a west invert elevation of 13.4. Therefore, we can assume that water elevations in the receiving ditch can rise to this elevation and artificially control the new system at the same elevation. Conservatively, the following surface water management calculations assume an on-site control elevation of 13.4. The calculations demonstrate the proposed development can meet regulatory criteria for finished floors (100-year 3-day stage), perimeter grades (25-year 3-day stage), and minimum pavement (10-year 1-day stage). We expect, however, that the on-site detention area water level will

fluctuate between elevation 13.4 and 10.5 (expected groundwater elevation). Elevation 10.5 is also the control elevation of NSLRWCD Canal 6. Accordingly, on-site storm stages will only rise as high as presented in the summary shown below during instances where the receiving ditch is full.

The site plan shows modifications to the receiving ditch. More specifically, as shown on the Conceptual Engineering Plan, a portion of the receiving ditch will be piped within the property limits. Sizing of the pipe will be determined based upon expected off-site flows. The site plan also considers re-grading the east bank of the receiving ditch.

We also note that the water surface of the proposed on-site detention area is less than 0.5 acres. This falls short of the minimum dimensional criteria established by South Florida Water Management District for water quality credit. Therefore, an exfiltration trench system is being established to provide necessary water quality treatment prior to off-site discharge.

WATER MANAGEMENT CALCULATIONS

Land Use Assumptions:

Total Site Area	=	6.50 ac.	(area within perimeter berm)	
Lake Area (Water)	=	0.36 ac.	el. 13.4	(100% imp.)
Lake Bank Area	=	0.23 ac.	el. 13.4→17.5	(0% imp.)
Building Area	=	1.39 ac.	el. 19.5 min.	(100% imp.)
Pavement Area	=	1.97 ac.	el. 17.25→18.5	(100% imp.)
Walk Area	=	0.29 ac.	el. 17.5→19.0	(100% imp.)
Remainder	=	2.26 ac.	el. 17.5→19.0	(0% imp.)

Soil Storage:

Wet Season Groundwater elevation is 13.4 NAVD.
Using Flatwoods Soil Storage:
Lake Bank (avg. 2.05' above GWT) = 0.23 ac. x 2.64 in. x 0.75= 0.46 ac.-in.

Remainder (avg. 4'+ above GWT) = 2.26 ac. x 9 in. x 0.75 = 15.26 ac.-in.

Total Soil Storage = 15.26 + 0.46 = 15.72 ac.-in. or 2.42 inches

Water Quality Retention Required:

Drainage Area= 6.5 ac.
1" over site:
V = 1" x 6.5 ac. x 1'/12" = 0.54 ac.-ft.`

2.5" x % impervious:
Site area for water quality = 6.5 – 1.39 – 0.36 = 4.75 ac.
Imp. area for water quality = 4.75 – 2.26– 0.23 = 2.26 ac.
% Impervious = 2.26 / 4.75 = 47.58%
2.5" x % impervious = 2.5" x 0.4758 = 1.19"
V = 1.19" x (6.5 – 0.36) ac. x 1'/12" = 0.61 ac.-ft.

Maximum controls, therefore, V = 0.61 ac.-ft.

Note: Detention area does not meet SFWMD dimensional criteria. Therefore, water quality will be provided by other means, see following exfiltration design.

Bleeder Criteria:

Type: Circular
Invert Elevation: 13.40'
Diameter: 3.75 in.
Weir Flow: 0.6
Orifice Flow: 0.6

Allowable Discharge:

Allowable Discharge = 0.216/24 x 6.5 x (43560 S.F. /3600 sec.) = 0.71 cfs*
Weir Top Elevation has been set above the 25-year 3-day flood stage.

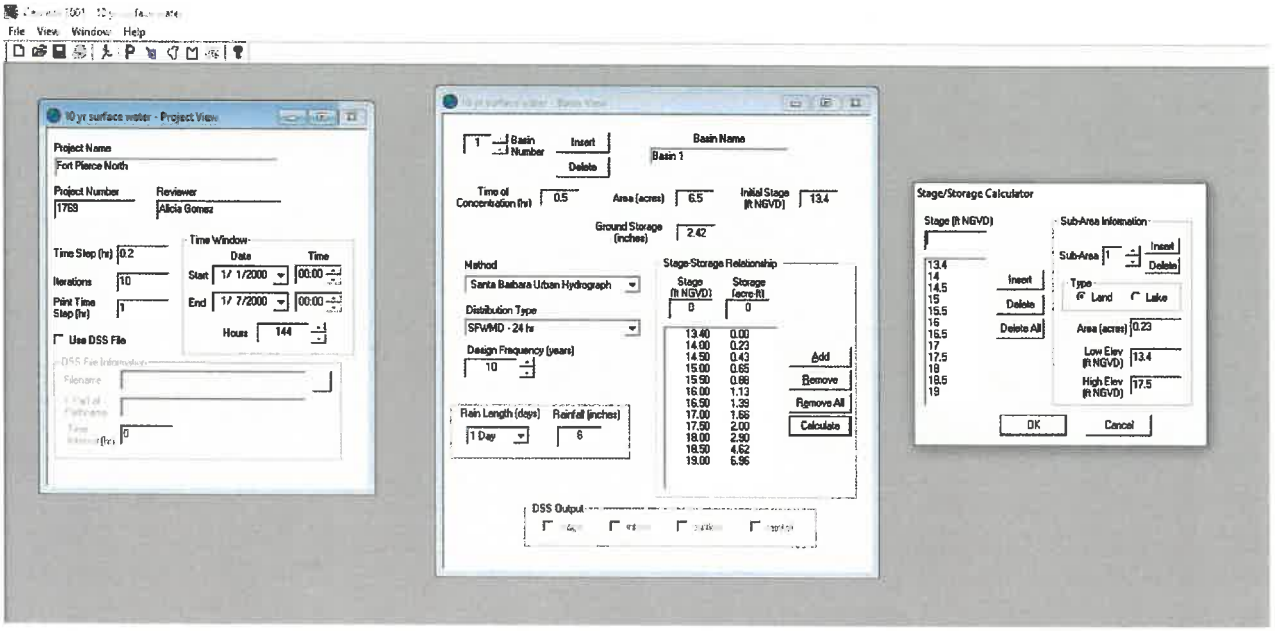
*Based on NSLRWCD criteria which is more restrictive than City of Fort Pierce pre vs. post analysis. NSLRWCD criteria = 2.6" in 24 hours.

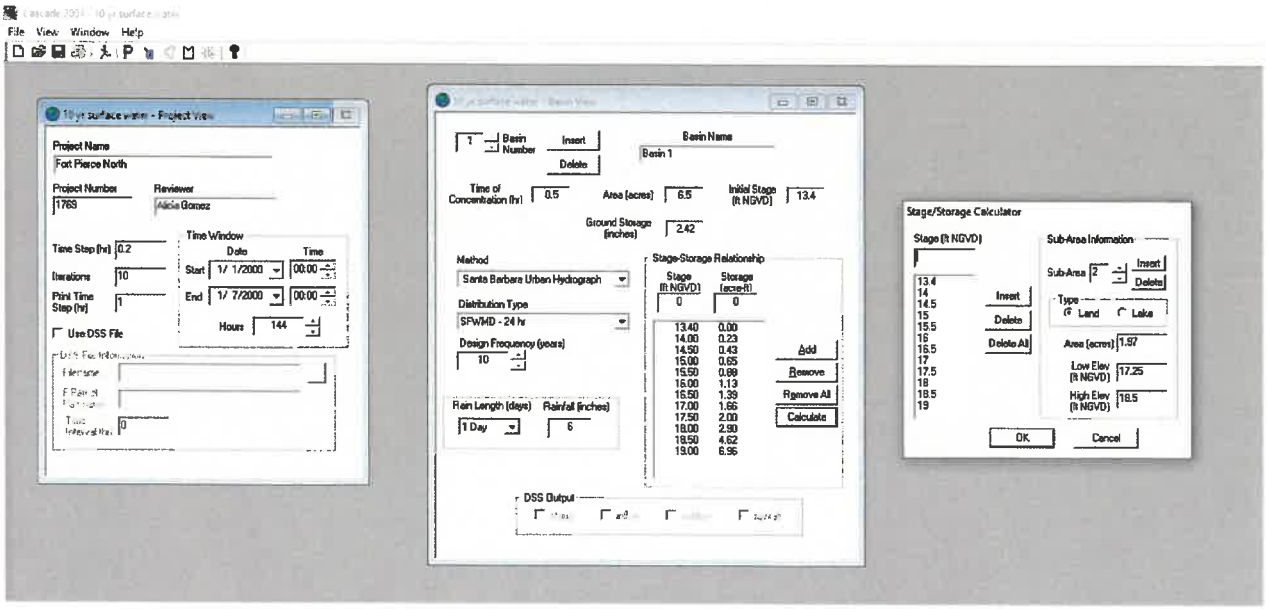
SUMMARY OF CONCEPTUAL DESIGN CRITERIA:

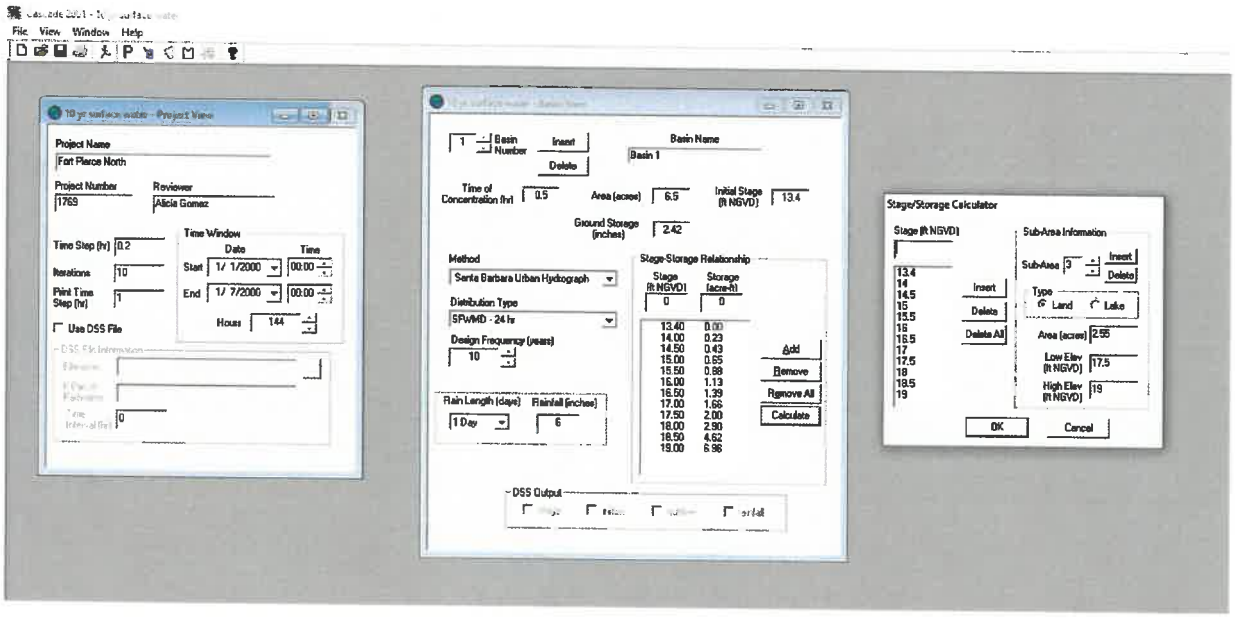
100 year –3 day Rainfall	12.23 inches
100 year - 3 day Flood Elevation	18.58' NAVD (zero discharge)
Minimum Finished Floor Elevation	19.50' NAVD
25 year – 3 day Rainfall	9.5 inches
25 year - 3 day Flood Elevation	17.76' NAVD
Minimum Perimeter Elevation	17.90' NAVD
Weir Elevation	17.90' NAVD
10 year - 1 day Rainfall	6 inches
10 year - 1 day Flood Elevation	16.16' NAVD
Minimum Pavement Elevation	17.25' NAVD

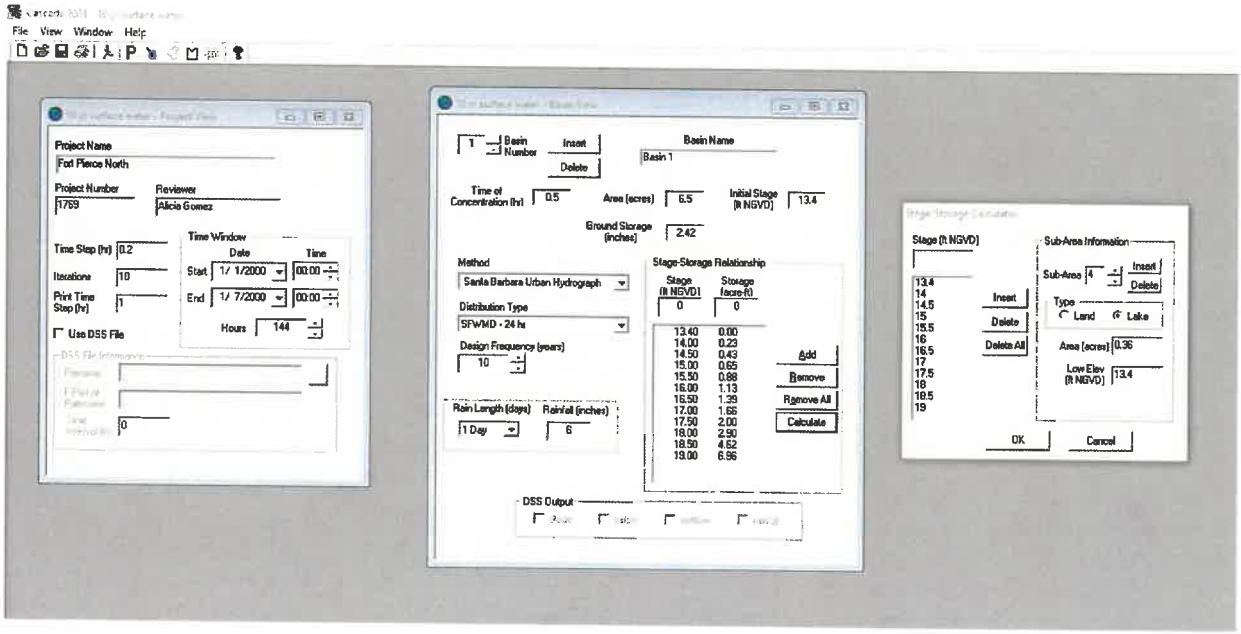
Stage/Storage Calculations on Cascade (Screenshots)

The following screenshots are presented to show the stage-storage table generated by the Cascade/SBWW program prior to hand entering storage associated with the proposed exfiltration trench.






File View Window Help
Project Name
Fort Pierce North
Project Number
1769
Reviewer
Alicia Gomez
Time Window
Time Step (hr) 0.2
Iterations 10
Print Time Step (hr) 1
Use DSS File
Start 1/ 1/2000
End 1/ 7/2000
Hours 144
Basin Number
Insert
Delete
Basin Name
Basin 1
Time of Concentration (hr) 0.5
Area (acres) 6.5
Initial Stage (ft NGVD) 13.4
Ground Storage (inches) 2.42
Method
Santa Barbara Urban Hydrograph
Distribution Type
SFWMD - 24 hr
Design Frequency (years) 10
Rain Length (days) 1 Day
Rainfall (inches) 6
Stage-Storage Relationship
Stage (ft NGVD) Storage (acre-ft)
13.40 0.00
14.00 0.23
14.50 0.43
15.00 0.65
15.50 0.88
16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage/Storage Calculator
Stage (ft NGVD)
Sub-Area Information
Sub-Area 3
Type Land Lake
Area (acres) 2.55
Low Elev (ft NGVD) 17.5
High Elev (ft NGVD) 19
Delete All
OK
Cancel


File View Window Help
Project Name
Fort Pierce North
Project Number
1769
Reviewer
Alicia Gomez
Time Window
Time Step (hr) 0.2
Iterations 10
Print Time Step (hr) 1
Use DSS File
Start 1/ 1/2000
End 1/ 7/2000
Hours 144
Basin Number
Insert
Delete
Basin Name
Basin 1
Time of Concentration (hr) 0.5
Area (acres) 6.5
Initial Stage (ft NGVD) 13.4
Ground Storage (inches) 2.42
Method
Santa Barbara Urban Hydrograph
Distribution Type
SFWMD - 24 hr
Design Frequency (years) 10
Rain Length (days) 1 Day
Rainfall (inches) 6
Stage-Storage Relationship
Stage (ft NGVD) Storage (acre-ft)
13.40 0.00
14.00 0.23
14.50 0.43
15.00 0.65
15.50 0.88
16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage (ft NGVD)
Sub-Area Information
Sub-Area 4
Type Land Lake
Area (acres) 0.36
Low Elev (ft NGVD) 13.4
Delete All
OK
Cancel

EXFILTRATION TRENCH DATA:

18" PERFORATED H.D.P.E PIPE
TRENCH DEPTH 3.5', TRENCH WIDTH 6'
OVERFLOW ELEVATION = 13.40 NAVD
PIPE INVERT ELEVATION = 12.75 NAVD
12" MINIMUM COVER OF COARSE ROCK OVER PIPE
TOP OF TRENCH ELEVATION = 15.25 NAVD
BOTTOM OF TRENCH ELEVATION = 11.75 NAVD
WATER TABLE ELEVATION = 13.40 NAVD

k = HYDRAULIC CONDUCTIVITY *	6.32E-05 cfs/sq.ft-ft-head	
V = VOLUME TO BE TREATED	0.61 Ac-in	Max. Allowed Volume
W = TRENCH WIDTH	6.00 feet	
Ds = SATURATED TRENCH DEPTH	1.65 feet	
Du = NON-SATURATED TRENCH DEPTH	1.85 feet	
H2 = DEPTH OF WT FROM CONTROL ELEV.	3.85 feet	(17.25-13.40)

EXFILTRATION TRENCH LENGTH

L = V / K(H2xW+2xH2xDu-Du^2+2xH2xDs) +(1.39x10-4)WxDu

L = 135.86 feet

*HYDRAULIC CONDUCTIVITY FROM SOIL REPORT. SEE ATTACHED EXHIBIT.

STAGE-STORAGE TABLE:

Stage (Ft NAVD)	Storage (acre-ft)	+	Exfiltration Trench (acre-ft)	=	Total Storage (acre-ft)
13.40	0	+	0.31	=	0.31
14.00	0.23	+	0.41	=	0.64
14.50	0.43	+	0.49	=	0.92
15.00	0.65	+	0.57	=	1.22
15.50	0.88	+	0.61	=	1.49
16.00	1.13	+	0.61	=	1.74
16.50	1.39	+	0.61	=	2.00
17.00	1.66	+	0.61	=	2.27
17.50	2.00	+	0.61	=	2.61
18.00	2.90	+	0.61	=	3.51
18.50	4.62	+	0.61	=	5.23
19.00	6.96	+	0.61	=	7.57
	Generated from Cascade				

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 100 year
  3 Day Rainfall: 12.23 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: None
    Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.05	0.00	0.00	0.00	13.40	13.40
2.00	0.11	0.00	0.00	0.00	13.40	13.40
3.00	0.16	0.00	0.00	0.00	13.40	13.40
4.00	0.22	0.00	0.00	0.00	13.40	13.40
5.00	0.27	0.00	0.00	0.00	13.40	13.40
6.00	0.33	0.00	0.00	0.00	13.40	13.40
7.00	0.38	0.00	0.00	0.00	13.40	13.40
8.00	0.44	0.00	0.00	0.00	13.40	13.40
9.00	0.49	0.00	0.00	0.00	13.40	13.40
10.00	0.55	0.01	0.00	0.00	13.40	13.40
11.00	0.60	0.02	0.00	0.00	13.40	13.40
12.00	0.66	0.03	0.00	0.00	13.41	13.40
13.00	0.71	0.05	0.00	0.00	13.41	13.40
14.00	0.77	0.06	0.00	0.00	13.42	13.40
15.00	0.82	0.07	0.00	0.00	13.43	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
16.00	0.88	0.08	0.00	0.00	13.44	13.40
17.00	0.93	0.09	0.00	0.00	13.45	13.40
18.00	0.99	0.10	0.00	0.00	13.47	13.40
19.00	1.04	0.11	0.00	0.00	13.49	13.40
20.00	1.09	0.12	0.00	0.00	13.50	13.40
21.00	1.15	0.13	0.00	0.00	13.52	13.40
22.00	1.20	0.14	0.00	0.00	13.54	13.40
23.00	1.26	0.15	0.00	0.00	13.56	13.40
24.00	1.31	0.15	0.00	0.00	13.59	13.40
25.00	1.39	0.21	0.00	0.00	13.61	13.40
26.00	1.47	0.24	0.00	0.00	13.65	13.40
27.00	1.55	0.26	0.00	0.00	13.68	13.40
28.00	1.63	0.27	0.00	0.00	13.72	13.40
29.00	1.71	0.28	0.00	0.00	13.77	13.40
30.00	1.79	0.29	0.00	0.00	13.81	13.40
31.00	1.87	0.30	0.00	0.00	13.85	13.40
32.00	1.95	0.31	0.00	0.00	13.90	13.40
33.00	2.03	0.32	0.00	0.00	13.95	13.40
34.00	2.11	0.33	0.00	0.00	14.00	13.40
35.00	2.19	0.34	0.00	0.00	14.04	13.40
36.00	2.27	0.34	0.00	0.00	14.09	13.40
37.00	2.35	0.35	0.00	0.00	14.15	13.40
38.00	2.43	0.36	0.00	0.00	14.20	13.40
39.00	2.51	0.36	0.00	0.00	14.25	13.40
40.00	2.59	0.37	0.00	0.00	14.30	13.40
41.00	2.67	0.37	0.00	0.00	14.36	13.40
42.00	2.75	0.38	0.00	0.00	14.42	13.40
43.00	2.83	0.38	0.00	0.00	14.47	13.40
44.00	2.91	0.39	0.00	0.00	14.53	13.40
45.00	2.99	0.39	0.00	0.00	14.58	13.40
46.00	3.07	0.40	0.00	0.00	14.63	13.40
47.00	3.15	0.40	0.00	0.00	14.69	13.40
48.00	3.23	0.40	0.00	0.00	14.75	13.40
49.00	3.32	0.44	0.00	0.00	14.80	13.40
50.00	3.41	0.46	0.00	0.00	14.87	13.40
51.00	3.52	0.53	0.00	0.00	14.93	13.40
52.00	3.64	0.59	0.00	0.00	15.01	13.40
53.00	3.79	0.74	0.00	0.00	15.11	13.40
54.00	3.98	0.93	0.00	0.00	15.24	13.40
55.00	4.20	1.13	0.00	0.00	15.40	13.40
56.00	4.46	1.34	0.00	0.00	15.60	13.40
57.00	4.77	1.61	0.00	0.00	15.84	13.40
58.00	5.15	1.98	0.00	0.00	16.13	13.40
59.00	5.65	2.65	0.00	0.00	16.49	13.40
60.00	9.13	16.79	0.00	0.00	17.45	13.40
61.00	10.13	9.84	0.00	0.00	18.05	13.40
62.00	10.59	5.41	0.00	0.00	18.22	13.40
63.00	10.88	3.12	0.00	0.00	18.32	13.40
64.00	11.15	2.23	0.00	0.00	18.38	13.40
65.00	11.31	1.47	0.00	0.00	18.43	13.40
66.00	11.47	1.19	0.00	0.00	18.46	13.40
67.00	11.64	1.09	0.00	0.00	18.49	13.40
68.00	11.80	1.05	0.00	0.00	18.51	13.40
69.00	11.91	0.82	0.00	0.00	18.52	13.40
70.00	12.01	0.74	0.00	0.00	18.54	13.40
71.00	12.12	0.70	0.00	0.00	18.55	13.40
72.00	12.23	0.69	0.00	0.00	18.56	13.40
73.00	12.23	0.26	0.00	0.00	18.57	13.40
74.00	12.23	0.09	0.00	0.00	18.57	13.40
75.00	12.23	0.03	0.00	0.00	18.57	13.40
76.00	12.23	0.01	0.00	0.00	18.58	13.40
77.00	12.23	0.00	0.00	0.00	18.58	13.40
78.00	12.23	0.00	0.00	0.00	18.58	13.40
79.00	12.23	0.00	0.00	0.00	18.58	13.40
80.00	12.23	0.00	0.00	0.00	18.58	13.40
81.00	12.23	0.00	0.00	0.00	18.58	13.40
82.00	12.23	0.00	0.00	0.00	18.58	13.40
83.00	12.23	0.00	0.00	0.00	18.58	13.40
84.00	12.23	0.00	0.00	0.00	18.58	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
85.00	12.23	0.00	0.00	0.00	18.58	13.40
86.00	12.23	0.00	0.00	0.00	18.58	13.40
87.00	12.23	0.00	0.00	0.00	18.58	13.40
88.00	12.23	0.00	0.00	0.00	18.58	13.40
89.00	12.23	0.00	0.00	0.00	18.58	13.40
90.00	12.23	0.00	0.00	0.00	18.58	13.40
91.00	12.23	0.00	0.00	0.00	18.58	13.40
92.00	12.23	0.00	0.00	0.00	18.58	13.40
93.00	12.23	0.00	0.00	0.00	18.58	13.40
94.00	12.23	0.00	0.00	0.00	18.58	13.40
95.00	12.23	0.00	0.00	0.00	18.58	13.40
96.00	12.23	0.00	0.00	0.00	18.58	13.40
97.00	12.23	0.00	0.00	0.00	18.58	13.40
98.00	12.23	0.00	0.00	0.00	18.58	13.40
99.00	12.23	0.00	0.00	0.00	18.58	13.40
100.00	12.23	0.00	0.00	0.00	18.58	13.40
101.00	12.23	0.00	0.00	0.00	18.58	13.40
102.00	12.23	0.00	0.00	0.00	18.58	13.40
103.00	12.23	0.00	0.00	0.00	18.58	13.40
104.00	12.23	0.00	0.00	0.00	18.58	13.40
105.00	12.23	0.00	0.00	0.00	18.58	13.40
106.00	12.23	0.00	0.00	0.00	18.58	13.40
107.00	12.23	0.00	0.00	0.00	18.58	13.40
108.00	12.23	0.00	0.00	0.00	18.58	13.40
109.00	12.23	0.00	0.00	0.00	18.58	13.40
110.00	12.23	0.00	0.00	0.00	18.58	13.40
111.00	12.23	0.00	0.00	0.00	18.58	13.40
112.00	12.23	0.00	0.00	0.00	18.58	13.40
113.00	12.23	0.00	0.00	0.00	18.58	13.40
114.00	12.23	0.00	0.00	0.00	18.58	13.40
115.00	12.23	0.00	0.00	0.00	18.58	13.40
116.00	12.23	0.00	0.00	0.00	18.58	13.40
117.00	12.23	0.00	0.00	0.00	18.58	13.40
118.00	12.23	0.00	0.00	0.00	18.58	13.40
119.00	12.23	0.00	0.00	0.00	18.58	13.40
120.00	12.23	0.00	0.00	0.00	18.58	13.40
121.00	12.23	0.00	0.00	0.00	18.58	13.40
122.00	12.23	0.00	0.00	0.00	18.58	13.40
123.00	12.23	0.00	0.00	0.00	18.58	13.40
124.00	12.23	0.00	0.00	0.00	18.58	13.40
125.00	12.23	0.00	0.00	0.00	18.58	13.40
126.00	12.23	0.00	0.00	0.00	18.58	13.40
127.00	12.23	0.00	0.00	0.00	18.58	13.40
128.00	12.23	0.00	0.00	0.00	18.58	13.40
129.00	12.23	0.00	0.00	0.00	18.58	13.40
130.00	12.23	0.00	0.00	0.00	18.58	13.40
131.00	12.23	0.00	0.00	0.00	18.58	13.40
132.00	12.23	0.00	0.00	0.00	18.58	13.40
133.00	12.23	0.00	0.00	0.00	18.58	13.40
134.00	12.23	0.00	0.00	0.00	18.58	13.40
135.00	12.23	0.00	0.00	0.00	18.58	13.40
136.00	12.23	0.00	0.00	0.00	18.58	13.40
137.00	12.23	0.00	0.00	0.00	18.58	13.40
138.00	12.23	0.00	0.00	0.00	18.58	13.40
139.00	12.23	0.00	0.00	0.00	18.58	13.40
140.00	12.23	0.00	0.00	0.00	18.58	13.40
141.00	12.23	0.00	0.00	0.00	18.58	13.40
142.00	12.23	0.00	0.00	0.00	18.58	13.40
143.00	12.23	0.00	0.00	0.00	18.58	13.40
144.00	12.23	0.00	0.00	0.00	18.58	13.40

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.00	0.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	18.58	81.60	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	5.27	0.00	0.00	0.31	5.58	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 25 year
  3 Day Rainfall: 9.5 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.04	0.00	0.00	0.00	13.40	13.40
2.00	0.09	0.00	0.00	0.00	13.40	13.40
3.00	0.13	0.00	0.00	0.00	13.40	13.40
4.00	0.17	0.00	0.00	0.00	13.40	13.40
5.00	0.21	0.00	0.00	0.00	13.40	13.40
6.00	0.26	0.00	0.00	0.00	13.40	13.40
7.00	0.30	0.00	0.00	0.00	13.40	13.40
8.00	0.34	0.00	0.00	0.00	13.40	13.40
9.00	0.38	0.00	0.00	0.00	13.40	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	0.43	0.00	0.00	0.00	13.40	13.40
11.00	0.47	0.00	0.00	0.00	13.40	13.40
12.00	0.51	0.00	0.00	0.00	13.40	13.40
13.00	0.55	0.01	0.00	0.00	13.40	13.40
14.00	0.60	0.02	0.00	0.00	13.40	13.40
15.00	0.64	0.02	0.00	0.00	13.41	13.40
16.00	0.68	0.03	0.00	0.00	13.41	13.40
17.00	0.72	0.04	0.00	0.00	13.42	13.40
18.00	0.77	0.05	0.00	0.00	13.42	13.40
19.00	0.81	0.05	0.00	0.00	13.43	13.40
20.00	0.85	0.06	0.00	0.00	13.44	13.40
21.00	0.89	0.07	0.00	0.00	13.45	13.40
22.00	0.94	0.07	0.01	0.00	13.46	13.40
23.00	0.98	0.08	0.01	0.00	13.47	13.40
24.00	1.02	0.09	0.01	0.00	13.48	13.40
25.00	1.08	0.12	0.02	0.00	13.49	13.41
26.00	1.14	0.14	0.02	0.01	13.51	13.42
27.00	1.21	0.15	0.03	0.01	13.53	13.42
28.00	1.27	0.16	0.04	0.01	13.55	13.43
29.00	1.33	0.17	0.05	0.01	13.56	13.44
30.00	1.39	0.18	0.06	0.02	13.58	13.45
31.00	1.45	0.19	0.07	0.02	13.60	13.46
32.00	1.52	0.20	0.08	0.03	13.62	13.47
33.00	1.58	0.21	0.09	0.04	13.64	13.48
34.00	1.64	0.21	0.10	0.05	13.65	13.48
35.00	1.70	0.22	0.11	0.06	13.67	13.49
36.00	1.77	0.23	0.12	0.06	13.69	13.50
37.00	1.83	0.23	0.13	0.08	13.70	13.51
38.00	1.89	0.24	0.15	0.09	13.72	13.52
39.00	1.95	0.24	0.15	0.10	13.73	13.52
40.00	2.01	0.25	0.16	0.11	13.74	13.53
41.00	2.08	0.25	0.16	0.13	13.76	13.54
42.00	2.14	0.26	0.17	0.14	13.77	13.55
43.00	2.20	0.26	0.17	0.15	13.78	13.56
44.00	2.26	0.27	0.17	0.17	13.80	13.57
45.00	2.32	0.27	0.18	0.18	13.81	13.58
46.00	2.39	0.28	0.18	0.20	13.83	13.58
47.00	2.45	0.28	0.18	0.21	13.84	13.59
48.00	2.51	0.28	0.18	0.23	13.86	13.60
49.00	2.58	0.31	0.17	0.24	13.87	13.65
50.00	2.65	0.32	0.16	0.26	13.90	13.69
51.00	2.73	0.37	0.16	0.27	13.92	13.74
52.00	2.82	0.42	0.15	0.28	13.96	13.78
53.00	2.94	0.53	0.16	0.29	14.01	13.83
54.00	3.09	0.66	0.16	0.31	14.07	13.87
55.00	3.26	0.81	0.18	0.32	14.16	13.91
56.00	3.47	0.97	0.20	0.34	14.26	13.96
57.00	3.70	1.16	0.22	0.36	14.39	14.01
58.00	4.00	1.44	0.25	0.38	14.54	14.05
59.00	4.39	1.95	0.29	0.40	14.73	14.10
60.00	7.10	12.58	0.42	0.43	15.45	14.14
61.00	7.87	7.41	0.60	0.47	16.95	14.19
62.00	8.23	4.08	0.66	0.52	17.52	14.23
63.00	8.45	2.36	0.67	0.58	17.63	14.27
64.00	8.66	1.69	0.67	0.63	17.69	14.32
65.00	8.79	1.12	0.67	0.69	17.72	14.36
66.00	8.91	0.91	0.66	0.74	17.74	14.41
67.00	9.04	0.83	0.66	0.80	17.75	14.45
68.00	9.16	0.80	0.66	0.85	17.76	14.50
69.00	9.25	0.63	0.66	0.91	17.76	14.50
70.00	9.33	0.56	0.66	0.96	17.76	14.49
71.00	9.42	0.54	0.66	1.02	17.75	14.49
72.00	9.50	0.53	0.66	1.07	17.74	14.48
73.00	9.50	0.19	0.66	1.12	17.73	14.48
74.00	9.50	0.07	0.65	1.18	17.71	14.48
75.00	9.50	0.03	0.65	1.23	17.68	14.47
76.00	9.50	0.01	0.65	1.29	17.65	14.47
77.00	9.50	0.00	0.65	1.34	17.62	14.47
78.00	9.50	0.00	0.64	1.39	17.59	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	9.50	0.00	0.64	1.45	17.56	14.46
80.00	9.50	0.00	0.64	1.50	17.53	14.45
81.00	9.50	0.00	0.63	1.55	17.50	14.45
82.00	9.50	0.00	0.63	1.60	17.43	14.45
83.00	9.50	0.00	0.62	1.66	17.35	14.44
84.00	9.50	0.00	0.61	1.71	17.28	14.44
85.00	9.50	0.00	0.60	1.76	17.20	14.44
86.00	9.50	0.00	0.60	1.81	17.13	14.43
87.00	9.50	0.00	0.59	1.85	17.06	14.43
88.00	9.50	0.00	0.58	1.90	16.98	14.42
89.00	9.50	0.00	0.57	1.95	16.90	14.42
90.00	9.50	0.00	0.56	2.00	16.81	14.42
91.00	9.50	0.00	0.55	2.04	16.72	14.41
92.00	9.50	0.00	0.54	2.09	16.64	14.41
93.00	9.50	0.00	0.53	2.13	16.56	14.41
94.00	9.50	0.00	0.52	2.18	16.48	14.40
95.00	9.50	0.00	0.51	2.22	16.39	14.40
96.00	9.50	0.00	0.50	2.26	16.31	14.39
97.00	9.50	0.00	0.49	2.30	16.23	14.39
98.00	9.50	0.00	0.48	2.34	16.16	14.39
99.00	9.50	0.00	0.47	2.38	16.08	14.38
100.00	9.50	0.00	0.46	2.42	16.00	14.38
101.00	9.50	0.00	0.45	2.46	15.93	14.38
102.00	9.50	0.00	0.44	2.50	15.86	14.37
103.00	9.50	0.00	0.43	2.53	15.78	14.37
104.00	9.50	0.00	0.42	2.57	15.71	14.36
105.00	9.50	0.00	0.41	2.60	15.64	14.36
106.00	9.50	0.00	0.40	2.63	15.58	14.36
107.00	9.50	0.00	0.39	2.67	15.51	14.35
108.00	9.50	0.00	0.38	2.70	15.45	14.35
109.00	9.50	0.00	0.37	2.73	15.39	14.35
110.00	9.50	0.00	0.36	2.76	15.34	14.34
111.00	9.50	0.00	0.35	2.79	15.28	14.34
112.00	9.50	0.00	0.34	2.82	15.23	14.33
113.00	9.50	0.00	0.33	2.85	15.18	14.33
114.00	9.50	0.00	0.33	2.87	15.13	14.33
115.00	9.50	0.00	0.32	2.90	15.08	14.32
116.00	9.50	0.00	0.31	2.93	15.03	14.32
117.00	9.50	0.00	0.30	2.95	14.99	14.32
118.00	9.50	0.00	0.29	2.97	14.95	14.31
119.00	9.50	0.00	0.28	3.00	14.91	14.31
120.00	9.50	0.00	0.27	3.02	14.87	14.30
121.00	9.50	0.00	0.26	3.04	14.83	14.30
122.00	9.50	0.00	0.26	3.06	14.79	14.30
123.00	9.50	0.00	0.25	3.09	14.76	14.29
124.00	9.50	0.00	0.24	3.11	14.73	14.29
125.00	9.50	0.00	0.23	3.13	14.69	14.29
126.00	9.50	0.00	0.22	3.14	14.66	14.28
127.00	9.50	0.00	0.22	3.16	14.63	14.28
128.00	9.50	0.00	0.21	3.18	14.60	14.27
129.00	9.50	0.00	0.20	3.20	14.57	14.27
130.00	9.50	0.00	0.19	3.21	14.55	14.27
131.00	9.50	0.00	0.18	3.23	14.52	14.26
132.00	9.50	0.00	0.18	3.24	14.50	14.26
133.00	9.50	0.00	0.17	3.26	14.47	14.26
134.00	9.50	0.00	0.16	3.27	14.45	14.25
135.00	9.50	0.00	0.15	3.28	14.42	14.25
136.00	9.50	0.00	0.14	3.30	14.40	14.24
137.00	9.50	0.00	0.14	3.31	14.38	14.24
138.00	9.50	0.00	0.13	3.32	14.36	14.24
139.00	9.50	0.00	0.12	3.33	14.34	14.23
140.00	9.50	0.00	0.11	3.34	14.33	14.23
141.00	9.50	0.00	0.11	3.35	14.31	14.23
142.00	9.50	0.00	0.10	3.36	14.29	14.22
143.00	9.50	0.00	0.09	3.36	14.28	14.22
144.00	9.50	0.00	0.08	3.37	14.27	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.67	64.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	17.76	68.80	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	3.85	0.00	3.37	0.31	0.79	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 24 hr
  Design Frequency: 10 year
  1 Day Rainfall: 6 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.06	0.00	0.00	0.00	13.40	13.40
2.00	0.12	0.00	0.00	0.00	13.40	13.40
3.00	0.19	0.00	0.00	0.00	13.40	13.40
4.00	0.27	0.00	0.00	0.00	13.40	13.40
5.00	0.37	0.00	0.00	0.00	13.40	13.40
6.00	0.50	0.00	0.00	0.00	13.40	13.40
7.00	0.65	0.05	0.00	0.00	13.40	13.40
8.00	0.82	0.15	0.00	0.00	13.42	13.40
9.00	1.03	0.31	0.01	0.00	13.45	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	1.28	0.53	0.02	0.00	13.51	13.40
11.00	1.61	0.91	0.07	0.01	13.61	13.40
12.00	3.94	8.63	0.26	0.02	14.06	13.40
13.00	4.60	5.35	0.44	0.05	15.01	13.40
14.00	4.91	3.04	0.51	0.09	15.56	13.40
15.00	5.10	1.81	0.55	0.14	15.86	13.40
16.00	5.28	1.33	0.57	0.18	16.02	13.40
17.00	5.39	0.89	0.58	0.23	16.10	13.40
18.00	5.50	0.72	0.58	0.28	16.13	13.40
19.00	5.60	0.67	0.58	0.33	16.15	13.40
20.00	5.71	0.65	0.59	0.37	16.16	13.40
21.00	5.78	0.51	0.59	0.42	16.15	13.40
22.00	5.86	0.46	0.58	0.47	16.14	13.40
23.00	5.93	0.44	0.58	0.52	16.11	13.40
24.00	6.00	0.43	0.58	0.57	16.09	13.40
25.00	6.00	0.16	0.57	0.62	16.04	13.41
26.00	6.00	0.06	0.56	0.66	15.97	13.42
27.00	6.00	0.02	0.55	0.71	15.88	13.42
28.00	6.00	0.01	0.54	0.75	15.79	13.43
29.00	6.00	0.00	0.53	0.80	15.70	13.44
30.00	6.00	0.00	0.52	0.84	15.62	13.45
31.00	6.00	0.00	0.51	0.88	15.53	13.46
32.00	6.00	0.00	0.50	0.93	15.45	13.47
33.00	6.00	0.00	0.49	0.97	15.38	13.48
34.00	6.00	0.00	0.48	1.01	15.30	13.48
35.00	6.00	0.00	0.47	1.05	15.23	13.49
36.00	6.00	0.00	0.46	1.08	15.16	13.50
37.00	6.00	0.00	0.45	1.12	15.09	13.51
38.00	6.00	0.00	0.44	1.16	15.02	13.52
39.00	6.00	0.00	0.43	1.19	14.96	13.52
40.00	6.00	0.00	0.42	1.23	14.90	13.53
41.00	6.00	0.00	0.41	1.26	14.84	13.54
42.00	6.00	0.00	0.40	1.30	14.79	13.55
43.00	6.00	0.00	0.39	1.33	14.73	13.56
44.00	6.00	0.00	0.38	1.36	14.68	13.57
45.00	6.00	0.00	0.37	1.39	14.63	13.58
46.00	6.00	0.00	0.36	1.42	14.58	13.58
47.00	6.00	0.00	0.35	1.45	14.53	13.59
48.00	6.00	0.00	0.34	1.48	14.48	13.60
49.00	6.00	0.00	0.32	1.51	14.43	13.65
50.00	6.00	0.00	0.30	1.53	14.38	13.69
51.00	6.00	0.00	0.28	1.56	14.34	13.74
52.00	6.00	0.00	0.26	1.58	14.30	13.78
53.00	6.00	0.00	0.24	1.60	14.26	13.83
54.00	6.00	0.00	0.22	1.62	14.23	13.87
55.00	6.00	0.00	0.19	1.64	14.20	13.91
56.00	6.00	0.00	0.17	1.65	14.17	13.96
57.00	6.00	0.00	0.14	1.66	14.15	14.01
58.00	6.00	0.00	0.10	1.67	14.13	14.05
59.00	6.00	0.00	0.06	1.68	14.12	14.10
60.00	6.00	0.00	0.00	1.68	14.12	14.14
61.00	6.00	0.00	0.00	1.68	14.12	14.19
62.00	6.00	0.00	0.00	1.68	14.12	14.23
63.00	6.00	0.00	0.00	1.68	14.12	14.27
64.00	6.00	0.00	0.00	1.68	14.12	14.32
65.00	6.00	0.00	0.00	1.68	14.12	14.36
66.00	6.00	0.00	0.00	1.68	14.12	14.41
67.00	6.00	0.00	0.00	1.68	14.12	14.45
68.00	6.00	0.00	0.00	1.68	14.12	14.50
69.00	6.00	0.00	0.00	1.68	14.12	14.50
70.00	6.00	0.00	0.00	1.68	14.12	14.49
71.00	6.00	0.00	0.00	1.68	14.12	14.49
72.00	6.00	0.00	0.00	1.68	14.12	14.48
73.00	6.00	0.00	0.00	1.68	14.12	14.48
74.00	6.00	0.00	0.00	1.68	14.12	14.48
75.00	6.00	0.00	0.00	1.68	14.12	14.47
76.00	6.00	0.00	0.00	1.68	14.12	14.47
77.00	6.00	0.00	0.00	1.68	14.12	14.47
78.00	6.00	0.00	0.00	1.68	14.12	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	6.00	0.00	0.00	1.68	14.12	14.46
80.00	6.00	0.00	0.00	1.68	14.12	14.45
81.00	6.00	0.00	0.00	1.68	14.12	14.45
82.00	6.00	0.00	0.00	1.68	14.12	14.45
83.00	6.00	0.00	0.00	1.68	14.12	14.44
84.00	6.00	0.00	0.00	1.68	14.12	14.44
85.00	6.00	0.00	0.00	1.68	14.12	14.44
86.00	6.00	0.00	0.00	1.68	14.12	14.43
87.00	6.00	0.00	0.00	1.68	14.12	14.43
88.00	6.00	0.00	0.00	1.68	14.12	14.42
89.00	6.00	0.00	0.00	1.68	14.12	14.42
90.00	6.00	0.00	0.00	1.68	14.12	14.42
91.00	6.00	0.00	0.00	1.68	14.12	14.41
92.00	6.00	0.00	0.00	1.68	14.12	14.41
93.00	6.00	0.00	0.00	1.68	14.12	14.41
94.00	6.00	0.00	0.00	1.68	14.12	14.40
95.00	6.00	0.00	0.00	1.68	14.12	14.40
96.00	6.00	0.00	0.00	1.68	14.12	14.39
97.00	6.00	0.00	0.00	1.68	14.12	14.39
98.00	6.00	0.00	0.00	1.68	14.12	14.39
99.00	6.00	0.00	0.00	1.68	14.12	14.38
100.00	6.00	0.00	0.00	1.68	14.12	14.38
101.00	6.00	0.00	0.00	1.68	14.12	14.38
102.00	6.00	0.00	0.00	1.68	14.12	14.37
103.00	6.00	0.00	0.00	1.68	14.12	14.37
104.00	6.00	0.00	0.00	1.68	14.12	14.36
105.00	6.00	0.00	0.00	1.68	14.12	14.36
106.00	6.00	0.00	0.00	1.68	14.12	14.36
107.00	6.00	0.00	0.00	1.68	14.12	14.35
108.00	6.00	0.00	0.00	1.68	14.12	14.35
109.00	6.00	0.00	0.00	1.68	14.12	14.35
110.00	6.00	0.00	0.00	1.68	14.12	14.34
111.00	6.00	0.00	0.00	1.68	14.12	14.34
112.00	6.00	0.00	0.00	1.68	14.12	14.33
113.00	6.00	0.00	0.00	1.68	14.12	14.33
114.00	6.00	0.00	0.00	1.68	14.12	14.33
115.00	6.00	0.00	0.00	1.68	14.12	14.32
116.00	6.00	0.00	0.00	1.68	14.12	14.32
117.00	6.00	0.00	0.00	1.68	14.12	14.32
118.00	6.00	0.00	0.00	1.68	14.12	14.31
119.00	6.00	0.00	0.00	1.68	14.12	14.31
120.00	6.00	0.00	0.00	1.68	14.12	14.30
121.00	6.00	0.00	0.00	1.68	14.12	14.30
122.00	6.00	0.00	0.00	1.68	14.12	14.30
123.00	6.00	0.00	0.00	1.68	14.12	14.29
124.00	6.00	0.00	0.00	1.68	14.12	14.29
125.00	6.00	0.00	0.00	1.68	14.12	14.29
126.00	6.00	0.00	0.00	1.68	14.12	14.28
127.00	6.00	0.00	0.00	1.68	14.12	14.28
128.00	6.00	0.00	0.00	1.68	14.12	14.27
129.00	6.00	0.00	0.00	1.68	14.12	14.27
130.00	6.00	0.00	0.00	1.68	14.12	14.27
131.00	6.00	0.00	0.00	1.68	14.12	14.26
132.00	6.00	0.00	0.00	1.68	14.12	14.26
133.00	6.00	0.00	0.00	1.68	14.12	14.26
134.00	6.00	0.00	0.00	1.68	14.12	14.25
135.00	6.00	0.00	0.00	1.68	14.12	14.25
136.00	6.00	0.00	0.00	1.68	14.12	14.24
137.00	6.00	0.00	0.00	1.68	14.12	14.24
138.00	6.00	0.00	0.00	1.68	14.12	14.24
139.00	6.00	0.00	0.00	1.68	14.12	14.23
140.00	6.00	0.00	0.00	1.68	14.12	14.23
141.00	6.00	0.00	0.00	1.68	14.12	14.23
142.00	6.00	0.00	0.00	1.68	14.12	14.22
143.00	6.00	0.00	0.00	1.68	14.12	14.22
144.00	6.00	0.00	0.00	1.68	14.12	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGE

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.59	20.40	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	16.16	20.40	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	2.08	0.00	1.68	0.31	0.71	0.00

ENVIRONMENTAL ASSESSMENT

6.87-ACRE PARCEL ALONG OKEECHOBEE ROAD

FT. PIERCE, ST. LUCIE COUNTY, FLORIDA

August 2019
Updated June 2020

For

Michael Moore
Arrow Investments
4512 North Flagler Drive, Ste. 216
West Palm Beach, Florida 33412

Prepared by:
David Nickerson, Inc.
6687 SE. Silverbell Avenue
Stuart, Florida 34997
561-891-1572

www.environmentalconsultflorida.com

Environmental Assessment

Project Name: 6.87-Acre Parcel **Project No.** C19012

Work Date: August 7 and 8, 2019

Site Location: Just east of South 31st Street, north side of Okeechobee Road
Ft. Pierce, Florida

Objective of Work: David Nickerson, Inc., (DNI) conducted an environmental assessment to document occurrences of any significant environmental resources including vegetative communities, jurisdictional wetland areas, and listed plant or wildlife species.

Site Description: The 6.87acre parcel is a vacant commercially zoned lot established in a commercial district located in Section 19, Township 35 South, Range 40 East, in Ft. Pierce, Florida (Figure 1). The property comprises 6.87 acres and is located east of South 31st Street, north of Okeechobee Road, west of developed commercial enterprises and south of undeveloped land. A small wetland ditch exists near the northwestern corner of the property and is connected to the dry drainage ditch located along the western property boundary. The entire site is disturbed and is dominated by cleared land on which a variety of weedy herbaceous plants occur. Remnant forest communities occur along the northeastern, northern and northwestern portions of the site. Several small to large isolated Cabbage palm (*Sabal palmetto*)/Brazilian pepper (*Schinus terebinthifolius*) heads occur along the southern site boundary and interior to the property. The largest of these, near the southwestern portion, supports an active homeless camp. Two well-worn foot paths occur onsite. One servicing the homeless camp from offsite at the intersection of Nebraska Avenue and South 31st Street and the other occurs along the eastern portion from the northern property line south to the business located offsite at the extreme southeastern property corner. No structures or other site improvements occur on the parcel.

Methodology: Prior to the site visit, the U.S. Geological Survey 7.5-minute Quadrangle Topographic Map, Ft. Pierce Quadrangle (Photo-revised 2015) and the Soil Survey of St. Lucie County Florida (U.S. Department of Agriculture 2014) were reviewed to determine topographic features and site soil map



NORTH

David Nickerson, Inc. www.environmentalconsultflorida.com	**Location Map** **6.87-Acre Okeechobee Road Parcel** **Ft. Pierce, Florida**	**Figure 1** August 2019 Not To Scale

units. Copies of Google 2016 aerial photographs of the parcel were obtained and reviewed to determine potential location of environmental features.

Pedestrian surveys of the parcel were conducted on August 7 and 8, 2019 to map approximate locations and boundaries of significant environmental resources, vegetative communities and occurrence of listed plant or animal species. Approximate locations of vegetative community cover type boundaries and other features were mapped on an aerial photograph of the site. Vegetative communities were identified in accordance with Florida Land Use Cover and Forms Classification System Handbook (FLUCFCS) (Florida Department of Transportation 1999).

Listed species of plants and wildlife are found in Florida's Endangered Species, Threatened Species, and Species of Special Concern, Official Lists (Florida Fish and Wildlife Conservation Commission 2013) and Preservation of Native Flora of Florida, Chapter 5B-40 (Florida Department of Agriculture and Consumer Services, Division of Plant Industry, October 2017). Any occurrences of listed species were recorded.

Technical Staff: David Nickerson

Findings: The entire 6.87-acre parcel is disturbed including vegetation and soil surface. Site investigation confirmed mapped soils on the southern half of the property as Tantile and Pomona sands and the northern half is underlain by Nettles and Oldsmar sands. Natural Resource and Conservation Service mapped soils are shown in Attachment A. Relatively intact native upland habitat does not occur on the property. Due to previous clearing, exotic and nuisance plant pioneers have replaced the historic pine flatwood understory vegetation naturally occurring on Tantile and Pomona sands and Nettles and Oldsmar sands soils in this part of St. Lucie County. The narrow forested areas along western and southern portions comprise mostly exotic plant species and the wetland buffer also contains exotic canopy and subcanopy species. Following partial clearing and local/regional historic drainage, six cover types currently occur on site and include Disturbed Herbaceous, Brazilian Pepper, Disturbed Mixed Hardwoods, Brazilian Pepper Cabbage Palm, Disturbed Pine Oak Cabbage Palm and Ditches. The cover types are described below and their locations on the parcel are depicted in Figure 2.



NORTH

LEGEND

- Parcel Boundary
- Human Paths

3101 – Disturbed Herbaceous
4141 – Disturbed Pine Oak Cabbage Palm
4220 – Brazilian Pepper
4221 – Brazilian Pepper Cabbage Palm
4381 – Disturbed Mixed Hardwoods
5101– Ditches
Source – *Florida Land Use, Cover and Forms Classification System* 1999

David Nickerson, Inc. www.environmentalconsultflorida.com	**Vegetation Communities Map 6.87 Acre Okeechobee Road Parcel Ft. Pierce, Florida**	Figure 2 August 2019 Not to Scale

Disturbed Herbaceous – FLUCFCS 3101; Disturbed Herbaceous cover type is the dominant cover on site, occurring on approximately 2.25 acres of the 6.87-acre parcel. Because this cover type has been cleared of all but herbaceous plants, no canopy, subcanopy or shrub plants occur. Bahiagrass (*Paspalum notatum*), in the eastern and southern portions, and St. Augustine grass (*Stenotaphrum secundatum*), in the northern and western portions, dominate the vegetation in the ground cover layer. Additional exotic and native herbaceous plants found in the ground cover include creeping oxeye (*Sphagneticola trilobata*), beggarticks (*Bidens pilosa*), sandspur (*Cenchrus spinifex*), morning glory (*Ipomea imperati*), frostweed (*Verbesina virginica*), creeping beggar weed (*Desmodium incanum*), pepper vine (*Ampleopsis arborea*), creeping indigo (*Indigofera spicata*), large flower pusley (*Richardia grandiflora*), West Indian dropseed (*Sporobolus jacquemontii*), shrubby false button (*Spermacoce verticillata*) and Guinea grass (*Panicum maximum*). Occasionally, ragweed (*Ambrosia artimisifolia*), dayflower (*Commelina* sp.), wild grape (*Vitis rotundifolia*), broomsedge bluestem (*Andropogon virginicus*), catbriar (*Smilax* spp.), wild poinsettia (*Poinsettia cyathophora*), Florida threeawn (*Aristida rhizomophora*), and dog fennel (*Eupatorium capillifolium*) also occur. Select photographs of this cover type are provided in Attachment B.

Disturbed Pine Oak Cabbage Palm – FLUCFCS 4141: Disturbed Pine Oak Cabbage Palm cover type occurs along the northern and eastern property boundaries. It comprises 2.1 acres. Evidence of disturbance observed includes abundant solid waste, soil disturbance and invasion of exotic plants. Only a few slash pine (*Pinus elliottii*) remain in the community and they occur in the northern extreme of the cover type. Other canopy plants include cabbage palm, laurel oak (*Quercus laurifolia*), melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper with occasional horse bush (*Peltophorum dubium*), Mexican fan palm (*Washingtonia robusta*), and Queen Palm (*Syagrus romanzoffiana*). Subcanopy vegetation comprises Brazilian pepper, cabbage palm, melaleuca, Guinea grass and carrotwood (*Cupaniopsis anacardioides*). Ground cover includes Brazilian pepper, cabbage palm, carrotwood, Surinam cherry (*Ugenia uniflora*), blechnum fern (*Blechnum serrulatum*), with occasional marlberry (*Ardisia escallonioides*), beauty berry (*Callicarpa americana*), caesar weed (*Urena lobata*), frostweed, cat briar (*Smilax* sp.), and monk orchid (*Oceoclades maculata*).

Brazilian Pepper – FLUCFCS 4220; Brazilian Pepper cover type occurs south of the Disturbed Pine Oak Cabbage Palm and north of Disturbed Herbaceous and Disturbed Mixed Hardwoods in the northwestern forested portion of the property. It

comprises approximately 0.92 acres. Canopy trees are dominated by the exotic Brazilian pepper (*Schinus terebinthifolius*) with occasional representation by cabbage palm (*Sabal palmetto*), laurel oak and queen palm. Brazilian pepper also dominates the subcanopy with occasional laurel oak and cabbage palm. Ground cover plants are sparse and include seedlings of Brazilian pepper, Caesar weed (*Urena lobata*), pepper vine and frostweed (*Verbesina virginica*). Select photographs of this cover type are provided in Attachment B.

Brazilian Pepper Cabbage Palm – FLUCFCS 4221; Brazilian Pepper Cabbage Palm cover type occurs mostly as isolated tree "heads" within the Disturbed Herbaceous cover and includes an upland fringing community along the west central site boundary. It comprises approximately 0.92 acres. This community is highly disturbed as evidenced by dominance of exotic and invasive plants and scattered solid waste in each area. The largest of the heads contains an active homeless camp with several tents, makeshift tables and clothes lines (Figure 2) and Attachment B. Trees in the canopy layer of this cover type are dominated by the exotic Brazilian pepper and include Cabbage palm and an occasional laurel oak. Subcanopy plants include Brazilian pepper, strangler fig (*Ficus aurea*), occasional laurel oak and the invasive Surinam cherry (*Ugenia uniflora*). Ground cover plants are sparse but include Brazilian pepper, West Indian dropseed, Caesar weed, bahia grass and Florida threeawn. Select photographs of this cover type are provided in Attachment B.

Disturbed Mixed Hardwoods – FLUCFCS 4381; Disturbed Mixed Hardwoods cover type occurs in a small area along the west central portion of the property south of the Brazilian Pepper and north of the Disturbed Herbaceous cover type. It comprises 0.39 acres. Canopy vegetation comprises False Tamarind (*Lysiloma latisiliquum*), cabbage palm, rosewood (*Dalbergia sissoo*), Brazilian pepper and laurel oak. Subcanopy plants include Brazilian pepper, rosewood, cabbage palm, Surinam cherry and laurel oak. Ground cover comprises seedlings of canopy and subcanopy species as well as Guinea grass, pepper vine, frostweed, Bahia grass and Caesar weed. A photograph of this cover type is provided in Attachment B.

Ditches – FLUCFCS 5101; Ditches cover type occurs as a 10-20 foot wide mostly dry drainage ditch along and just within the western property boundary from Okeechobee Road north to the Disturbed Pine Oak Cabbage Palm community. It comprises approximately 0.29 acres. On the day of this assessment, standing water was observed to occur only in the northern half of the ditch. The southern two fifths of the ditch and its banks are open and without any shrubs or trees. The northern three fifths of the ditch length are covered by

overhanging vegetation and the portion west of the Disturbed Mixed Hardwoods community has Primrose willow (*Ludwigia peruviana*) plants growing in the ditch. No canopy trees actually grow in the ditch but overhanging Brazilian pepper predominates over the ditch in that community and an occasional laurel oak and Carolina willow (Salix caroliniana) overhang to the south. Herbaceous plants growing in the open portion of the ditch include Guinea grass, West Indian dropseed, pepper vine, Caesar weed, rattlebox, blechnum fern (*Blechnum serrulatum*), with occasional maidencane (*Panicum hemitomon*) and plants typically found in the Disturbed Herbaceous cover type to the east. Select photographs of this cover type are provided in Attachment B.

A Gopher Tortoise Burrow Survey was conducted on the property. No active or inactive burrows were found. No other animals listed as protected by federal, state, or local environmental regulatory agencies, nor any signs of such animals, were observed on the parcel. Unlisted animal species and/or sign observed on the parcel included southern leopard frog (*Lithobates utricularia*), common oak toad (*Bufo quercicus*), Cuban anole (*Anolis sagrei*), Southern black racer (*Coluber constrictor*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), mockingbird (*Mimus polyglottos*), loggerhead shrike (*Lanius ludovicianus*), zebra longwing butterfly (*Heliconius charitonia*) and a few other butterflies. Sign of animal occurrence observed include common rabbit (*Sylvilagus floridanus*) scat.

No plant species regulated by the Florida Department of Agriculture and Consumer Services were observed on the property.

Recommendations: Ft. Pierce Land Development Regulations address Tree Protection of native trees. A tree removal permit and a land clearing permit must be obtained prior to conducting any site work. No tree removal permit is required should only Brazilian pepper, Australian pine or Melaleuca trees be removed. Ft. Pierce Landscape Code defines material standards as to species and sizes. A tree survey may be necessary as the few native trees occurring onsite are required to be protected onsite or replaced with same species in future landscaping areas.

A small area of low land adjacent to and east of northern portions of the western drainage ditch is jurisdictional wetland and a wetland delineation was conducted to determine and mark the actual jurisdictional wetland limits on site in accordance with South Florida Water Management District (SFWMD) rules. The wetland delineation has been approved by SFWMD and the wetland has been determined to be an isolated wetland less than 0.5

acre in area. Should the wetland be maintained as part of the site plan, a 25 foot wide upland buffer must be maintained outside and surrounding the jurisdictional wetland line. Should the isolated wetland be impacted by the project, no mitigation would be required in accordance with SFWMD rules.

Because native upland habitat does not occur on site, Ft. Pierce Land Development Regulations (LDR) do not require any portion of onsite upland habitat to be protected in an upland preserve area on site.

Additionally, in accordance with Fort Pierce rules, all prohibited exotic plant species occurring on the property must be eradicated as a condition of building permit approval. Consequently, all prohibited species, including Brazilian pepper, camphor tree, Old World climbing fern and Guinea grass found on the site must be removed during the development process.

DNI can assist in addressing all of the above topics by conducting pre-permit application meetings with environmental regulatory agencies, preparing permit applications in cooperation with planners and engineers, and defining options that will assist in the development goals for the parcel.

Figures:

Figure 1 – Location Map
Figure 2 – Vegetative Communities Map

References:

Florida Association of Environmental Soil Scientists. 1995. Hydric Soils of Florida Handbook, second edition. University of Florida, United States Department of Agriculture, Florida Department of Environmental Protection, and St. Johns River Water Management District. 409p.

Florida Fish and Wildlife Conservation Commission. 2013. Florida's Endangered Species, Threatened Species and Species of Special Concern, Official Lists. Tallahassee, Florida. 12p.

U. S. Department of Agriculture, Soil Conservation Service. 2014. NRCS Web Soil Survey, Custom Soil Resource Report for St Lucie County

Attachment A

Area Soils Map



Map Scale: 1:8,520 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 400 800 1600 2400

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

Natural Resources Web Soil Survey **Conservation Service** National Cooperative Soil Survey Soil Map—St. Lucie County, Florida (6.87 Acre Parcel)

MAP LEGEND

Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Map Unit Polygons
Soil Map Unit Lines
Soil Map Unit Points
Special Line Features
Blowout
Borrow Pit
Clay Spot
Closed Depression
Gravel Pit
Gravelly Spot
Landfill
Lava Flow
Marsh or swamp
Mine or Quarry
Miscellaneous Water
Perennial Water
Rock Outcrop
Saline Spot
Sandy Spot
Severely Eroded Spot
Sinkhole
Slide or Slip
Sodic Spot
Spoil Area
Stony Spot
Very Stony Spot
Wet Spot
Other
Special Point Features
Water Features
Streams and Canals
Transportation
Rails
Interstate Highways
US Routes
Major Roads
Local Roads
Background
Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were m

Warning: Soil Map may not be valid at this

Enlargement of maps beyond the scale of misunderstanding of the detail of mapping line placement. The maps do not show th contrasting soils that could have been sho scale.

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

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

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

This product is ge NRCS certified data as of the version date(s) lis

Soil Survey Area: St. Lucie
Survey Area Data: Version 11, Sep 17, 2018

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

Date(s) aerial images were 2019—Mar 23, 2019

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

Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farmton sands	12.2	3.7%
4	Arents, 0 to 5 percent slopes	5.6	1.7%
21	Lawnwood and Myakka sands	1.9	0.6%
25	Nettles and Oldsmar sands	29.7	9.0%
31	Pepper and EauGallie sands	55.0	16.6%
32	Pineda sand, 0 to 2 percent slopes	1.5	0.4%
40	Samsula muck, frequently ponded, 0 to 1 percent slopes	2.7	0.8%
44	Tantile and Pomona sands	188.8	57.0%
50	Waveland and Immokalee fine sands	1.2	0.4%
52	Waveland-Urban land complex	29.7	9.0%
99	Water	2.6	0.8%
Totals for Area of Interest		**330.9**	**100.0%**

Attachment B
Selected Photographs



Brazilian Pepper Cabbage Palm Head & Disturbed Herbaceous cover at SE property corner view to W



Disturbed Herbaceous cover and Human Path at SE property corner view to N



Disturbed Pine Oak Cabbage Palm, Disturbed Herbaceous & Human Path at NE corner view to S



Disturbed Herbaceous and Pine Oak Cabbage Palm at NE corner view to W



Adjacent land, Ditch, Disturbed Herbaceous & Brazilian Pepper head at SW corner view to N



Ditch, Disturbed Herbaceous & Brazilian Pepper Cabbage Palm head at SW corner view to ENE



Disturbed Herbaceous & Brazilian Pepper Heads from S of Disturbed Mixed Hardwoods view to SE



BP head, Disturbed Herbaceous and Brazilian Pepper head along street near SW corner view to E



Eastern Disturbed Pine Oak Cabbage Palm interior view to SE



Northern Disturbed Pine Oak Cabbage Palm western interior view to SW



False Tamarind tree and Brazilian pepper in Disturbed Mixed Hardwoods View to NW



Disturbed Herbaceous, Wetland portion of Ditch and Mexican fan palms in NW portion view to NNW



Homeless camp in Largest Brazilian Pepper Cabbage Palm head in SW portion of site view to ESE

Kimley»Horn

June 22, 2020

Arrow Investment Group, LLC
c/o Michael Sanchez
4512 North Flagler Drive, Suite 206
West Palm Beach, Florida 33407

Re: Arrow Fort Pierce North Residential – Future Land Use Plan Amendment Analysis
Fort Pierce, Florida
Kimley-Horn #043264001

Dear Mr. Sanchez:

Kimley-Horn and Associates, Inc. has prepared a future land use plan amendment traffic analysis for the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The proposed plan of development includes changing the future land use designation from general commercial (GC) to medium density residential (RM). The parcel identification number for the site is 2417-504-0020-001-6.

The attached **Figure 1** shows the location of the site. The site plan and parcel number are attached for reference.

Table 1 summarizes the maximum development intensities for proposed future land use designation on the parcel based upon the proposed medium density residential (RM) designation. Per *City of Fort Pierce Comprehensive Plan* Policy 1.1.5, the City allows a density bonus of 5 dwelling units per acre for developments located within a ¼ mile of a rail station, multimodal transit center, or transit stop.

This analysis was conducted following short-term and long-term analysis procedures typically used to evaluate comprehensive plan amendments in Fort Pierce as outlined in the Comprehensive Plan. This report summarizes the findings of the comprehensive plan land use amendment traffic analysis.

TRIP GENERATION

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

The trip generation calculations are based on the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition* for the following:

- Scenario A: Maximum development potential under the existing FLU – General Commercial (GC)
- Scenario B: Maximum development potential under the future FLU – Medium Density Residential (RM)

The trip differential between the maximum development potential of the existing FLU site and maximum development potential of the proposed FLU was used for the short-range (year 2025) analysis and for the long-range (year 2040) analysis. As indicated in **Table 2**, the proposed development is a decrease in 26 net new external AM peak hour trips and a decrease in 32 net new external PM peak hour trips. Therefore, no further analysis is required for the proposed future lane use.

CONCLUSION

The foregoing comprehensive plan traffic analysis has been conducted to evaluate the proposed future land use to medium density residential at the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the trip generation calculation between the existing and proposed future land use, the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project. Therefore, the change in future land use for the subject parcel meets applicable criteria for an amendment to Fort Pierce's comprehensive plan.

Please contact me at (561) 840-0874 or adam.kerr@kimley-horn.com should you have any questions.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.

Adam B. Kerr, P.E.
Transportation Engineer

Florida Registration
Number 64773
Certificate of Authorization
Number 696

Attachments

k:\wpb_tpto\0432\043264001 - arrow fp north\flupa\2020-03-19 arrow flupa.docx

TABLE 1: MAXIMUM DEVELOPMENT INTENSITIES ARROW FORT PIERCE NORTH RESIDENTIAL			
Scenario	Maximum Intensity	Acreage	Max
Existing Future Land Use *General Commercial (GC)*	1.0 FAR	6.796	296,034 SF
Proposed Future Land Use *Medium Density Res (RM)*	17 DU per Acre	6.796	115 DU

TABLE 2
WEEKDAY TRIP GENERATION
ARROW FORT PIERCE NORTH RESIDENTIAL

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Future Land Use								
Commercial	296.034 KSF	12,576	99	26	73	126	77	49
Subtotal		*12,576*	*99*	*26*	*73*	*126*	*77*	*49*
Pass-By								
Commercial	34%	4,276	34	9	25	43	26	17
Net External Trips		*8,300*	*65*	*17*	*48*	*83*	*51*	*32*
Proposed Future Land Use								
Multifamily Residential (Mid-Rise)	115 DU	625	39	10	29	51	31	20
Net External Trips		*625*	*39*	*10*	*29*	*51*	*31*	*20*
Existing Future Land Use - Proposed Future Land Use		*(7,675)*	*(26)*	*(7)*	*(19)*	*(32)*	*(20)*	*(12)*

Trip generation was calculated using the following data:

Daily Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.68Ln(X) + 5.57 trips/1,000 SF
Multifamily Residential (Mid-Rise)	[ITE 221]	=	T = 5.45(X) - 1.75 trips/DU
AM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	T = 0.50(X) + 151.78 trips/1,000 SF (62% in, 38% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)
PM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.74 Ln(X) + 2.89 trips/1,000 SF (48% in, 52% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Kimley»Horn


S 25TH STREET
VIRGINIA AVENUE
OKEECHOBEE ROAD
FIGURE 1
SITE LOCATION
ARROW FP NORTH RESIDENTIAL
Kimley»Horn
LEGEND
Project Site
NORTH

SITE INFORMATION

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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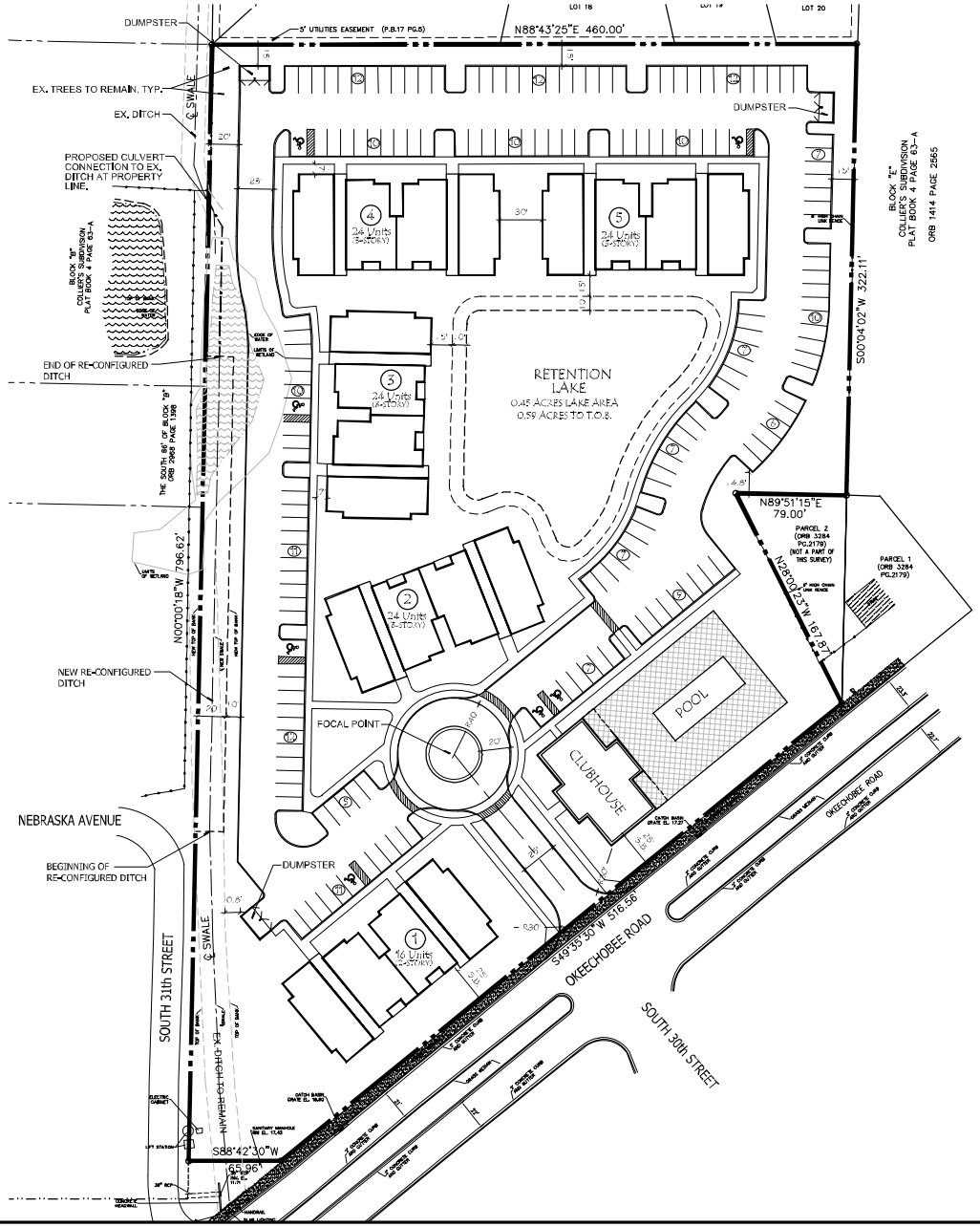

MANAGED LAND ENTITLEMENTS

3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8065

APPLICATION DATA:

NAME OF APPLICATION:	ARROW FP NORTH RESIDENTIAL
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	109,454.95 S.F. (36.9%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		175 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champions, Suite 260
Palm Beach Gardens, Florida 33418
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CIVIL ENGINEER/SURVEYOR
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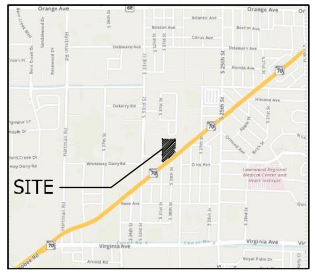
Contact: Michael LaCoursiere (561-368-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Florida 34990
Contact: Jason Litterick (561-719-3878)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-478-3888)

LOCATION MAP



Site Plan

0 25' 50' 100' 150' 200'

NORTH

Scale: 1" = 50'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3878
JasonLA1677@yahoo.com

Project Name

Arrow FP North Residential
Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA
LA0001677

Scale: 1" = 50'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	3/13/2020
Job No.	
Revisions:	

Sheet No.
SP-1

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS
FT PIERCE, FL

PREPARED FOR:
ARROW INVESTMENT GROUP, LLC.

Kimley»Horn

Project # 043264001
June 22, 2020
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS

FT PIERCE, FL

Prepared by:
Kimley-Horn and Associates, Inc.
West Palm Beach, Florida

Project # 043264001
June 22, 2020
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1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

Adam B. Kerr, P.E.
Florida Registration Number 64773

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Introduction

Kimley-Horn and Associates, Inc. has performed a traffic impact analysis to evaluate future traffic conditions associated with the proposed development located on the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The traffic impact analysis has been conducted using a buildout year of 2025. Figure 1 illustrates the location of the project site. The Parcel ID for the site is 2417-504-0020-001-6.

The proposed site plan and parcel information are included in *Appendix A*.

Kimley-Horn and Associates, Inc was retained to prepare a traffic impact analysis for the proposed development. The study quantifies the project's impact on the adjacent transportation network. This report summarizes the project trip generation, distribution, and intersection analyses. This analysis followed the methodology and procedures determined by St Lucie County's *Standardized Traffic Impact Studies Methodology and Procedures.*



NORTH

LEGEND

Project Site

FIGURE 1
SITE LOCATION
ARIA APARTMENTS

Kimley»Horn

Inventory and Planning Data

The data used in this analysis was obtained from St. Lucie County and from the Florida Department of Transportation. The data included:

- Roadway link volume data
- Committed Developments
- Historical growth rate information

Turning movement counts were collected at the following intersections during the AM peak period (7:00 am to 9:00 am) and PM peak period (4:00 pm to 6:00 pm). Counts at the intersection of N 25th Street & Okeechobee Road were performed on Tuesday, October 22, 2019 and the interaction of Okeechobee Road & Virginia Avenue were performed on Wednesday, April 3, 2019:

- N 25th Street & Okeechobee Road
- Okeechobee Road & Virginia Avenue

Roadway link volumes and the committed developments are included in *Appendix B.* The growth rate calculation is included in *Appendix C* and turning movement counts are included in *Appendix D.*

Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The existing site is vacant. The proposed plan of development includes 112 multifamily (mid-rise) dwelling units.

Trip Generation

The trip generation potential for the proposed redevelopment was calculated using the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. Land Use [221] rates and equations were used for multifamily residential (mid-rise) use. As indicated in Table 1, the proposed development is projected to generate 609 net new external daily trips, an increase in 38 net new AM peak hour trips (+10 in, +28 out), and an increase of 49 net new external PM peak hour trips (+30 in, +19 out). Based on the new external daily trips, the area of influence is one-mile.

Table 1: Trip Generation

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed								
Multifamily Residential (Mid-Rise)	112 DU	609	38	10	28	49	30	19
Driveway Volumes		609	38	10	28	49	30	19
Net External Trips		*609*	*38*	*10*	*28*	*49*	*30*	*19*

Trip generation was calculated using the following data:

Daily Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = T = 5.45(X) - 1.75 trips/DU

AM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)

PM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Traffic Distribution

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. The project assignment on the study roadway links based on the characteristics of the proposed land use and existing travel demands.

The distribution is the following:

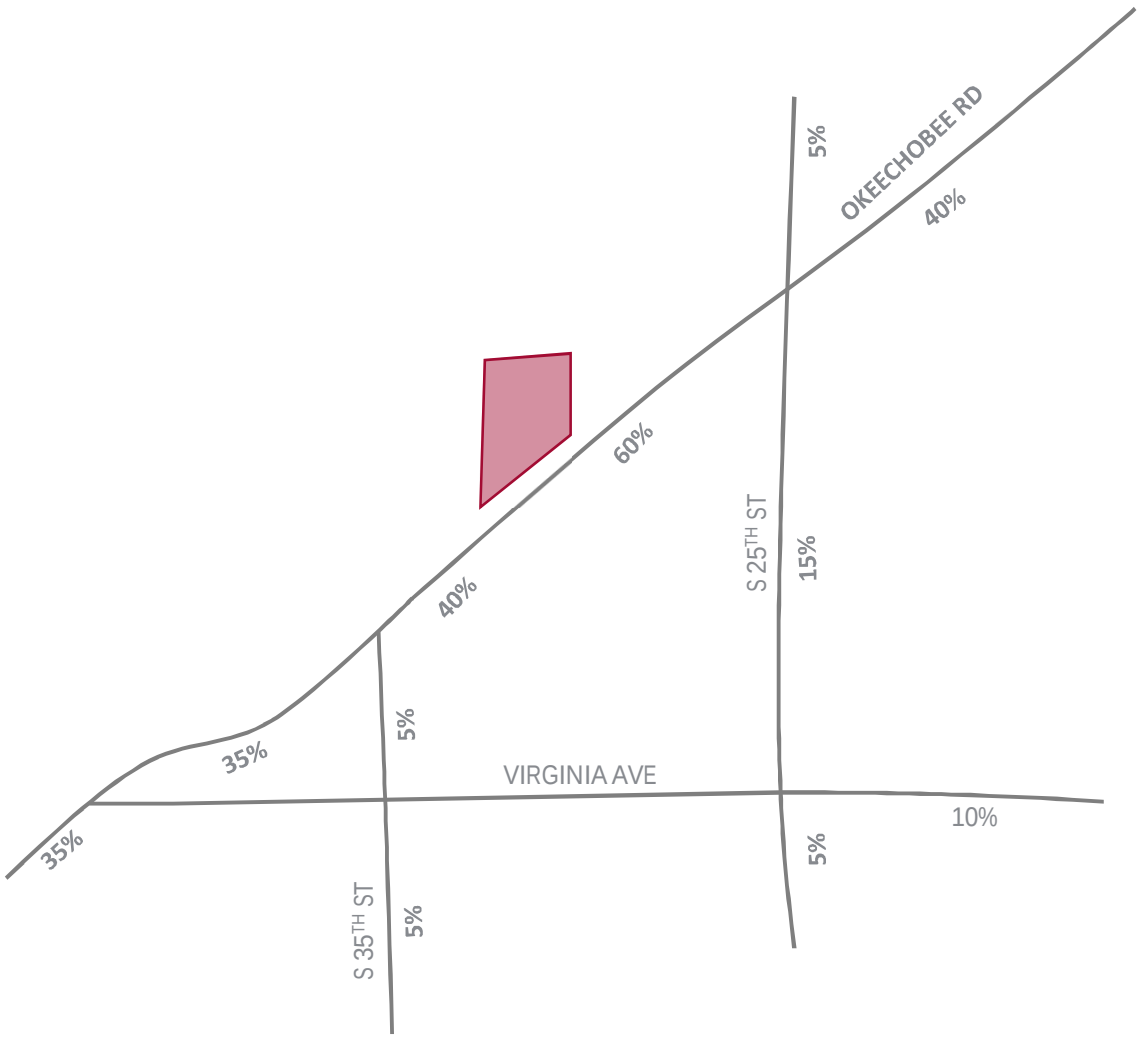
NORTH	5 percent
SOUTH	10 percent
WEST	35 percent
EAST	40 percent

Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns and the traffic distribution. The function classification of the surround roadways is the following:

- Okeechobee Road – Minor Arterial
- S 35th Street – Major Collector
- S 25th Street – Other Principal Arterial
- Virginia Avenue – Other Principal Arterial

Figure 2 illustrates the roadway link assignment. The AM and PM peak hour trips for the project were then assigned to the surrounding roadway network projected to be in place by 2025.



NORTH

LEGEND

Project Site

XX% Project Assignment

FIGURE 2
PROJECT ASSIGNMENT
ARIA APARTMENTS

Kimley»Horn

Background Traffic

Background traffic is calculated from historical annual growth rates and/or traffic from the unbuilt portions of committed developments. For this study, the areawide growth rate was calculated as 2.53% and was applied to links and intersections to account for background growth not related to the approved projects. Growth rate calculations are included in *Appendix C*. St Lucie County provided committed development projects in the area. The impacts of the approved projects were added to links and intersections that were subject to analysis.

A nominal 1% growth rate was applied to links and intersections (to which committed project traffic was already added) to account for background growth not related to the approved projects. The total background traffic for each significantly impacted link and intersection was then determined as the greater of the following:

- Existing traffic volumes plus growth due to a historic growth rate of 2.53%
- Existing traffic volumes plus growth due to committed projects and a nominal 1% background growth rate

Roadway Segment Analysis

The roadway segments within the adjacent influence area were analyzed and are summarized in Table 2. Significantly impacted roadways, where the project traffic consumes one percent or more of the existing peak hour peak direction service capacity, are considered significantly impacted and required further analysis. The following roadway segments were significantly impacted due to the project traffic:

AM Peak Hour and PM Peak Hour

- Okeechobee Road: S 25th Street to Georgia Avenue

The future volume on each significantly impacted roadway segment was analyzed in comparison to its peak hour directional service capacity volume. Committed development information for each significantly impacted link was provided by St Lucie County. It should be noted, committed developments which were identified to be insignificant (fewer than 20 peak hour trips) did not have a provided inbound/outbound distribution. Committed developments that generated greater traffic volumes were applied using the corresponding approved traffic study, attached in *Appendix B*. As seen in Table 2, the significantly impacted roadways are projected to operate acceptably during the AM and PM peak hours through buildout 2025.

Table 2: Peak Hour Peak Direction Roadway Segment Analysis

Roadway			Existing		Existing Base Peak Direction Volume/LOS		Peak Hour Peak Direction Project Traffic					Background Traffic			Capacity	
From	To		Lanes	Peak Hour Service Capacity			Last Count Year	% Assignment	Project Trips	% Impact	Significant Impact ?	Growth Rate (1)	2025 Background Growth	2025 Background Traffic	2025 Project	Over Capacity ?
AM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	687	C	2020	35%	10	0.61%	No	2.53%	91	778	788	-
S 35th Street	Project Driveway		4	1630	922	C	2020	35%	10	0.61%	No	2.53%	123	1,045	1,055	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	11	0.67%	No	2.53%	123	1,045	1,056	-
S 25th Street	Georgia Ave		4	1630	777	C	2020	60%	17	1.04%	Yes	2.53%	103	880	897	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	497	D	2020	5%	1	0.13%	No	2.53%	66	563	564	-
Virginia Ave	Okeechobee Rd		2	750	279	C	2016	5%	1	0.13%	No	2.53%	70	349	350	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1182	C	2020	5%	1	0.05%	No	2.53%	157	1,339	1,340	-
Virginia Ave	Okeechobee Rd		5	2000	1193	C	2017	15%	4	0.20%	No	2.53%	264	1,457	1,461	-
Okeechobee Rd	Georgia Ave		5	1630	1196	D	2017	5%	1	0.06%	No	2.53%	265	1,461	1,462	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 35th Street	S 25th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 25th Street	13th Street		6	3020	1093	C	2017	10%	3	0.10%	No	2.53%	242	1,335	1,338	-
PM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	727	C	2020	35%	11	0.67%	No	2.53%	97	824	835	-
S 35th Street	Project Driveway		4	1630	902	C	2020	35%	11	0.67%	No	2.53%	120	1,022	1,033	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	12	0.74%	No	2.53%	123	1,045	1,057	-
S 25th Street	Georgia Ave		4	1630	738	C	2020	60%	18	1.10%	Yes	2.53%	98	836	854	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	406	D	2020	5%	2	0.25%	No	2.53%	54	460	462	-
Virginia Ave	Okeechobee Rd		2	750	280	C	2016	5%	2	0.27%	No	2.53%	71	351	353	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1261	C	2020	5%	2	0.10%	No	2.53%	168	1,429	1,431	-
Virginia Ave	Okeechobee Rd		5	2000	1069	C	2017	15%	5	0.25%	No	2.53%	237	1,306	1,311	-
Okeechobee Rd	Georgia Ave		5	1630	1159	D	2017	5%	2	0.12%	No	2.53%	256	1,415	1,417	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 35th Street	S 25th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 25th Street	13th Street		6	3020	1164	C	2017	10%	3	0.10%	No	2.53%	258	1,422	1,425	-

Intersection Analysis

The operating conditions for the existing, background, and future total buildout was analyzed using Trafficware's *Synchro 10.0* Software during the AM peak hour and the PM peak hour at the following intersections because the intersection is part of the impacted roadway:

1. S 25th Street & Okeechobee Road (signalized)

In addition to the intersection of S 25th Street & Okeechobee Road, the intersection of Okeechobee Road & Virginia Avenue was analyzed for the existing, background, and future total buildout.

These analyses use the methodologies outlined in the *Highway Capacity Manual*, 6th *Edition* in order to determine the overall intersection level of service and delay. The signal timing sheet was provided by the City of Ft Pierce and is included in *Appendix E.* Table 3 summarizes the level of service and delay at the study intersections under existing, background, and future total conditions. As shown in Table 3, the intersection operates at an acceptable overall level of service during the existing, background, and future total (with project traffic) conditions.

Table 3: Intersection Analysis

Intersection	Type	Movement	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
Existing Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	42.7	D	35.4	D
		WB	31.1	C	34.2	C
		NB	32.9	C	45.3	D
		SB	52.1	D	58.8	E
		Overall	41.1	D	45.3	D
Okeechobee Road & Virginia Avenue	Signalized	EB	6.3	A	10.1	B
		WB	53.8	D	45.8	D
		SB	5.6	A	10.6	B
		Overall	16.3	B	20.7	C
Background Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.4	C	44.0	D
		WB	20.5	C	40.8	D
		NB	43.9	D	47.0	D
		SB	85.6	F	67.5	E
		Overall	49.3	D	51.5	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	14.8	B
		WB	51.5	D	42.3	D
		SB	7.1	A	15.8	B
		Overall	17.1	B	23.0	C
Future Total Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.2	C	40.7	D
		WB	20.2	C	34.8	C
		NB	43.9	D	47.8	D
		SB	85.9	F	62.6	E
		Overall	49.3	D	49.0	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	27.0	C
		WB	51.5	D	26.4	C
		SB	7.1	A	29.1	C
		Overall	17.0	B	27.2	C

The 95th percentile queue lengths are summarized in Table 4 for the study intersection of S 25th Street & Okeechobee Road. As shown in Table 4, the queues will remain within the provided storage through future total buildout year.

Table 4: 95th Percentile Queue Lengths

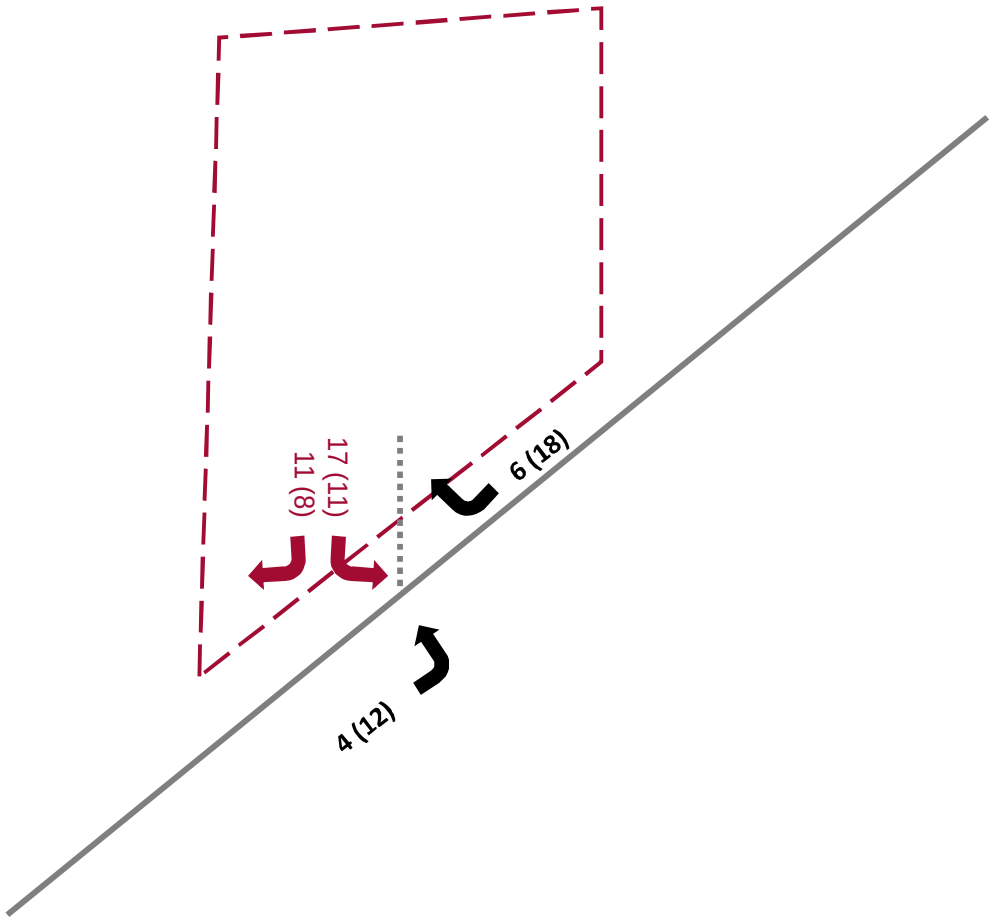
Movement	EBL	WBL	NBL	SBL
Provided Storage	225	200	225	200
Existing Scenario				
AM Peak Hour	108	84	80	33
PM Peak Hour	184	154	145	43
Background Scenario				
AM Peak Hour	125	97	102	37
PM Peak Hour	266	199	182	48
Future Total Scenario				
AM Peak Hour	126	97	109	37
PM Peak Hour	186	141	149	47

The volume development sheet is included in *Appendix F*. The Synchro output sheets are included in *Appendix G*.

Access Review

Access to the proposed site includes one proposed full-access driveway on Okeechobee Road *Figure 3* illustrates the AM peak hour and PM peak hour driveway volumes. According to the FDOT's Driveway Information Guide, exclusive right-turn lanes are recommended at unsignalized intersections for roadways with a posted speed limit of 45 mph or less when the volume of right turns per hour exceed 80 vehicles. As shown in *Figure 3,* the project driveway volume on Okeechobee Road is not expected to generate 80 vehicles; therefore, a right-turn lane is not required. The need for left-turn lanes is evaluated based on the Pennsylvania Department of Transportation's (PennDOT) Publication 46. This warrant considers the left-turn volume, the adjacent volume ("advancing" volume), the conflicting volume ("opposing" volume), and the posted speed limit to determine whether the percentage of left-turns justifies the presence of an exclusive left-turn lane.

Under existing conditions, the advancing volume is the eastbound through volume and the opposing volume is the westbound through volume. The highest eastbound left-turn volume is anticipated to be 12 vehicles per hour, which is projected to occur during the PM peak hour and constitutes approximately 1.8% percent of the total advancing volume. The opposing volume during this hour is 733 vehicles. The volumes were compared to the thresholds defined for a four-lane divided highway with a speed of 35 mph. The left-turn lane warrant worksheet is included in *Appendix H* for Okeechobee Road. The results of the analysis show that an eastbound left turn lane is warranted on Okeechobee Road at the proposed project driveway under current conditions. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.



NORTH

LEGEND

Project Site

XX (XX) AM (PM) Inbound Driveway Volumes

XX (XX) AM (PM) Outbound Driveway Volumes

FIGURE 3
DRIVEWAY VOLUMES
ARIA APARTMENTS

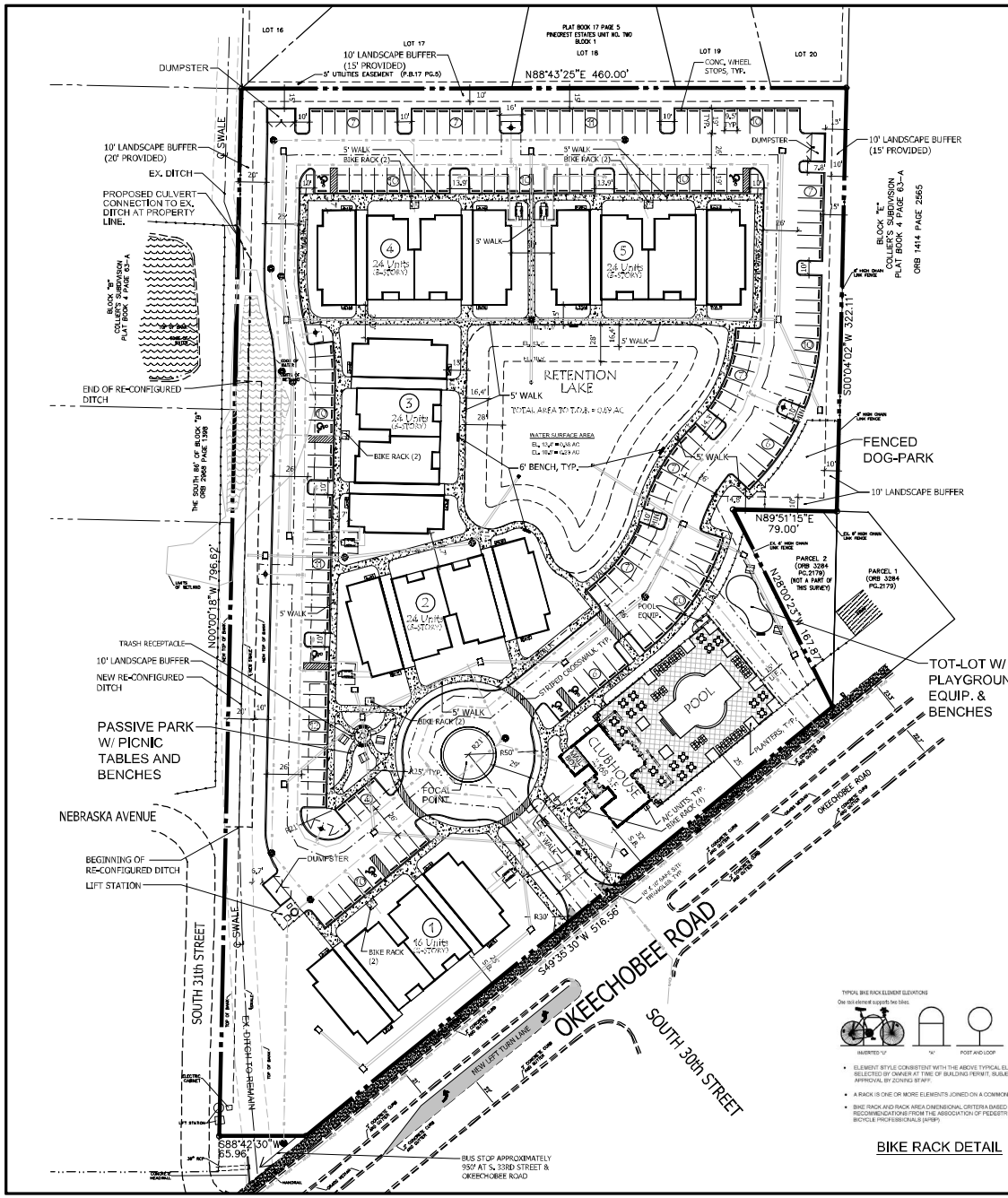
Kimley»Horn

Conclusion

The proposed plan of development includes 112 multifamily (mid-rise) dwelling units located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the analysis undertaken, the roadway links are sufficient to accommodate the project traffic during the AM and PM peak hours.

An intersection analysis was conducted at the signalized intersection of S 25th Street & Okeechobee Road, which is the intersection that was part of a significantly impacted roadway. In addition, an intersection analysis was conducted at Okeechobee Road & Virginia Avenue. Based on the intersection analysis, the existing geometry is expected to operate acceptably under existing, background, and future total conditions. The 95th percentile queue lengths at S 25th Street & Okeechobee Road are within the provided storage through future total conditions. An eastbound left turn lane is required per Pennsylvania Department of Transportation's (PennDOT) Publication 46 warrant criteria. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.

Appendix A: Project Site Data



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-3020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

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TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES



TRASH RECEPTACLE DETAIL
N.T.S.

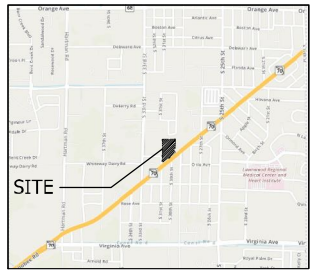
BIKE RACK DETAIL



LANDSCAPE FORMS • CHASE PARK BENCH CAST ALUM./W STEEL FRAMES & ARMREST ARMS

BENCH DETAIL
N.T.S.

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

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Palm City, FL 34990
561-719-3878
Jasonl.LA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA 0001677

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/15/2020
Job No.	
Revisions:	

Sheet No.

SP-1

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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Appendix B: St Lucie County Traffic Data

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE Q	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	18,275	2017	2,100	1,310	C	0.652	1,222	C	0.608
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	22,049	2017	2,000	1,405	C	0.736	1,401	C	0.734
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	19,612	2017	1,630	1,021	D	0.626	1,015	D	0.623
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE Q	940050	15,331	2017	1,630	807	D	0.495	784	D	0.481
25TH ST	AVENUE Q to JUANITA AVE	945152	13,301	2017	2,000	752	C	0.394	689	C	0.361
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	5,924	2017	2,100	340	C	0.169	380	C	0.189
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	4,991	2017	790	230	C	0.622	230	C	0.622
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

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Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIO RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIO RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
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*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

Appendix C: Growth Rate Calculations

Road Segment	2015 Volume	2018 Volume	Growth Rate	Yearly Growth
Virginia Ave	22,000	22,000	0.00%	0
S 35th Street	7,900	10,900	11.33%	1235
S 25th Street	22,000	22,500	0.75%	169
Sum		55,400		1,404
Area Wide Growth Rate =			2.53%	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0032 - SR 70/VIRGINIA AVE - W OF SR 615/25 ST

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22000 C	E 11000	W 11000	9.00	51.30	6.10
2017	20900 C	E 9900	W 11000	9.00	50.90	4.10
2016	20800 C	E 9800	W 11000	9.00	50.90	4.10
2015	22000 C	E 11000	W 11000	9.00	51.00	4.10
2014	21000 C	E 11000	W 10000	9.00	50.80	4.20
2013	21000 C	E 10500	W 10500	9.00	50.80	3.70
2012	23000 F	E 12000	W 11000	9.00	56.80	4.30
2011	23000 C	E 12000	W 11000	9.00	57.20	5.10
2010	22500 C	E 11500	W 11000	10.32	55.40	5.10
2009	22500 C	E 11500	W 11000	10.27	57.35	5.10
2008	23500 C	E 11500	W 12000	10.45	58.06	4.10
2007	25000 C	E 13000	W 12000	10.31	58.74	4.10
2006	21500 C	E 11500	W 10000	10.73	65.89	4.10
2005	23500 C	E 12000	W 11500	10.80	60.70	6.00
2004	22500 C	E 11500	W 11000	10.30	57.70	6.00
2003	20500 C	E 10500	W 10000	10.20	59.60	2.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0083 - S 35 ST- NORTH OFARNOLD RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	10900 C	N 6500	S 4400	9.00	51.30	5.80
2017	8100 V	0	0	9.00	50.90	10.00
2016	8000 R	0	0	9.00	50.90	6.20
2015	7900 T	0	0	9.00	51.00	41.80
2014	7900 S			9.00	50.80	49.50
2013	7900 F	0	0	9.00	50.80	11.90
2012	7900 C	N 0	S 0	9.00	56.80	7.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0015 - SR 615/25 ST - N OF SR 70/VIRGINIA AVE (COUNTY 15)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22500 C	N 11500	S 11000	9.00	51.30	5.40
2017	20500 C	N 11000	S 9500	9.00	50.90	4.80
2016	22500 C	N 11000	S 11500	9.00	50.90	4.80
2015	22000 C	N 11000	S 11000	9.00	51.00	4.80
2014	21000 C	N 10000	S 11000	9.00	50.80	4.20
2013	20500 C	N 10500	S 10000	9.00	50.80	4.20
2012	22500 C	N 11500	S 11000	9.00	56.80	4.20
2011	22500 C	N 12000	S 10500	9.00	57.20	3.00
2010	23000 C	N 12000	S 11000	10.32	55.40	3.00
2009	22500 C	N 12000	S 10500	10.27	57.35	3.00
2008	21500 C	N 11000	S 10500	10.45	58.06	3.90
2007	25000 C	N 13000	S 12000	10.31	58.74	3.90
2006	23000 C	N 11500	S 11500	10.73	65.89	3.90
2005	24000 C	N 12000	S 12000	10.80	60.70	3.10
2004	23000 C	N 11500	S 11500	10.30	57.70	3.10
2003	22500 C	N 11500	S 11000	10.20	59.60	3.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix D: Turning Movement Counts

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- ALL VEHICLES

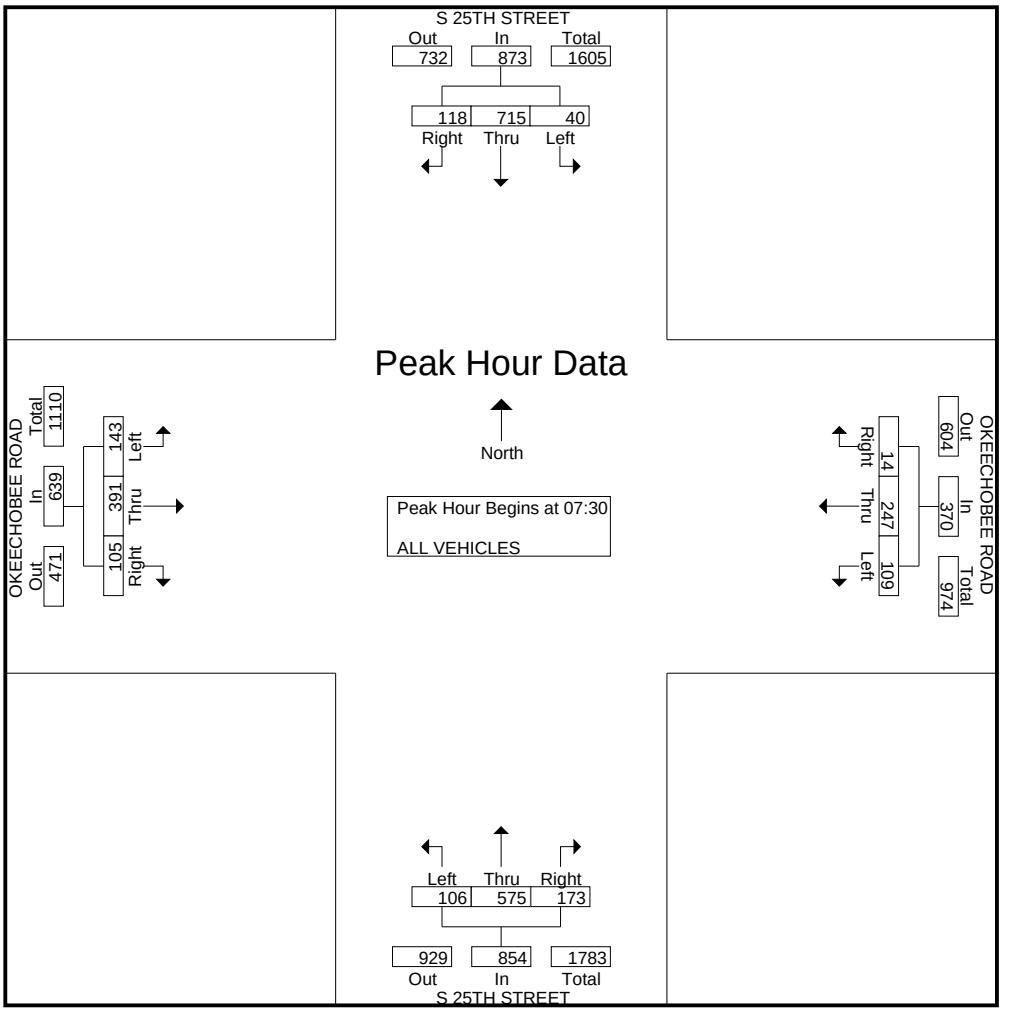
	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	5	135	26	0	26	49	2	0	19	162	24	0	37	40	9	534
07:15	0	6	159	33	0	25	50	4	0	24	162	35	0	37	52	14	601
07:30	0	5	177	35	0	26	46	1	0	30	158	37	0	28	74	27	644
07:45	0	11	186	28	2	26	62	4	0	27	171	50	0	38	95	30	730
Total	0	27	657	122	2	103	207	11	0	100	653	146	0	140	261	80	2509
08:00	0	13	197	33	1	27	75	6	0	24	115	45	0	37	124	25	722
08:15	0	11	155	22	0	27	64	3	0	25	131	41	1	39	98	23	640
08:30	0	18	152	18	2	28	48	3	0	23	106	41	1	36	49	12	537
08:45	0	11	164	19	1	27	71	3	0	21	97	26	0	25	63	23	551
Total	0	53	668	92	4	109	258	15	0	93	449	153	2	137	334	83	2450
16:00	0	7	162	24	0	42	76	7	0	29	137	49	1	30	73	16	653
16:15	0	10	155	29	3	41	84	3	0	31	151	32	1	37	82	26	685
16:30	0	10	160	23	0	44	88	2	0	32	141	48	1	44	51	18	662
16:45	0	7	171	25	0	28	112	3	0	36	154	31	1	42	78	31	719
Total	0	34	648	101	3	155	360	15	0	128	583	160	4	153	284	91	2719
17:00	0	13	182	43	0	46	112	3	0	33	166	39	0	39	75	34	785
17:15	0	12	194	37	1	28	96	5	0	24	162	41	0	42	93	25	760
17:30	0	9	194	35	0	36	80	2	0	33	157	33	0	43	111	22	755
17:45	0	6	157	26	0	33	66	5	0	22	148	25	1	28	98	16	631
Total	0	40	727	141	1	143	354	15	0	112	633	138	1	152	377	97	2931
Grand Total	0	154	2700	456	10	510	1179	56	0	433	2318	597	7	582	1256	351	10609
Apprch %	0	4.7	81.6	13.8	0.6	29.1	67.2	3.2	0	12.9	69.2	17.8	0.3	26.5	57.2	16	
Total %	0	1.5	25.5	4.3	0.1	4.8	11.1	0.5	0	4.1	21.8	5.6	0.1	5.5	11.8	3.3	

Traffic Survey Specialists, Inc.
Delray Beach, Florida
Phone (561) 272-3255 www.trafficsurveyspecialists.com

S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 2

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	5	177	**35**	217	0	26	46	1	73	0	**30**	158	37	225	0	28	74	27	129	644
07:45	0	11	186	28	225	**2**	26	62	4	94	0	27	**171**	**50**	**248**	0	38	95	**30**	163	**730**
08:00	0	**13**	**197**	33	**243**	1	**27**	**75**	**6**	**109**	0	24	115	45	184	0	37	**124**	25	**186**	722
08:15	0	11	155	22	188	0	27	64	3	94	0	25	131	41	197	**1**	**39**	98	23	161	640
Total Volume	0	40	715	118	873	3	106	247	14	370	0	106	575	173	854	1	142	391	105	639	2736
% App. Total	0	4.6	81.9	13.5		0.8	28.6	66.8	3.8		0	12.4	67.3	20.3		0.2	22.2	61.2	16.4		
PHF	.000	.769	.907	.843	.898	.375	.981	.823	.583	.849	.000	.883	.841	.865	.861	.250	.910	.788	.875	.859	.937



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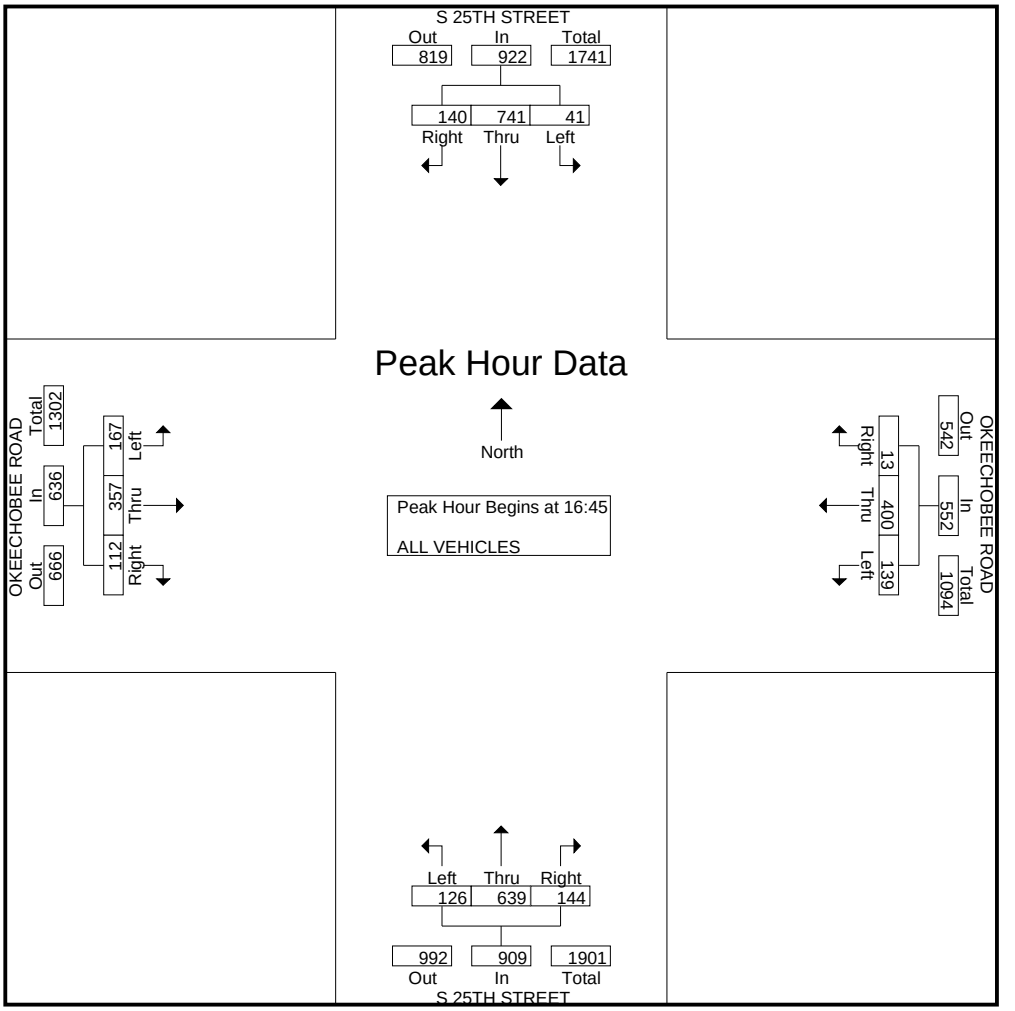
S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 3

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	7	171	25	203	0	28	**112**	3	143	0	**36**	154	31	221	**1**	42	78	31	152	719
17:00	0	**13**	182	**43**	238	0	**46**	112	3	**161**	0	33	**166**	39	**238**	0	39	75	**34**	148	**785**
17:15	0	12	**194**	37	**243**	**1**	28	96	**5**	130	0	24	162	**41**	227	0	42	93	25	160	760
17:30	0	9	194	35	238	0	36	80	2	118	0	33	157	33	223	0	**43**	**111**	22	**176**	755
Total Volume	0	41	741	140	922	1	138	400	13	552	0	126	639	144	909	1	166	357	112	636	3019
% App. Total	0	4.4	80.4	15.2		0.2	25	72.5	2.4		0	13.9	70.3	15.8		0.2	26.1	56.1	17.6		
PHF	.000	.788	.955	.814	.949	.250	.750	.893	.650	.857	.000	.875	.962	.878	.955	.250	.965	.804	.824	.903	.961



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S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- PEDESTRIANS & BIKES

	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
08:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
16:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
16:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	4
Total	0	0	2	0	0	0	0	0	0	0	1	0	1	0	2	0	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	4
17:45	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	0	1	0	0	0	1	0	1	0	2	0	1	0	1	0	7
Grand Total	1	0	4	0	0	0	1	0	2	0	3	0	2	0	3	0	16
Apprch %	20	0	80	0	0	0	100	0	40	0	60	0	40	0	60	0	
Total %	6.2	0	25	0	0	0	6.2	0	12.5	0	18.8	0	12.5	0	18.8	0	

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
07:00	0	0	47	0	0	0	102	0	0	0	0	0	0	0	70	114	333
07:15	0	0	71	0	0	0	114	0	0	0	0	0	0	0	82	165	432
07:30	0	0	104	0	0	0	136	0	0	0	0	0	0	0	126	252	618
07:45	0	0	99	0	0	0	124	0	0	0	0	0	0	0	134	317	674
Hr Total	0	0	321	0	0	0	476	0	0	0	0	0	0	0	412	848	2057
08:00	0	0	97	0	0	0	133	0	0	0	0	0	0	0	113	258	601
08:15	0	0	89	0	0	0	133	0	0	0	0	0	0	0	104	259	585
08:30	0	0	103	0	0	0	144	0	0	0	0	0	0	0	112	244	603
08:45	0	0	103	0	0	0	149	0	0	0	0	0	0	0	90	216	558
Hr Total	0	0	392	0	0	0	559	0	0	0	0	0	0	0	419	977	2347
---------- * BREAK * ----------																	
16:00	0	0	129	0	0	0	229	0	0	0	0	0	0	0	128	207	693
16:15	0	0	105	0	0	0	197	0	0	0	0	0	0	0	128	225	655
16:30	0	0	149	0	0	0	203	0	0	0	0	0	0	0	119	227	698
16:45	0	0	141	0	0	0	231	0	0	0	0	0	0	0	123	215	710
Hr Total	0	0	524	0	0	0	860	0	0	0	0	0	0	0	498	874	2756
17:00	0	0	161	0	0	0	272	0	0	0	0	0	0	0	109	233	775
17:15	0	0	167	0	0	0	200	0	0	0	0	0	0	0	160	223	750
17:30	0	0	130	0	0	0	210	0	0	0	0	0	0	0	145	256	741
17:45	0	0	137	0	0	0	202	0	0	0	0	0	0	0	144	245	728
Hr Total	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	2994
TOTAL	0	0	1832	0	0	0	2779	0	0	0	0	0	0	0	1887	3656	10154

TRAFFIC SURVEY SPECIALISTS, INC.

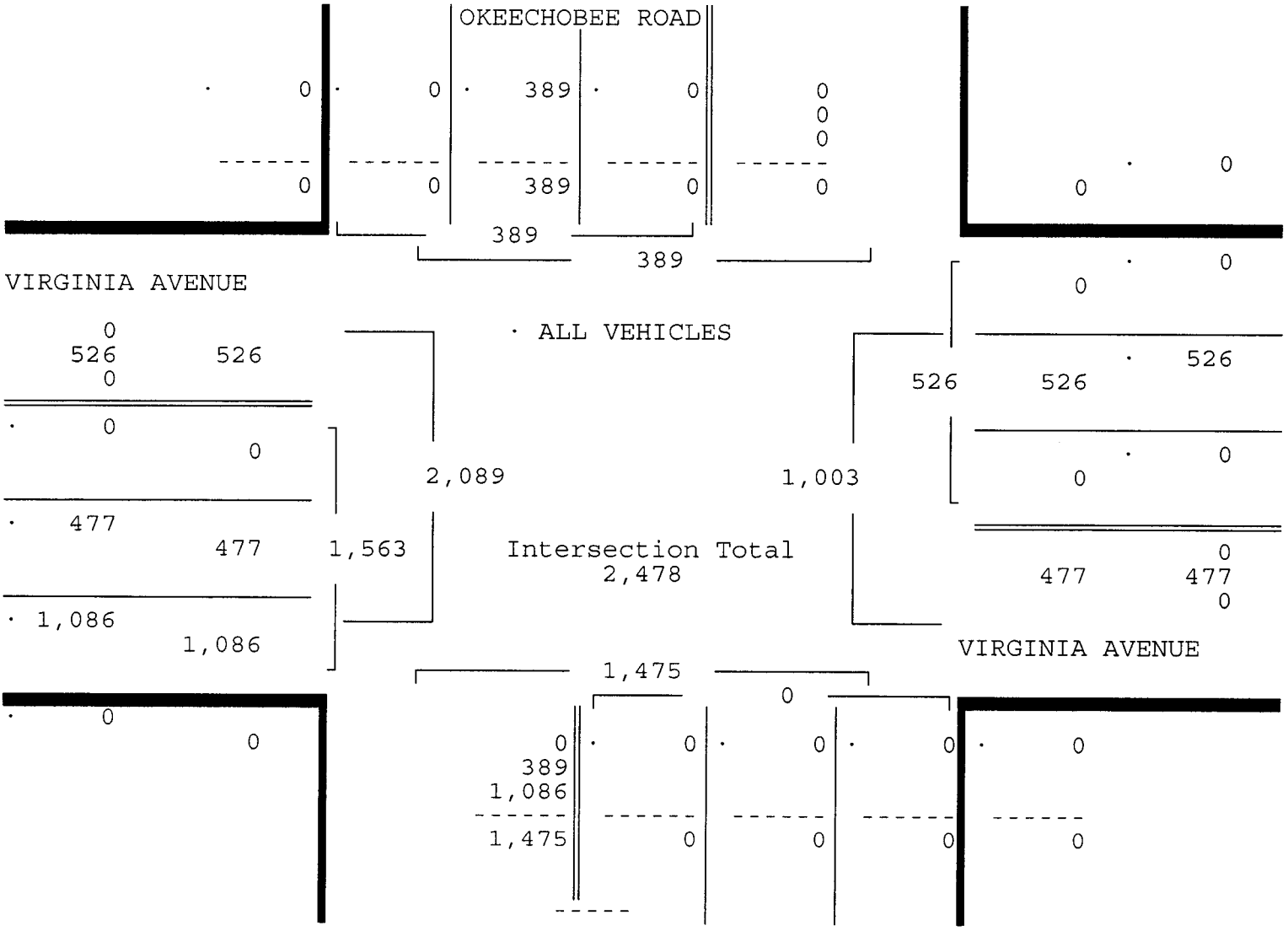
VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/03/19																	
Peak start	07:30				07:30				07:30				07:30				
Volume	0	0	389	0	0	0	526	0	0	0	0	0	0	0	477	1086	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	31%	69%	
Pk total	389				526				0				1563				
Highest	07:30				07:30				07:00				07:45				
Volume	0	0	104	0	0	0	136	0	0	0	0	0	0	0	134	317	
Hi total	104				136				0				451				
PHF	.94				.97				.0				.87				



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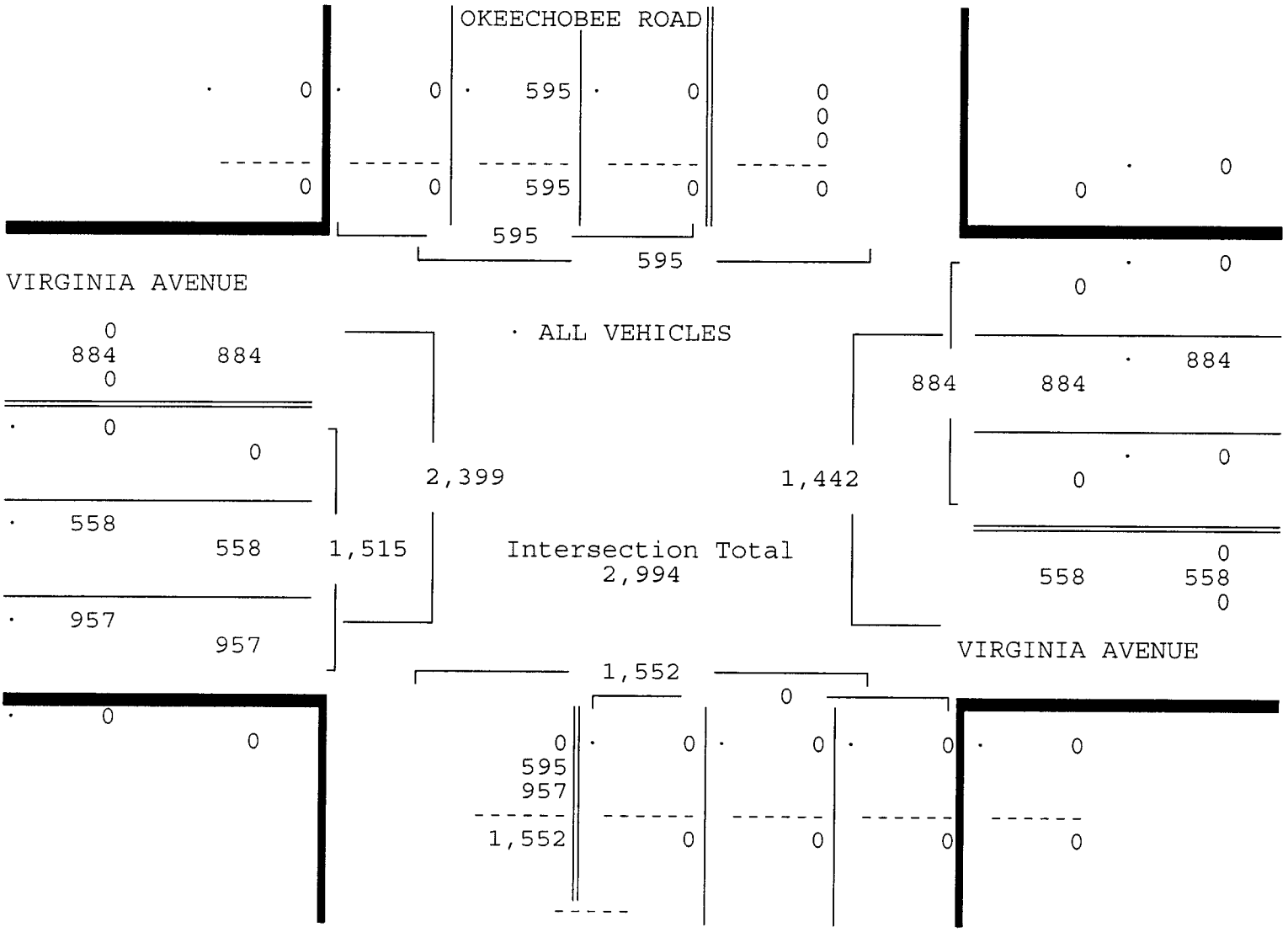
VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 3

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 04/03/19																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	37%	63%	
Pk total	595				884				0				1515				
Highest	17:15				17:00				07:00				17:30				
Volume	0	0	167	0	0	0	272	0	0	0	0	0	0	0	145	256	
Hi total	167				272				0				401				
PHF	.89				.81				.0				.94				



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VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
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PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

PEDESTRIANS & BIKES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/03/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
* BREAK *																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2

Appendix E: Signal Timing Sheet

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-615 at Okeechobee Road**

Part I — Actuated Timing Information

Non-coordinated Operation

Phase	1	2	3	4	5	6	7	8		
Approach	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB		
Initial	12	12	9	12	12	12	9	12		
Passage	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Max1	15.0	35.0	20.0	45.0	15.0	35.0	20.0	45.0		
Yellow	4.0	3.7	4.0	4.4	3.7	4.0	4.4	4.0		
Red	2.6	2.7	2.0	2.1	2.6	2.7	2.0	2.1		
Walk		7.0		7.0		7.0		7.0		
Ped Clear		28.0		25.0		30.0		29.0		
Recall		Min				Min				
LT Type	Prot+Perm		Prot+Perm		Prot+Perm		Prot+Perm			

Part II — Coordinated Timing Information

Pattern Tables

PHASE	1	2	3	4	5	6	7	8	Cycle	Offset
Split Pattern 1	17	25	15	33	17	25	15	33	90	59
Split Pattern 2	18	31	15	36	18	31	15	36	100	50
Split Pattern 3	17	44	15	64	17	44	23	56	140	49
Split Pattern 4	15	22	15	28	15	22	15	28	80	42
Split Pattern 5	15	33	15	37	15	33	15	37	100	30

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Split	Start	End	Split			
0:00	6:30	100	0:00	7:00	100			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	100			
21:00	0:00	100						

Part III — Notes and Comments

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)

Office DEPOT®

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-70 at Okeechobee Road**

Part I — *Actuated Timing Information*

Non-coordinated Operation

Phase	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*		
Approach		EB/SBR		WBT						
Initial		12		12						
Passage		5.0		5.0						
Max1		60.0		60.0						
Max2										
Yellow		4.8		4.8						
Red		2.5		2.5						
Walk		5.0								
Ped Clear		9.0								
Recall				Min						
LT Type										

Part II — *Coordinated Timing Information*

Pattern Tables

PHASE	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Cycle*	*Offset*
Split Pattern 1		60		70					130	34
Split Pattern 2		65		65					130	22
Split Pattern 3		65		65					130	103
Split Pattern 4		50		50					100	70
Split Pattern 5		55		65					120	80

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Pattern	Start	End	Pattern			
0:00	6:30	Free	0:00	7:00	Free			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	Free			
21:00	0:00	Free						

Part III — *Notes and Comments*

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)
2. Coord offset reference - Phase 4

Appendix F: Volume Development Worksheet

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
OKEECHOBEE ROAD & VIRIGNIA AVENUE

Peak Season =	1.01	1.01
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	389	0	0	477	1,086	0	526	0
Peak Season Volume	0	0	0	0	393	0	0	482	1,097	0	531	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	64	0	0	78	177	0	86	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					5						15	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								19	56			
Project Traffic	0	0	0	0	5	0	0	19	56	0	15	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					38						38	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								51	51			
Project Traffic	0	0	0	0	38	0	0	51	51	0	38	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					7							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	7	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					2						11	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								1	3			
Project Traffic	0	0	0	0	2	0	0	1	3	0	11	0
Total Committed Projects	0	0	0	0	52	0	0	71	110	0	64	0
1.0% Traffic Volume Growth	0	0	0	0	24	0	0	30	67	0	33	0
Committed + 1.0% Growth	0	0	0	0	76	0	0	101	177	0	97	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	76	0	0	101	177	0	97	0
Background Traffic Volumes	0	0	0	0	469	0	0	583	1,274	0	628	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								4				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					10							
Project Traffic	0	0	0	0	10	0	0	4	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	479	0	0	587	1,274	0	628	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	479	0	0	587	1,274	0	628	0

PM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	595	0	0	558	957	0	884	0
Peak Season Volume	0	0	0	0	601	0	0	564	967	0	893	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	97	0	0	91	156	0	144	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					20						60	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								11	32			
Project Traffic	0	0	0	0	20	0	0	11	32	0	60	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					23						23	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								63	63			
Project Traffic	0	0	0	0	23	0	0	63	63	0	23	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					25							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	25	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					3						17	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								4	20			
Project Traffic	0	0	0	0	3	0	0	4	20	0	17	0
Total Committed Projects	0	0	0	0	71	0	0	78	115	0	100	0
1.0% Traffic Volume Growth	0	0	0	0	37	0	0	35	59	0	55	0
Committed + 1.0% Growth	0	0	0	0	108	0	0	113	174	0	155	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	108	0	0	113	174	0	155	0
Background Traffic Volumes	0	0	0	0	709	0	0	677	1,141	0	1,048	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								11				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					7							
Project Traffic	0	0	0	0	7	0	0	11	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	716	0	0	688	1,141	0	1,048	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	716	0	0	688	1,141	0	1,048	0

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
S 25TH STREET & OKEECHOBEE ROAD

Peak Season =	1.11	1.11
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	106	575	173	40	715	118	143	391	105	109	247	14
Peak Season Volume	118	638	192	44	794	131	159	434	117	121	274	16
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	19	103	31	7	128	21	26	70	19	20	44	3
1.0% Traffic Volume Growth	7	39	12	3	49	8	10	27	7	7	17	1
Committed + 1.0% Growth	7	39	12	3	49	8	10	27	7	7	17	1
Max (Committed + 1.0% or Historic Growth)	19	103	31	7	128	21	26	70	19	20	44	3
Background Traffic Volumes	137	741	223	51	922	152	185	504	136	141	318	19
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	2				1						4	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	11	4			
Project Traffic	2	0	0	0	1	0	1	11	4	0	4	0
Total Traffic w/o RTOR	139	741	223	51	923	152	186	515	140	141	322	19
RTOR Reduction												
TOTAL TRAFFIC	139	741	223	51	923	152	186	515	140	141	322	19

PM Peak Hour

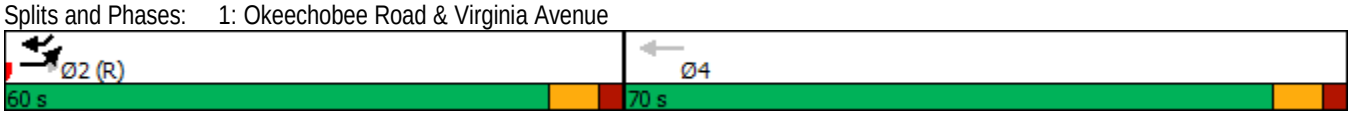
	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	126	639	144	41	741	140	167	357	112	139	400	13
Peak Season Volume	140	709	160	46	823	155	185	396	124	154	444	14
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	23	115	26	7	133	25	30	64	20	25	72	2
1.0% Traffic Volume Growth	9	44	10	3	51	10	11	24	8	9	27	1
Committed + 1.0% Growth	9	44	10	3	51	10	11	24	8	9	27	1
Max (Committed + 1.0% or Historic Growth)	23	115	26	7	133	25	30	64	20	25	72	2
Background Traffic Volumes	163	824	186	53	956	180	215	460	144	179	516	16
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	5				2						12	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	8	3			
Project Traffic	5	0	0	0	2	0	1	8	3	0	12	0
Total Traffic w/o RTOR	168	824	186	53	958	180	216	468	147	179	528	16
RTOR Reduction												
TOTAL TRAFFIC	168	824	186	53	958	180	216	468	147	179	528	16

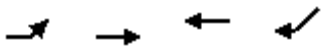
Appendix G: Synchro Analyses

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	482	1097	531	393
Future Volume (vph)	482	1097	531	393
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	94.5	94.5	20.9	94.5
Actuated g/C Ratio	0.73	0.73	0.16	0.73
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
LOS	A	A	E	A
Approach Delay		6.6	55.6	
Approach LOS		A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 36.2%	ICU Level of Service A
Analysis Period (min) 15	

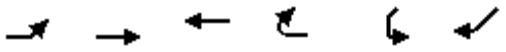
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	507	1155	559	414
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
Queue Length 50th (ft)	62	112	164	0
Queue Length 95th (ft)	96	155	198	15
Internal Link Dist (ft)		358	1207	
Turn Bay Length (ft)				
Base Capacity (vph)	2494	3694	2452	2141
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.31	0.23	0.19

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	482	1097	531	0	0	393
Future Volume (vph)	482	1097	531	0	0	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	507	1155	559	0	0	414
RTOR Reduction (vph)	0	0	0	0	0	113
Lane Group Flow (vph)	507	1155	559	0	0	301
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	94.5	94.5	20.9			94.5
Effective Green, g (s)	94.5	94.5	20.9			94.5
Actuated g/C Ratio	0.73	0.73	0.16			0.73
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2495	3696	817			2025
v/s Ratio Prot	0.15					0.11
v/s Ratio Perm		c0.23	c0.11			
v/c Ratio	0.20	0.31	0.68			0.15
Uniform Delay, d1	5.7	6.3	51.4			5.4
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.2	2.4			0.2
Delay (s)	5.9	6.5	53.8			5.6
Level of Service	A	A	D			A
Approach Delay (s)		6.3	53.8		5.6	
Approach LOS		A	D		A	

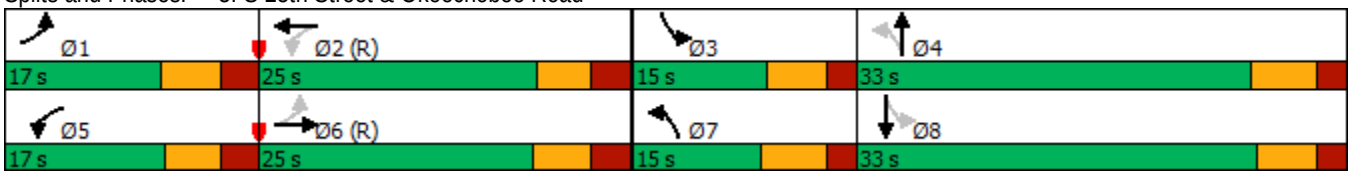
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

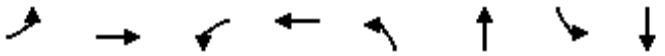
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	159	434	121	274	118	638	44	794
Future Volume (vph)	159	434	121	274	118	638	44	794
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	25.0	17.0	25.0	15.0	33.0	15.0	33.0
Total Split (%)	18.9%	27.8%	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	28.9	18.4	29.5	18.7	37.7	32.4	35.9	26.8
Actuated g/C Ratio	0.32	0.20	0.33	0.21	0.42	0.36	0.40	0.30
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
LOS	C	D	C	C	C	C	B	D
Approach Delay		37.3		29.5		28.0		44.9
Approach LOS		D		C		C		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.7	Intersection LOS: D
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

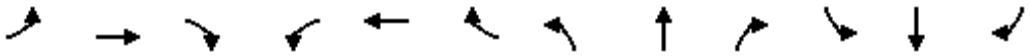




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	580	127	305	124	874	46	974
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Length 50th (ft)	62	156	46	77	39	233	14	276
Queue Length 95th (ft)	108	#234	84	117	80	#333	33	#402
Internal Link Dist (ft)		1962		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	409	725	305	732	243	1259	298	1050
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Future Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3427		1770	3510		1770	3417		1770	3464	
Flt Permitted	0.54	1.00		0.25	1.00		0.12	1.00		0.22	1.00	
Satd. Flow (perm)	1001	3427		457	3510		230	3417		405	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	457	123	127	288	17	124	672	202	46	836	138
RTOR Reduction (vph)	0	28	0	0	5	0	0	28	0	0	14	0
Lane Group Flow (vph)	167	552	0	127	300	0	124	846	0	46	960	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Effective Green, g (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Actuated g/C Ratio	0.29	0.18		0.30	0.18		0.46	0.36		0.38	0.32	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	609		293	635		251	1230		237	1123	
v/s Ratio Prot	0.05	c0.16		c0.05	0.09		c0.05	c0.25		0.01	c0.28	
v/s Ratio Perm	0.08			0.08			0.18			0.06		
v/c Ratio	0.44	0.91		0.43	0.47		0.49	0.69		0.19	0.85	
Uniform Delay, d1	24.8	36.3		24.2	33.0		17.5	24.5		18.1	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	19.6		1.0	2.5		1.5	1.6		0.4	6.5	
Delay (s)	25.6	55.8		25.2	35.5		19.1	26.1		18.5	34.9	
Level of Service	C	E		C	D		B	C		B	C	
Approach Delay (s)		49.1			32.5			25.2			34.2	
Approach LOS		D			C			C			C	

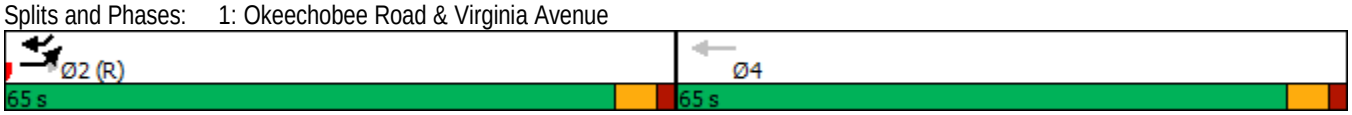
Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

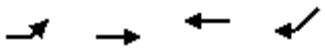
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	564	967	893	601
Future Volume (vph)	564	967	893	601
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	84.5	84.5	33.5	84.5
Actuated g/C Ratio	0.65	0.65	0.26	0.65
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
LOS	B	B	D	A
Approach Delay		10.7	46.9	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

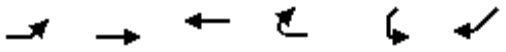
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	594	1018	940	633
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
Queue Length 50th (ft)	102	128	265	100
Queue Length 95th (ft)	153	178	293	159
Internal Link Dist (ft)		326	1056	
Turn Bay Length (ft)				
Base Capacity (vph)	2230	3304	2307	1853
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.31	0.41	0.34

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	564	967	893	0	0	601
Future Volume (vph)	564	967	893	0	0	601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	594	1018	940	0	0	633
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	594	1018	940	0	0	591
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	84.5	84.5	33.5			84.5
Effective Green, g (s)	84.5	84.5	33.5			84.5
Actuated g/C Ratio	0.65	0.65	0.26			0.65
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2231	3305	1310			1811
v/s Ratio Prot	0.17					c0.21
v/s Ratio Perm		0.20	c0.18			
v/c Ratio	0.27	0.31	0.72			0.33
Uniform Delay, d1	9.6	10.0	43.9			10.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.2	1.9			0.5
Delay (s)	9.9	10.2	45.8			10.6
Level of Service	A	B	D			B
Approach Delay (s)		10.1	45.8		10.6	
Approach LOS		B	D		B	

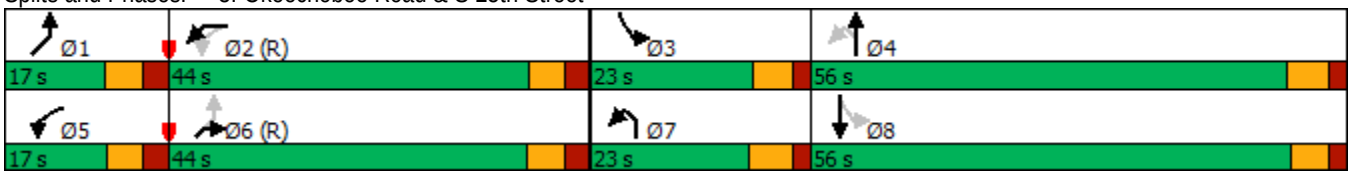
Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	154	444	140	709	46	823	185	396
Future Volume (vph)	154	444	140	709	46	823	185	396
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	53.6	42.1	65.6	54.6	56.6	47.5	54.2	42.4
Actuated g/C Ratio	0.38	0.30	0.47	0.39	0.40	0.34	0.39	0.30
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
LOS	C	C	D	D	C	D	D	D
Approach Delay		31.5		38.1		50.1	35.2	
Approach LOS		C		D		D	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	162	482	147	914	48	1029	195	548
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Length 50th (ft)	93	138	77	357	22	445	115	192
Queue Length 95th (ft)	154	193	145	414	43	533	184	267
Internal Link Dist (ft)		574		2034		690	3530	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	1122	260	1360	337	1249	354	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.43	0.57	0.67	0.14	0.82	0.55	0.59

Intersection Summary

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Future Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3442		1770	3455		1770	2787	
Flt Permitted	0.29	0.95		0.08	1.00		0.19	1.00		0.36	1.00	
Satd. Flow (perm)	539	3431		142	3442		363	3455		679	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	467	15	147	746	168	48	866	163	195	417	131
RTOR Reduction (vph)	0	91	0	0	13	0	0	11	0	0	91	0
Lane Group Flow (vph)	162	391	0	147	901	0	48	1018	0	195	457	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Effective Green, g (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Actuated g/C Ratio	0.37	0.29		0.48	0.39		0.40	0.35		0.38	0.29	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	301	1004		222	1342		217	1199		348	822	
v/s Ratio Prot	0.04	0.11		c0.06	c0.26		0.01	c0.29		c0.05	0.16	
v/s Ratio Perm	0.16			0.26			0.08			c0.17		
v/c Ratio	0.54	0.39		0.66	0.67		0.22	0.85		0.56	0.56	
Uniform Delay, d1	31.0	39.5		29.1	35.3		27.3	42.3		30.8	41.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	1.1		7.2	1.3		0.5	5.8		2.1	2.7	
Delay (s)	32.8	40.6		36.4	36.6		27.8	48.1		32.9	44.3	
Level of Service	C	D		D	D		C	D		C	D	
Approach Delay (s)		38.7			36.6			47.2		41.3		
Approach LOS		D			D			D		D		

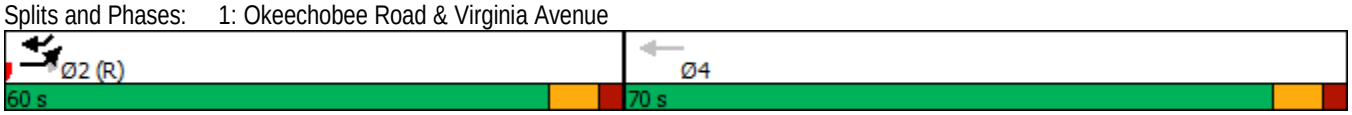
Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

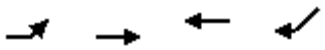
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	583	1274	628	469
Future Volume (vph)	583	1274	628	469
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 40.9%	ICU Level of Service A
Analysis Period (min) 15	

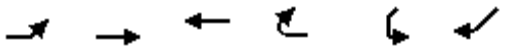
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	614	1341	661	494
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
Queue Length 50th (ft)	88	153	191	24
Queue Length 95th (ft)	132	207	225	51
Internal Link Dist (ft)		282	721	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.24

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	583	1274	628	0	0	469
Future Volume (vph)	583	1274	628	0	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	614	1341	661	0	0	494
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	614	1341	661	0	0	399
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.14
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.20
Uniform Delay, d1	7.1	7.9	49.3			6.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

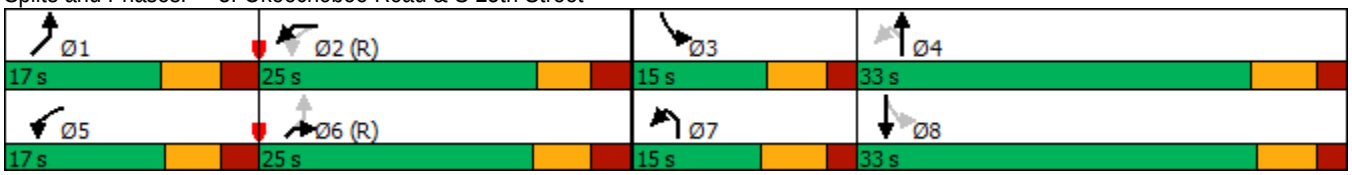
Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	318	137	741	51	922	185	504
Future Volume (vph)	141	318	137	741	51	922	185	504
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.5		32.4		79.2	40.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	355	144	1015	54	1131	195	674
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Length 50th (ft)	54	38	46	288	16	~377	74	155
Queue Length 95th (ft)	97	76	#102	#427	37	#507	125	#276
Internal Link Dist (ft)		574		2034		690	2264	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	386	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Future Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.48	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		888	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	335	20	144	780	235	54	971	160	195	531	143
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	191	0	144	986	0	54	1117	0	195	509	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		361	492	
v/s Ratio Prot	0.06	0.06		c0.05	c0.29		0.02	c0.32		c0.06	c0.18	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.31		0.57	0.80		0.28	0.99		0.54	1.04	
Uniform Delay, d1	25.0	32.0		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.3		3.2	3.7		0.8	24.5		1.7	50.0	
Delay (s)	26.4	33.4		22.3	29.6		19.6	54.7		27.0	87.0	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.3			28.7			53.1		73.6		
Approach LOS		C			C			D		E		

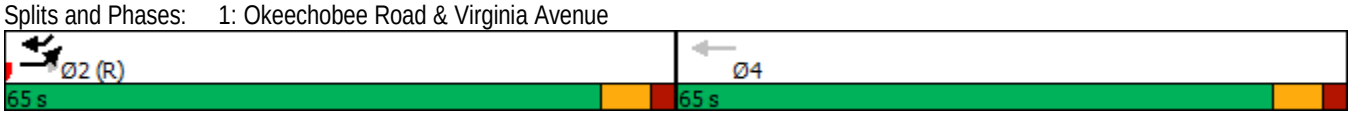
Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

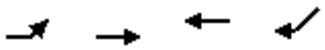
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	677	1141	1048	709
Future Volume (vph)	677	1141	1048	709
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	76.3	76.3	39.1	76.3
Actuated g/C Ratio	0.59	0.59	0.30	0.59
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
LOS	B	B	D	B
Approach Delay		15.6	43.1	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

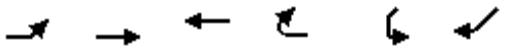
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	713	1201	1103	746
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
Queue Length 50th (ft)	154	191	304	172
Queue Length 95th (ft)	224	259	326	259
Internal Link Dist (ft)		557	1265	
Turn Bay Length (ft)				
Base Capacity (vph)	2015	2984	2256	1663
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.40	0.49	0.45

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	677	1141	1048	0	0	709
Future Volume (vph)	677	1141	1048	0	0	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	713	1201	1103	0	0	746
RTOR Reduction (vph)	0	0	0	0	0	28
Lane Group Flow (vph)	713	1201	1103	0	0	718
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	76.3	76.3	39.1			76.3
Effective Green, g (s)	76.3	76.3	39.1			76.3
Actuated g/C Ratio	0.59	0.59	0.30			0.59
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2014	2984	1529			1635
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.35	0.40	0.72			0.44
Uniform Delay, d1	14.0	14.5	40.6			14.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	0.4	1.7			0.9
Delay (s)	14.5	14.9	42.3			15.8
Level of Service	B	B	D			B
Approach Delay (s)		14.8	42.3		15.8	
Approach LOS		B	D		B	

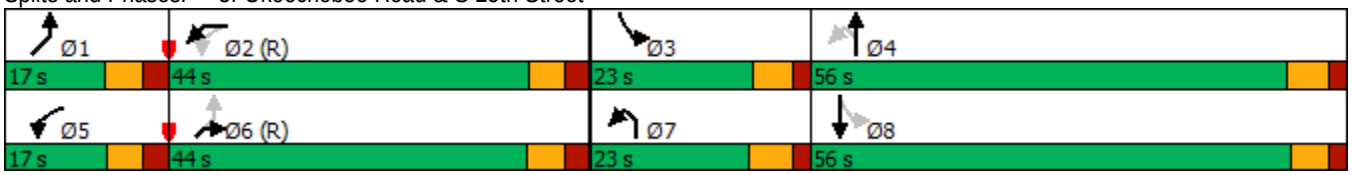
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	179	516	163	824	53	956	215	460
Future Volume (vph)	179	516	163	824	53	956	215	460
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	49.2	38.3	70.9	59.2	60.3	51.1	49.3	38.3
Actuated g/C Ratio	0.35	0.27	0.51	0.42	0.43	0.36	0.35	0.27
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
LOS	E	D	D	D	C	E	D	D
Approach Delay		40.5		38.9		55.3	46.1	
Approach LOS		D		D		E	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 45.7	Intersection LOS: D
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	188	560	172	1063	56	1195	226	636
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Length 50th (ft)	116	174	101	421	25	540	143	246
Queue Length 95th (ft)	#200	234	182	511	48	#705	#261	327
Internal Link Dist (ft)		574		2034		690	4088	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	235	1031	260	1467	319	1271	282	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.54	0.66	0.72	0.18	0.94	0.80	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Future Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3441		1770	3455		1770	2787	
Flt Permitted	0.19	0.95		0.07	1.00		0.15	1.00		0.28	1.00	
Satd. Flow (perm)	360	3431		128	3441		285	3455		527	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	543	17	172	867	196	56	1006	189	226	484	152
RTOR Reduction (vph)	0	95	0	0	12	0	0	11	0	0	95	0
Lane Group Flow (vph)	188	465	0	172	1051	0	56	1184	0	226	541	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Effective Green, g (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Actuated g/C Ratio	0.34	0.27		0.52	0.42		0.42	0.37		0.34	0.27	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	909		234	1455		198	1288		277	740	
v/s Ratio Prot	0.06	0.14		c0.08	c0.31		0.01	c0.34		c0.06	0.19	
v/s Ratio Perm	0.21			0.31			0.11			c0.22		
v/c Ratio	0.81	0.51		0.74	0.72		0.28	0.92		0.82	0.73	
Uniform Delay, d1	35.8	43.7		36.5	33.6		25.9	41.9		38.1	46.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.3	2.1		11.3	1.8		0.8	10.6		16.7	6.3	
Delay (s)	55.1	45.8		47.8	35.4		26.7	52.5		54.8	53.1	
Level of Service	E	D		D	D		C	D		D	D	
Approach Delay (s)		48.1			37.1			51.3		53.6		
Approach LOS		D			D			D		D		

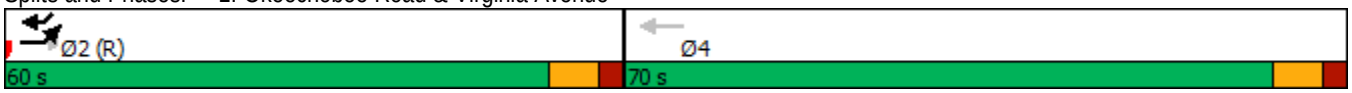
Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

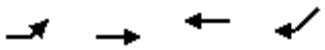
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	587	1274	628	479
Future Volume (vph)	587	1274	628	479
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

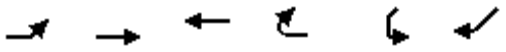
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	618	1341	661	504
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
Queue Length 50th (ft)	89	153	191	26
Queue Length 95th (ft)	132	207	225	53
Internal Link Dist (ft)		281	1314	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.25

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	587	1274	628	0	0	479
Future Volume (vph)	587	1274	628	0	0	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	618	1341	661	0	0	504
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	618	1341	661	0	0	409
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.15
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.21
Uniform Delay, d1	7.1	7.9	49.3			6.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

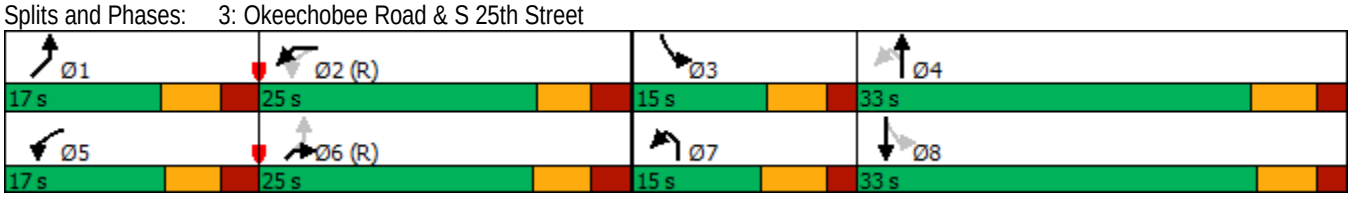
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	322	139	741	51	923	186	515
Future Volume (vph)	141	322	139	741	51	923	186	515
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.6		32.4		79.5	43.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street



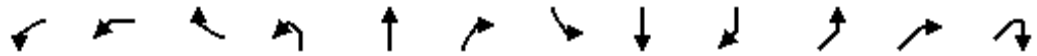


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	359	146	1015	54	1132	196	689
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Length 50th (ft)	54	39	47	288	16	~377	74	161
Queue Length 95th (ft)	97	77	#109	#427	37	#507	126	#286
Internal Link Dist (ft)		574		2034		690	4876	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	383	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Future Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.47	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		878	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	339	20	146	780	235	54	972	160	196	542	147
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	195	0	146	986	0	54	1118	0	196	524	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		359	492	
v/s Ratio Prot	0.06	0.06		c0.06	c0.29		0.02	c0.32		c0.06	c0.19	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.32		0.58	0.80		0.28	0.99		0.55	1.07	
Uniform Delay, d1	25.0	32.1		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.4		3.4	3.7		0.8	24.7		1.7	59.2	
Delay (s)	26.4	33.4		22.6	29.6		19.6	55.0		27.1	96.3	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.4			28.7			53.3		80.9		
Approach LOS		C			C			D		F		

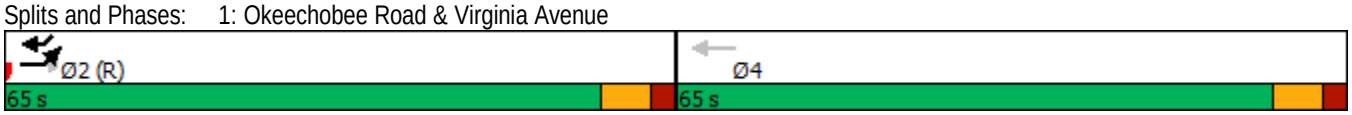
Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

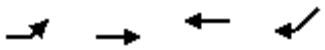
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	688	1141	1048	716
Future Volume (vph)	688	1141	1048	716
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effct Green (s)	57.7	57.7	57.7	57.7
Actuated g/C Ratio	0.44	0.44	0.44	0.44
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
LOS	C	C	C	C
Approach Delay		27.2	26.6	
Approach LOS		C	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

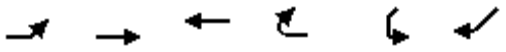
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	724	1201	1103	754
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
Queue Length 50th (ft)	218	265	237	244
Queue Length 95th (ft)	272	310	279	315
Internal Link Dist (ft)		228	779	
Turn Bay Length (ft)				
Base Capacity (vph)	1523	2256	2256	1274
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.53	0.49	0.59

Intersection Summary



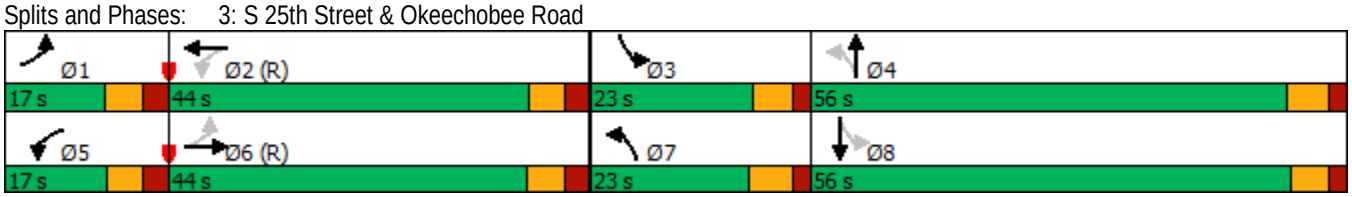
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	688	1141	1048	0	0	716
Future Volume (vph)	688	1141	1048	0	0	716
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	1201	1103	0	0	754
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	724	1201	1103	0	0	717
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	57.7	57.7	57.7			57.7
Effective Green, g (s)	57.7	57.7	57.7			57.7
Actuated g/C Ratio	0.44	0.44	0.44			0.44
Clearance Time (s)	7.3	7.3	7.3			7.3
Lane Grp Cap (vph)	1523	2256	2256			1236
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.48	0.53	0.49			0.58
Uniform Delay, d1	25.5	26.3	25.7			27.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.1	0.9	0.8			2.0
Delay (s)	26.5	27.2	26.4			29.1
Level of Service	C	C	C			C
Approach Delay (s)		27.0	26.4		29.1	
Approach LOS		C	C		C	

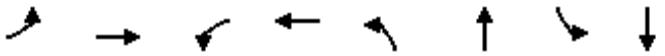
Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	186	515	141	322	139	741	51	923
Future Volume (vph)	186	515	141	322	139	741	51	923
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	44.0	17.0	44.0	23.0	56.0	23.0	56.0
Total Split (%)	12.1%	31.4%	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	51.5	40.4	51.0	40.1	68.3	57.3	59.5	50.3
Actuated g/C Ratio	0.37	0.29	0.36	0.29	0.49	0.41	0.42	0.36
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
LOS	C	D	D	D	D	D	C	D
Approach Delay		44.7		40.5		38.0		51.2
Approach LOS		D		D		D		D

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 86.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

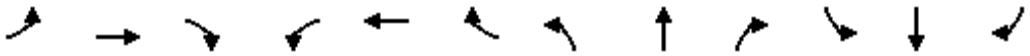




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	689	148	359	146	1015	54	1132
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Length 50th (ft)	122	293	89	139	77	390	24	486
Queue Length 95th (ft)	186	367	141	186	149	475	47	#641
Internal Link Dist (ft)		2355		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	384	1004	247	1009	258	1414	321	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.69	0.60	0.36	0.57	0.72	0.17	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Future Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3426		1770	3510		1770	3416		1770	3464	
Flt Permitted	0.46	1.00		0.21	1.00		0.07	1.00		0.16	1.00	
Satd. Flow (perm)	848	3426		385	3510		130	3416		299	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	196	542	147	148	339	20	146	780	235	54	972	160
RTOR Reduction (vph)	0	17	0	0	3	0	0	18	0	0	9	0
Lane Group Flow (vph)	196	672	0	148	356	0	146	997	0	54	1123	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Effective Green, g (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Actuated g/C Ratio	0.36	0.28		0.36	0.28		0.50	0.41		0.42	0.37	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	956		243	975		217	1398		202	1276	
v/s Ratio Prot	0.04	c0.20		c0.05	0.10		c0.06	c0.29		0.01	c0.32	
v/s Ratio Perm	0.15			0.17			0.27			0.10		
v/c Ratio	0.52	0.70		0.61	0.37		0.67	0.71		0.27	0.88	
Uniform Delay, d1	32.7	45.2		33.3	40.6		31.6	34.5		26.2	41.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	4.3		4.3	1.1		8.0	1.7		0.7	7.2	
Delay (s)	34.0	49.5		37.6	41.7		39.5	36.2		26.9	48.5	
Level of Service	C	D		D	D		D	D		C	D	
Approach Delay (s)		46.1			40.5			36.7			47.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix H: Turn Lane Warrant Worksheet

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:	N/A	Analysis Date:	3/19/2020
County:	Saint Lucie	Conducted By:	MAG
FDOT District:	5	Checked By:	ABK
		Agency/Company Name:	Kimley Horn

Intersection & Approach Description: Okeechobee Road and Project Driveway

Analysis Scenario:	Existing 2020	Number of Approach Lanes:	2
Design Hour:	PM Peak Hour	Undivided or Divided Highway:	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	12	2.0%	13
	Through	-	705	2.0%	713
	Right	No		0.0%	N/A
Opposing	Left	No		0.0%	N/A
	Through	-	739	2.0%	747
	Right	Yes	18	2.0%	19

Advancing Volume:	726
Opposing Volume:	766
Left Turn Volume:	13
% Left Turns in Advancing Volume:	1.79%

TURN LANE WARRANT FINDINGS

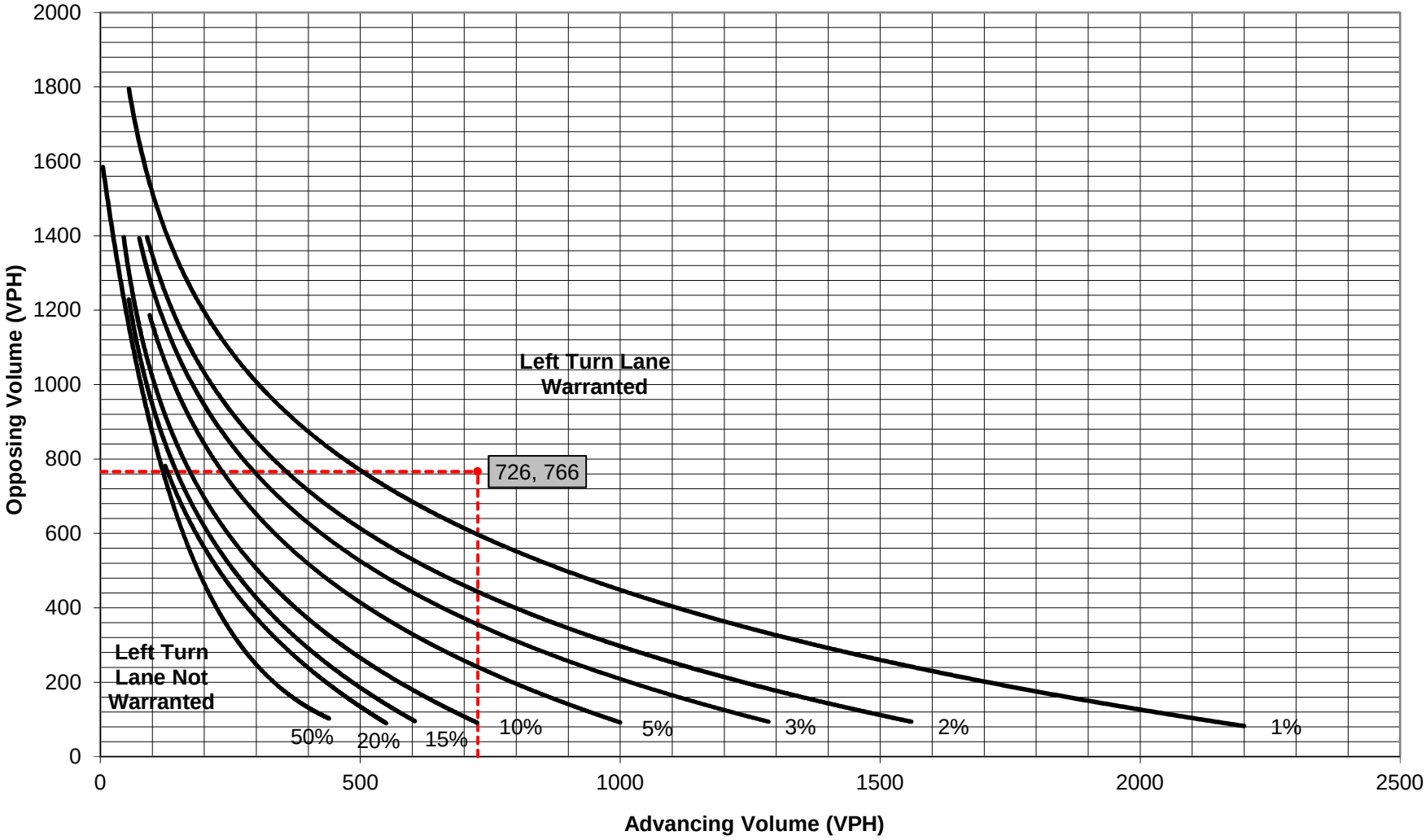
Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

Warrant Met?: Yes

Additional Comments / Justifications:

Figure 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)





REAR ELEVATION
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"

revisions

no.	date
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COLORED ELEVATIONS

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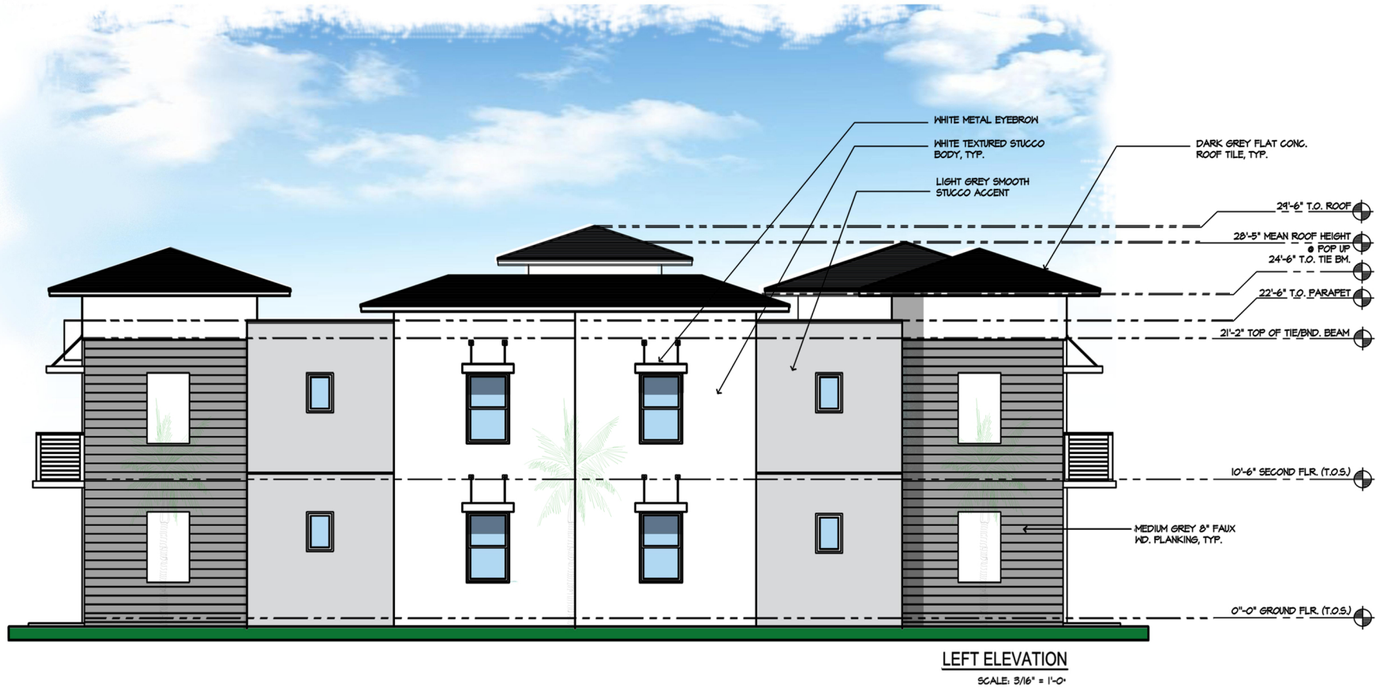

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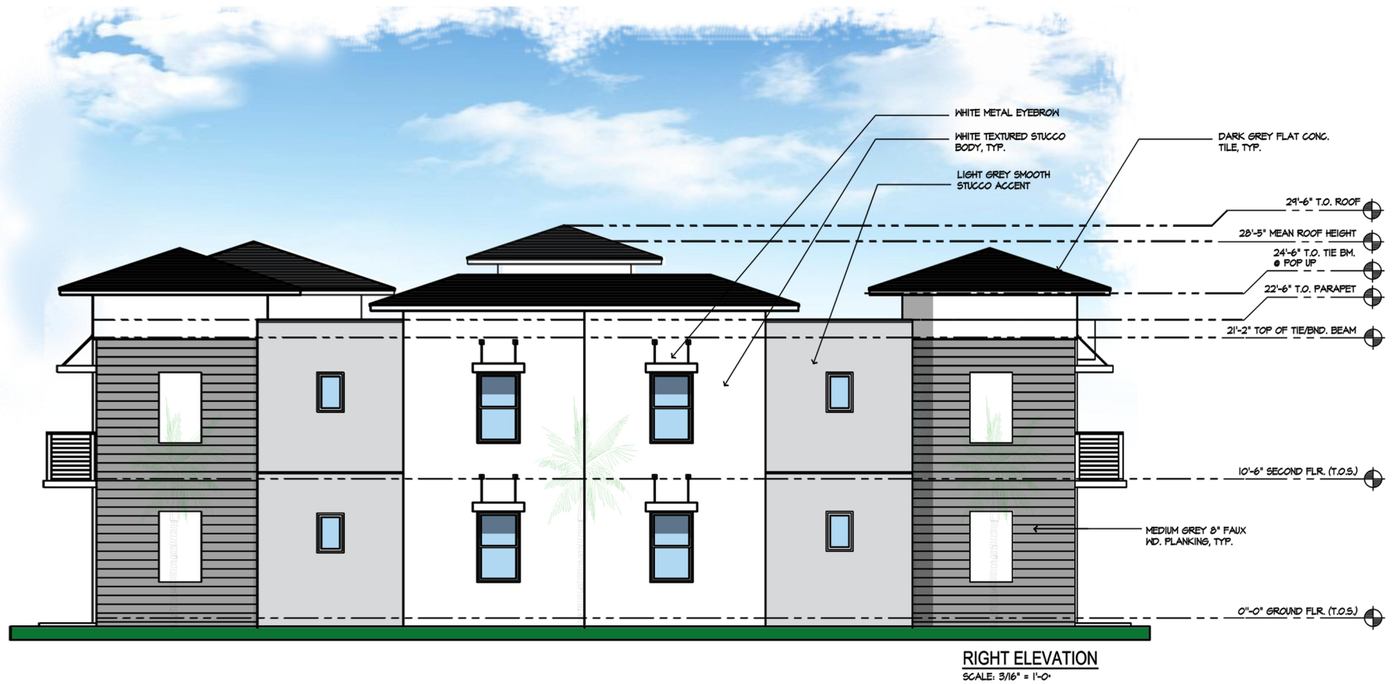

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CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
AC (3)	UNIT C	957 SF
AC (2)	UNIT B	1227 SF
AC	UNIT A	735 SF
	TTL.	7752 SF

NON CONDITIONED AREAS

NC	BREEZEWAY	522 SF
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NC (8)	BALCONY(B)	96 SF
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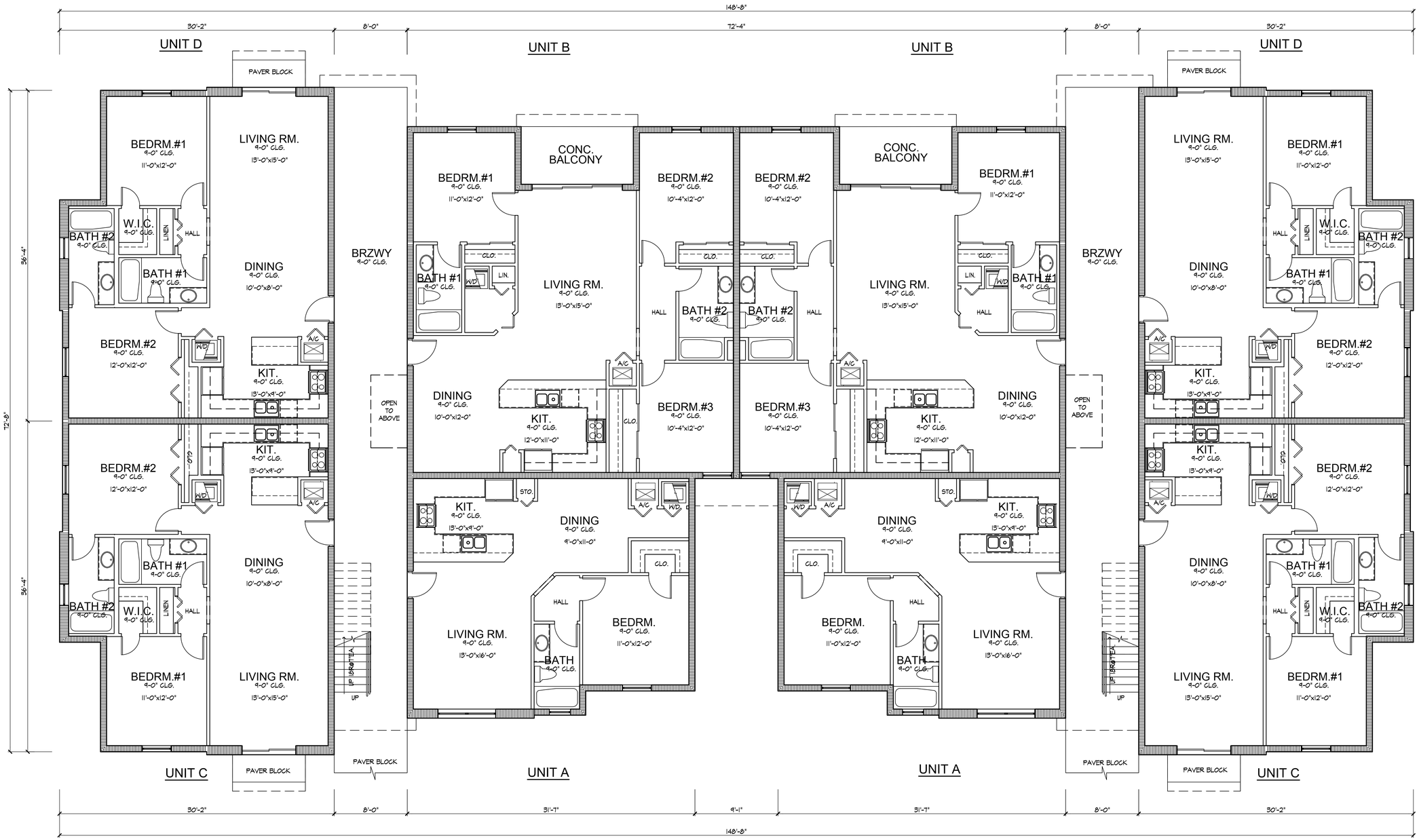
NC (5)	BALCONY(C)	32 SF
NC (7)	BALCONY(D)	32 SF
NC (6)	BALCONY(D)	32 SF
	TTL.	1364 SF

GROSS AREA

GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
TOTAL AC AREA:	23256 SF
TOTAL NON-AC AREA:	4092 SF
TOTAL GROSS AREA:	24477 SF



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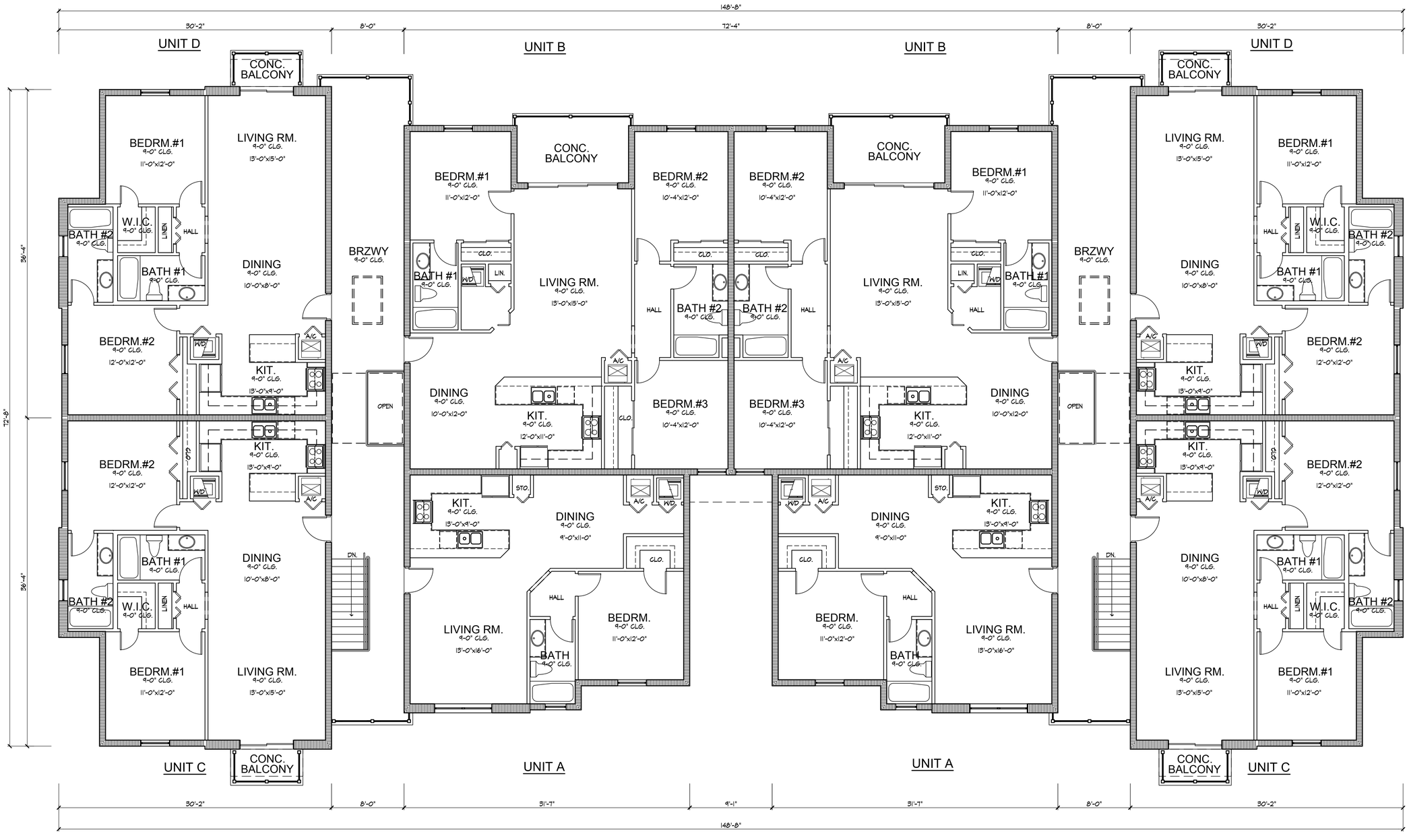

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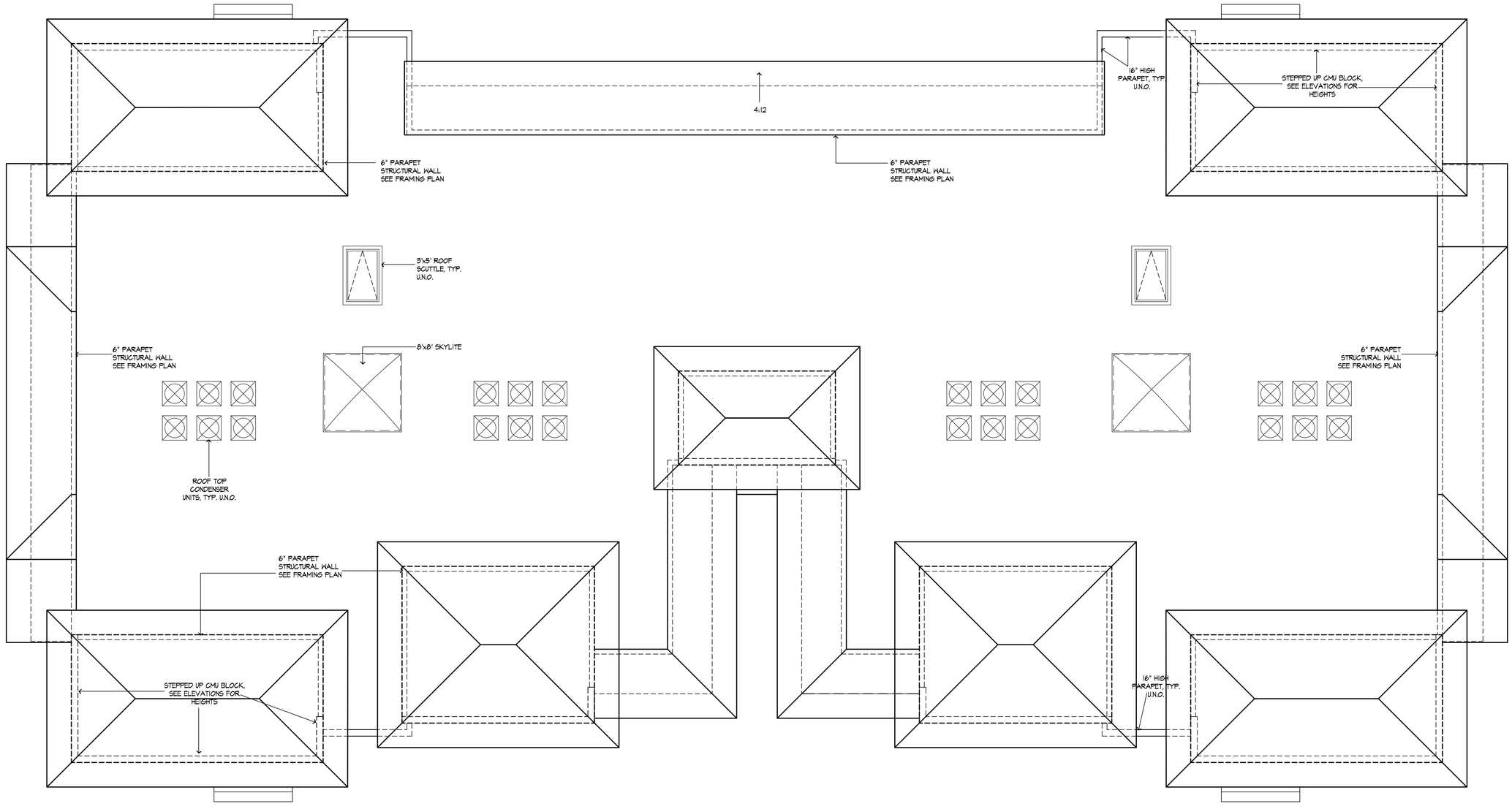

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REAR ELEVATION

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FRONT ELEVATION

SCALE: 3/16" = 1'-0"

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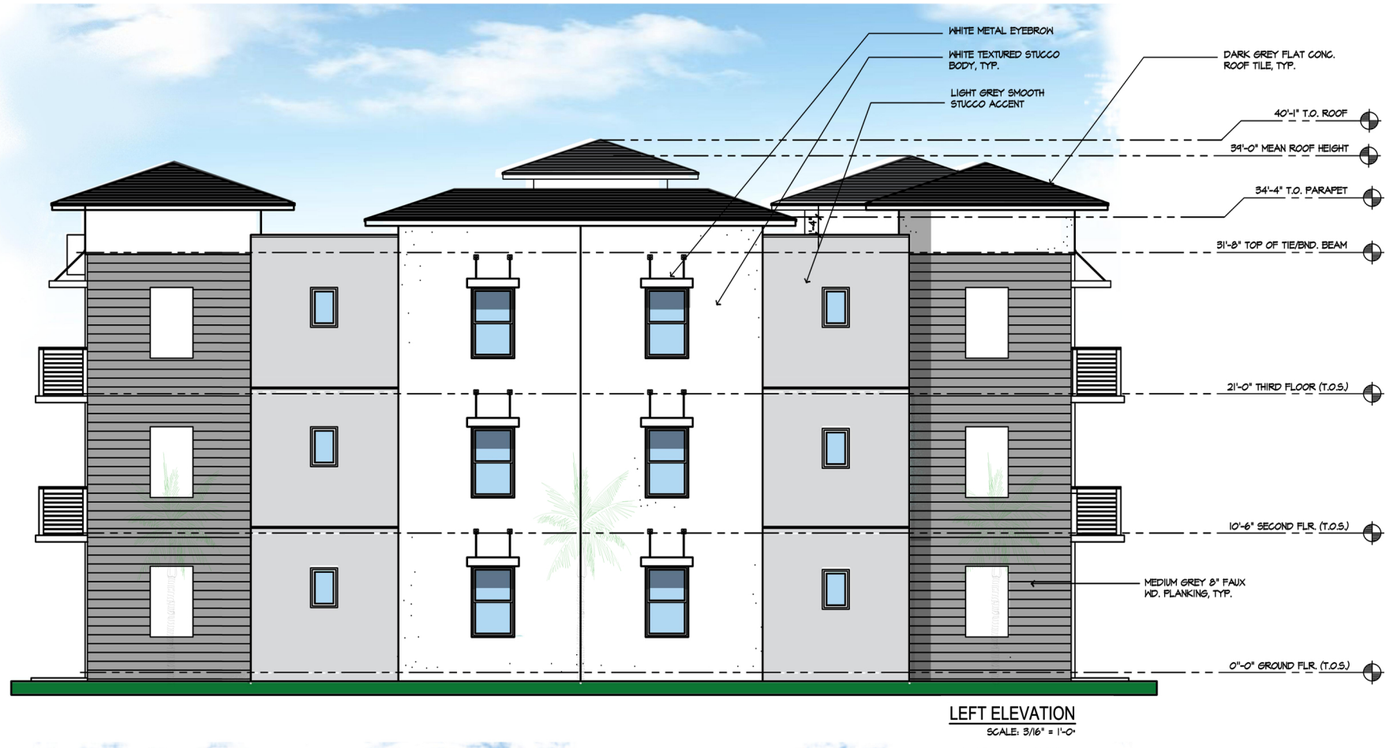

LEFT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

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A-5

CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

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GROSS AREA

GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
TOTAL AC AREA:	23256 SF
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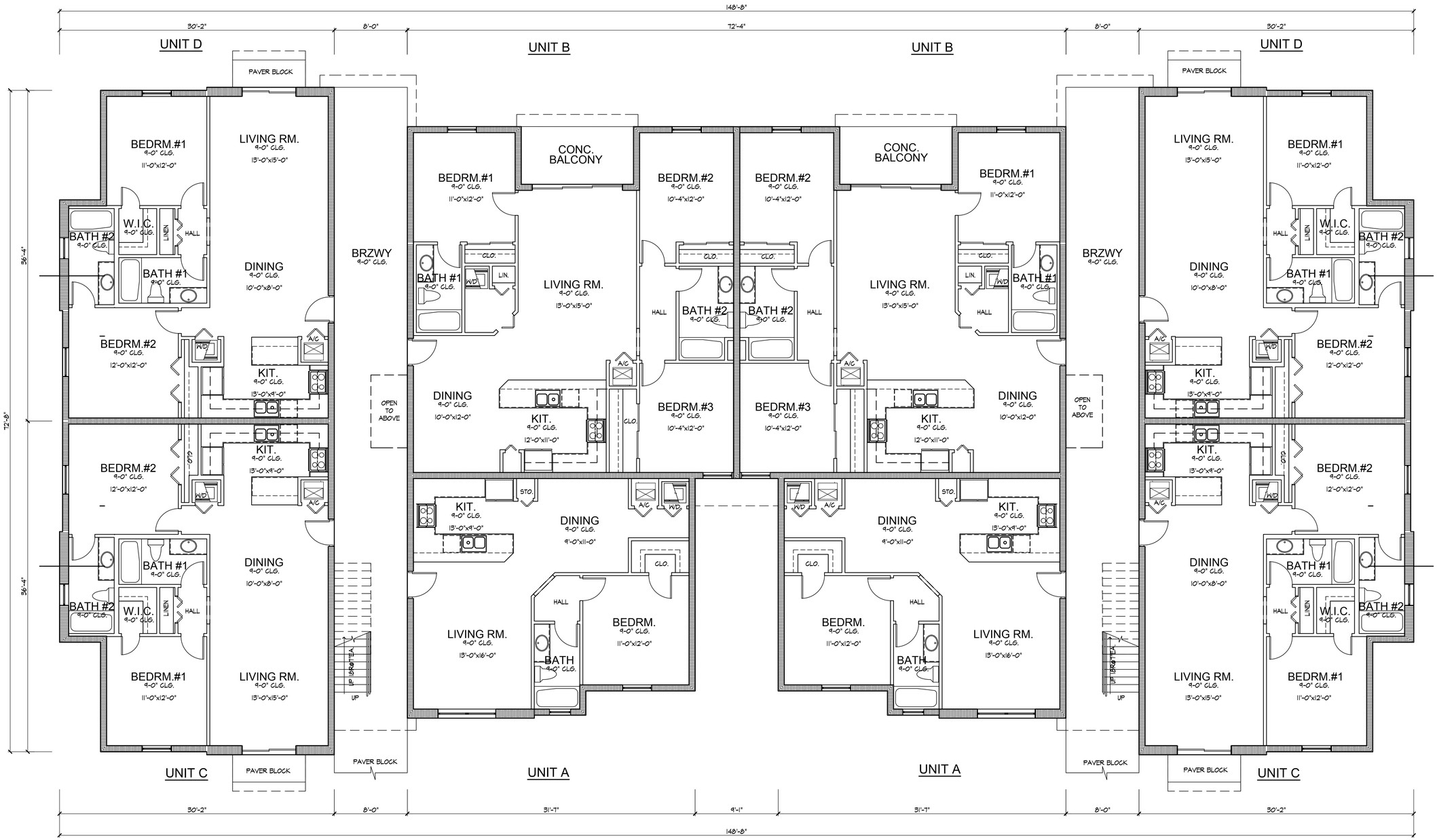
TOTAL GROSS AREA:	24477 SF



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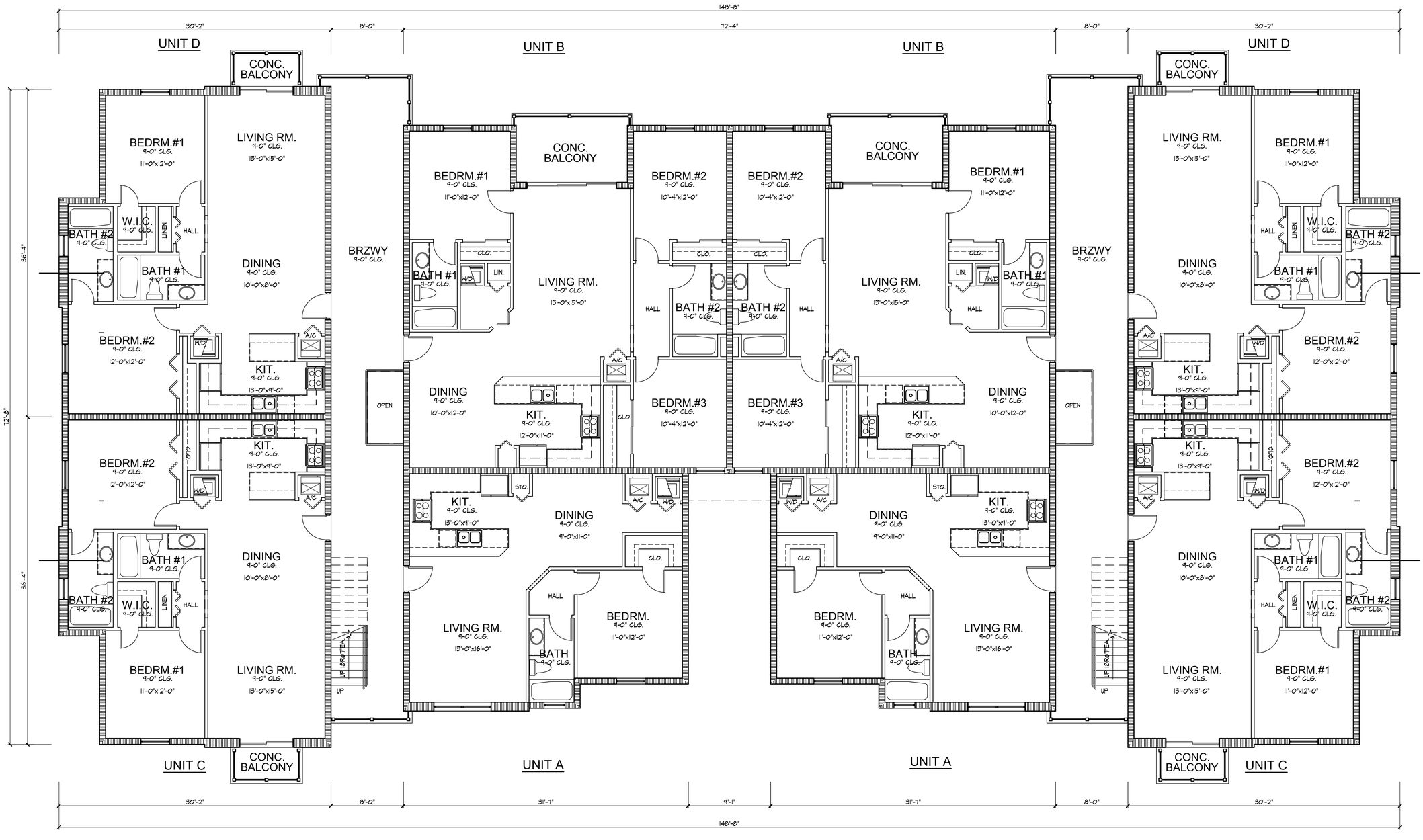

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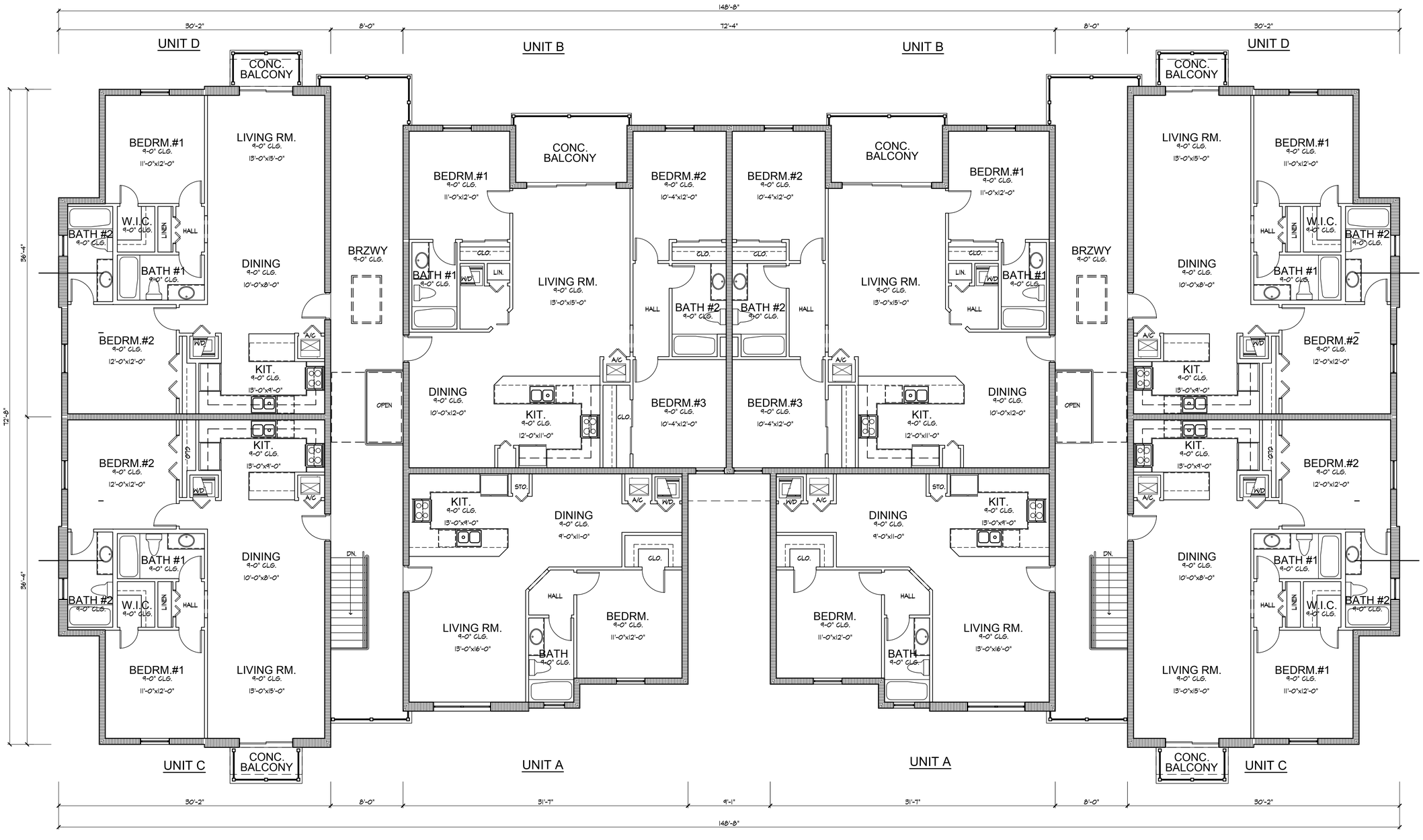

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THIRD FLOOR PLAN

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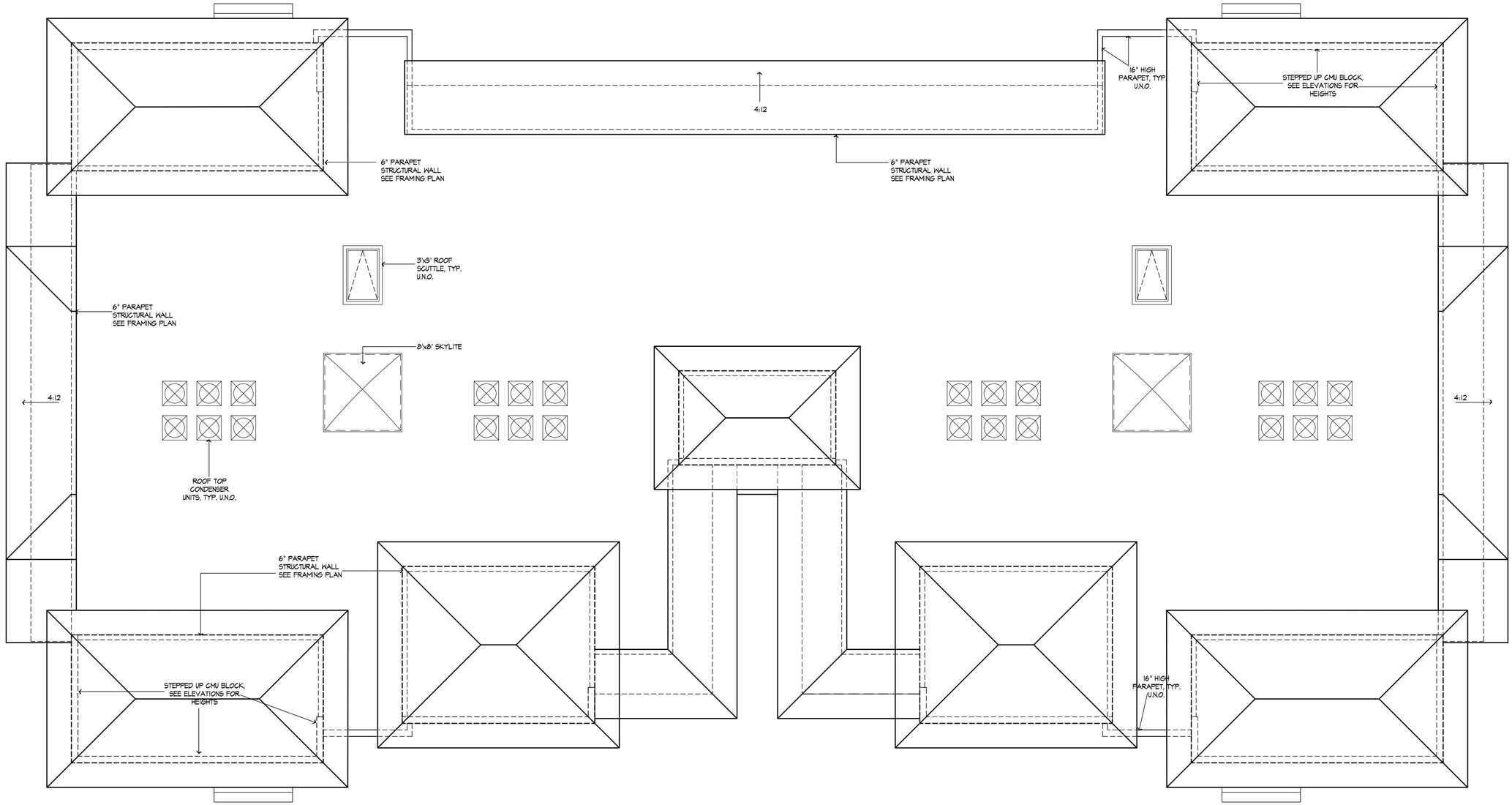
A-3



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ROOF PLAN

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A-6



LEFT ELEVATION



REAR ELEVATION



FRONT ELEVATION

revisions

no.	date
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date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
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CLUBHOUSE

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ELEVATIONS

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A-2



LEFT ELEVATION



RIGHT ELEVATION

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ELEVATIONS

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A-3

CALCULATIONS

AIR CONDITIONED AREAS

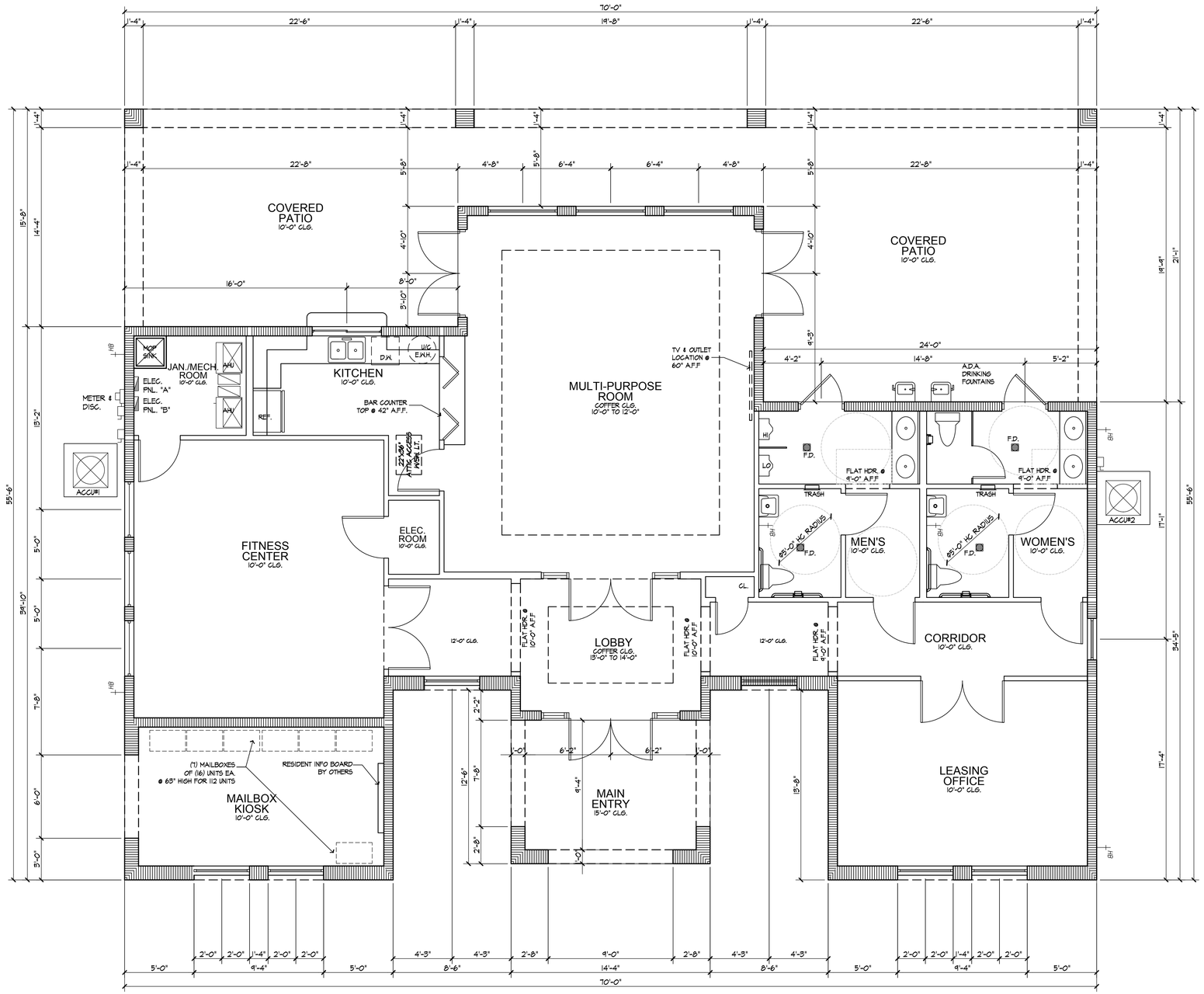
CLUBHOUSE A/C	2239 SF
	2239 SF

NON CONDITIONED AREAS

MAIN ENTRY	148 SF
MAILBOX KIOSK	213 SF
COVERED PATIO	1036 SF
	1397 SF

GROSS AREA

GROSS AREA	3636 SF



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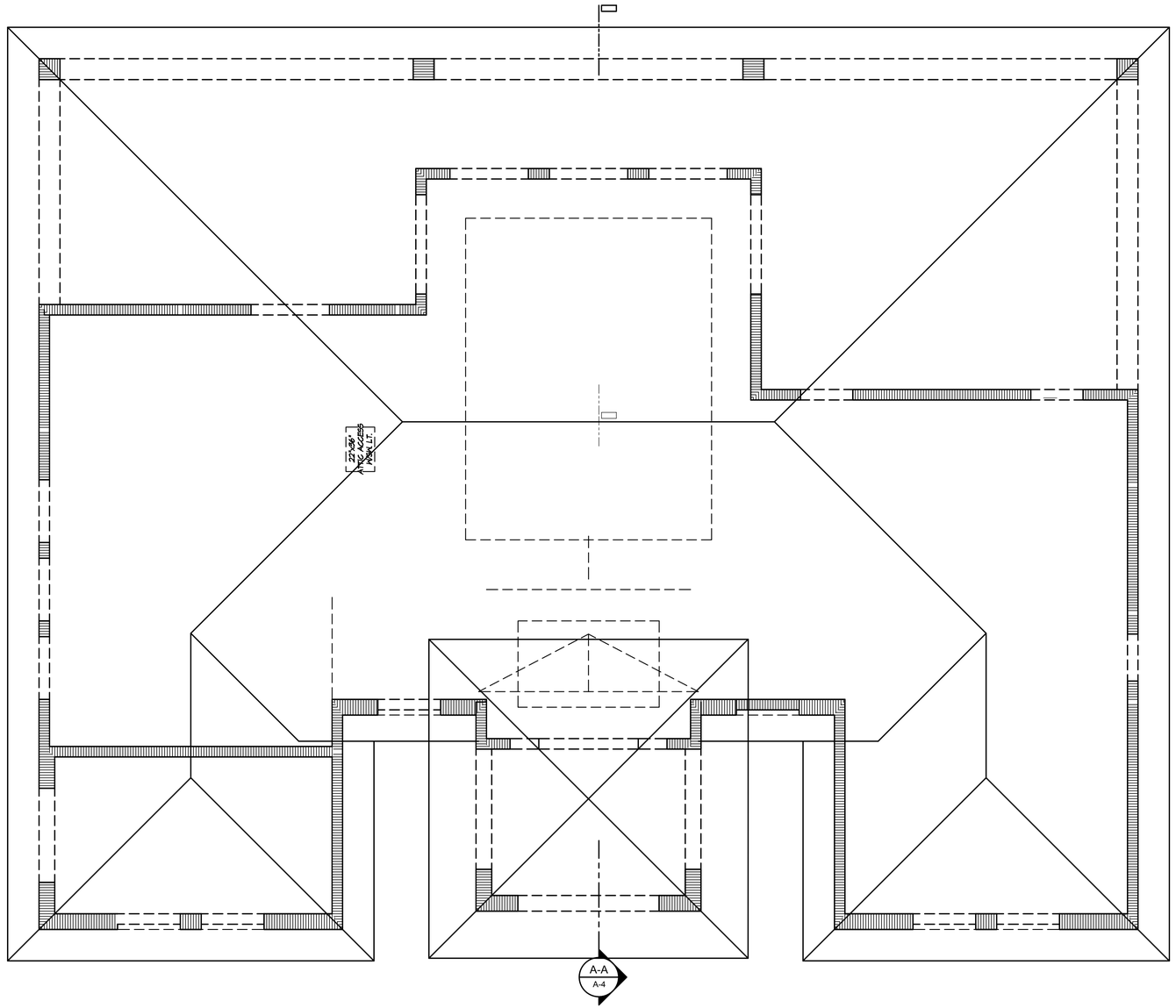

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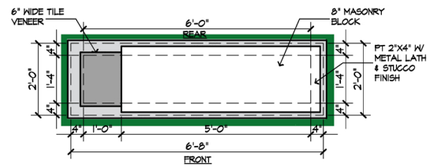
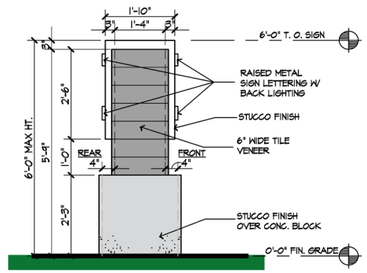


ENTRY MONUMENT PLAN

SCALE: 1/2" = 1'-0"



ENTRY MONUMENT LEFT SIDE ELEVATION

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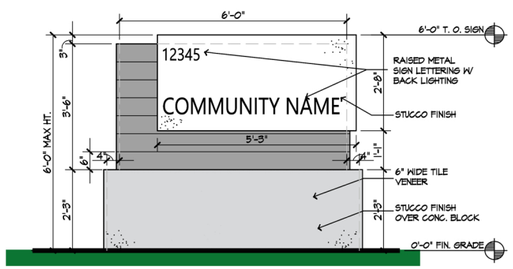
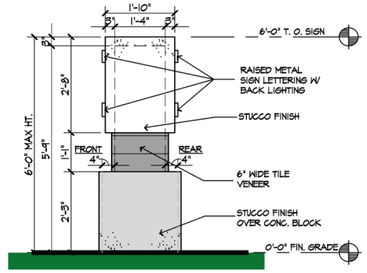


ENTRY MONUMENT FRONT ELEVATION

SCALE: 1/2" = 1'-0" (REAR ELEVATION TO MATCH FRONT ELEVATION)



ENTRY MONUMENT RIGHT SIDE ELEVATION

SCALE: 1/2" = 1'-0"

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	06/12/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190724_EM.dig

Scott Blakeslee Disher
AR-0011586 AA-0003285

PROGRESS SET
06/15/20

project

ENTRY MONUMENT

FORT PIERCE NORTH APTS. & COMMERCIAL CENTER
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

ARCHITECTURAL Studio, Inc.

Architecture
+
Planning

300 Avenue of Champions
Suite 260
Palm Beach Gardens, Florida 33418

Phone 561.202.6990
Fax 561.296.2494
archstudiofl.com

drawing

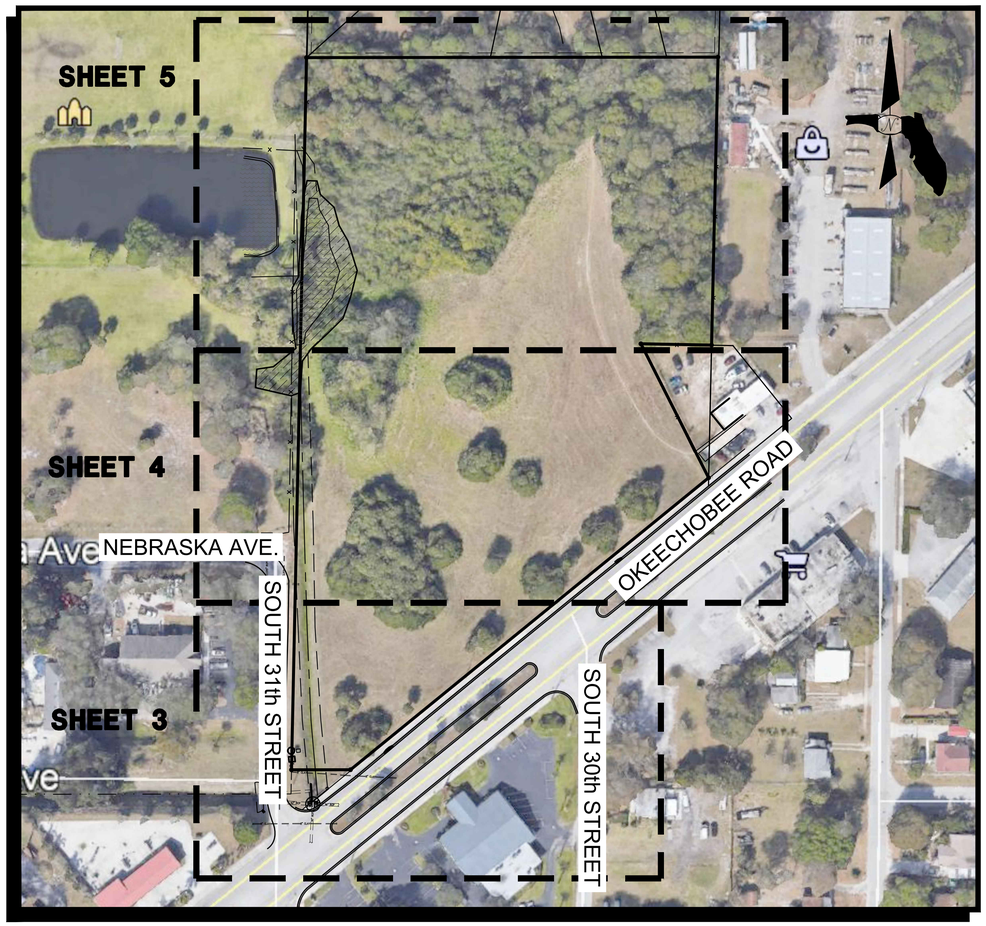
ENTRY MONUMENT

sheet

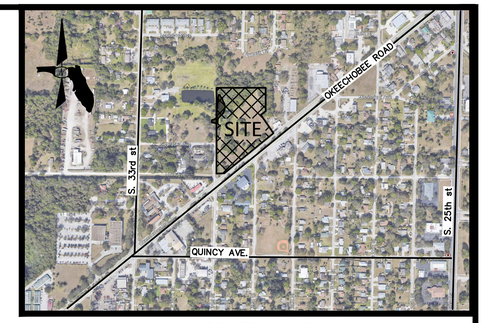
A-1

ST. LUCIE COUNTY
STATE OF FLORIDA

SKETCH OF BOUNDARY SURVEY
FOR
FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD



KEY MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS:
P.O.C.– POINT OF COMMENCEMENT
P.O.B. – POINT OF BEGINNING
P.B. – PLAT BOOK
ORB – OFFICIAL RECORD BOOK
D.B. – DEED BOOK
PG. – PAGE
R/W – RIGHT–OF–WAY
R – RADIUS
Δ – CENTRAL ANGLE
A – ARC LENGTH
U.E. – UTILITY EASEMENT
D.E. – DRAINAGE EASEMENT
(P) – PLAT DIMENSION
(D) – DEED DIMENSION
(M) – MEASURED DIMENSION
℄ – CENTERLINE
IR – IRON ROD
IR/C – IRON ROD WITH CAP AS NOTED
C.M. – 4"x4" CONCRETE MONUMENT
PRM – PERMANENT REFERENCE MONUMENT
PCP – PERMANENT CONTROL POINT
N/D – NAIL & DISK
PK – PARKER KALON
NAD – NORTH AMERICAN DATUM
NAVD – NORTH AMERICAN VERTICAL DATUM
LB – LICENSED BUSINESS
WM – WATER MAIN
TOW – TOP OF WALL
INV – INVERT
DIP – DUCTILE IRON PIPE
PVC – POLYVINYL CHLORIDE PIPE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
MON – MONUMENT
RCP – REINFORCED CONCRETE PIPE
HDPE – HIGH DENSITY POLYETHYLENE PIPE
EL. – ELEVATION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS–OF–WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT–OF–WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

SURVEY REPORT:

1. THIS IS A BOUNDARY SURVEY, PREPARED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF THE STANDARDS OF PRACTICE SET FORTH IN RULE 5J–17.051 THROUGH 5J–17.053, FLORIDA ADMINISTRATIVE CODE. THE FIELD WORK WAS COMPLETED ON SEPTEMBER 30, 2019.
2. THE SURVEY WAS BASED ON INSTRUCTIONS FROM CLIENT, AND ST. LUCIE COUNTY SURVEY DEPARTMENT INFORMATION.
3. BEARINGS ARE BASED ON S49°35'30"W (DEED) ALONG THE NORTH RIGHT–OF–WAY OF OKEECHOBEE ROAD.
4. THE LEGAL DESCRIPTION IS RECORDED IN OFFICIAL RECORD BOOK 3204 PAGE 743.
5. AREA = 6.796 ACRES, MORE OR LESS.
6. EASEMENTS, RESTRICTIONS, AND OTHER ITEMS OF RECORD SHOWN ARE PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO.756647, DATED JULY 8, 2019.

   NO SEARCH OF THE PUBLIC RECORDS HAS BEEN PERFORMED BY BROWN & PHILLIPS, INC.

   THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ST. LUCIE COUNTY.
7. ALL DISTANCES ARE MEASURED UNLESS NOTED OTHERWISE.
8. THE PROPERTY WAS VACANT AS OF THE DATE OF SURVEY. THE PROPOSED USE IS FOR SITE PLANNING.
9. ALL FIELD–MEASURED CONTROL MEASUREMENTS EXCEEDED AN ACCURACY OF 1:7,500.
10. THE CONTRACTED PURPOSE OF THIS SURVEY IS FOR SITE PLANNING THIS SURVEY IS NOT VALID FOR ANY OTHER USE.
11. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
12. THIS SURVEY WAS PREPARED FOR THE PARTIES LISTED BELOW AND IS NOT ASSIGNABLE:
    –ARROW INVESTMENT GROUP, LLC
    –LIGHTHOUSE GLOBAL INVESTMENTS, INC.
    –OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
13. THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' (SHEET 2) AND 1"=50' (SHEETS 3–5), ON 24"x 36" SHEETS.
14. SOME TOPOGRAPHIC FEATURES MAY BE EXAGGERATED IN SCALE FOR CLARITY. THE CENTER OF THE SYMBOL OF SUCH FEATURES IS THE CORRECT LOCATION.
15. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED AS PART OF THIS SURVEY.
16. ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988, AND ARE REFERENCED TO ST. LUCIE COUNTY BENCHMARK "VIR 3–10", ELEVATION=17.47.
17. +10.0 DENOTES SPOT ELEVATION, REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.
18. © COPYRIGHT 2019 BY BROWN & PHILLIPS, INC. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND STAMP, OR A DIGITALLY VERIFIED ELECTRONIC SIGNATURE AND SEAL, OF A FLORIDA LICENSED SURVEYOR AND MAPPER EMPLOYED BY BROWN & PHILLIPS, INC.

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988, 615–3991 FAX

DATE	REVISIONS	#
12/19/19	ADD WETLANDS & TREE CHART	1
3/12/20	ADD'L WETLANDS DATA	2

DRAWN: JAO
CHECKED: JEP
F.B.ST. LUCIE CO.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: N.T.S.
DATE: SEPT 2019
SHT. 1 OF 6

JOHN E. PHILLIPS III
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA No. 4826
DATE: _____

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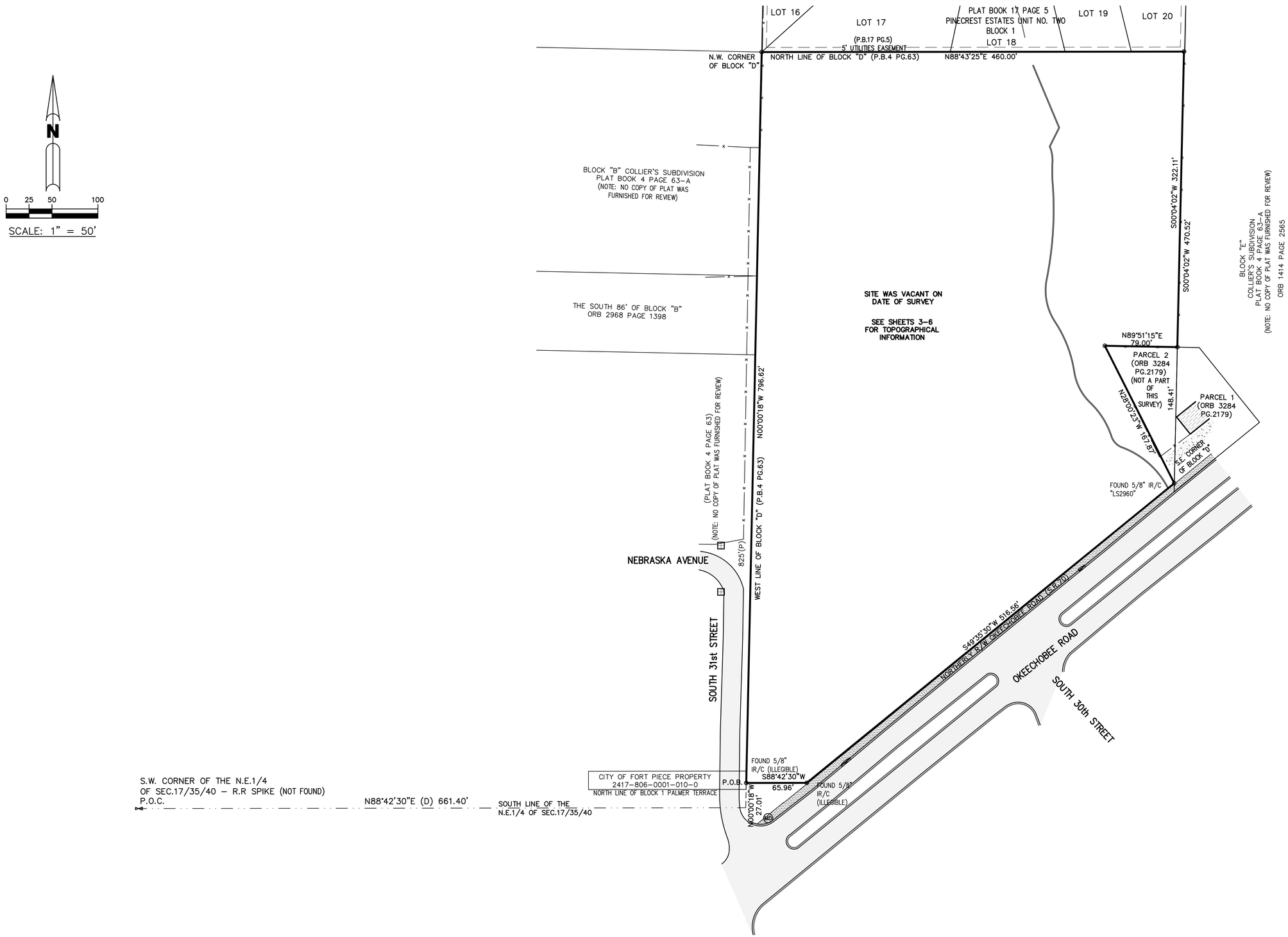

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=50'
DATE: SEPT. 2019
SHEET 2 OF 6

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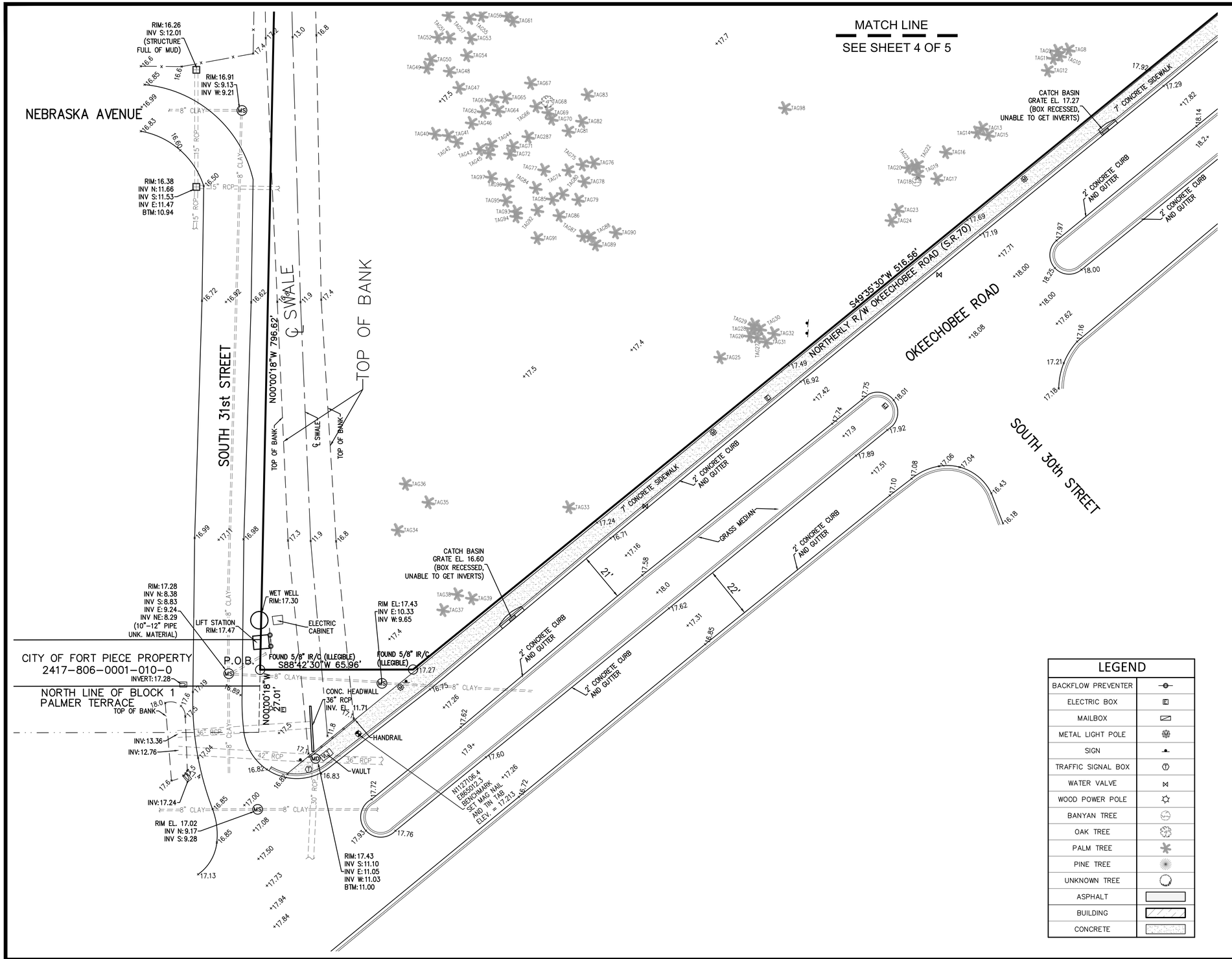

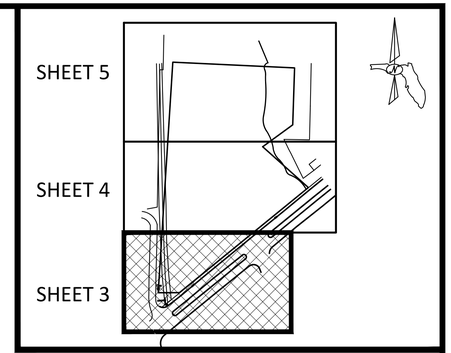

KEY MAP
NOT TO SCALE

N

0 10 20 40

SCALE: 1" = 20'

LEGEND	
BACKFLOW PREVENTER	
ELECTRIC BOX	
MAILBOX	
METAL LIGHT POLE	
SIGN	
TRAFFIC SIGNAL BOX	
WATER VALVE	
WOOD POWER POLE	
BANYAN TREE	
OAK TREE	
PALM TREE	
PINE TREE	
UNKNOWN TREE	
ASPHALT	
BUILDING	
CONCRETE	

ABBREVIATIONS:
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BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 3 OF 6

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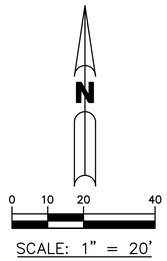

LEGEND			
BACKFLOW PREVENTER		BANYAN TREE	
ELECTRIC BOX		OAK TREE	
MAILBOX		PALM TREE	
METAL LIGHT POLE		PINE TREE	
SIGN		UNKNOWN TREE	
TRAFFIC SIGNAL BOX		ASPHALT	
WATER VALVE		BUILDING	
WOOD POWER POLE		CONCRETE	

ABBREVIATIONS:
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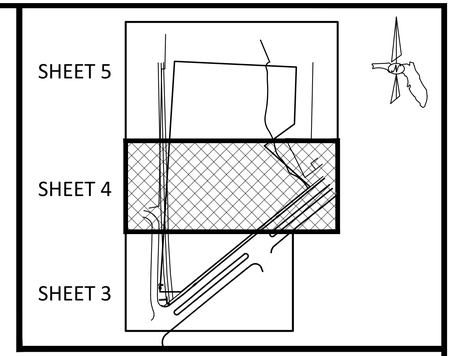
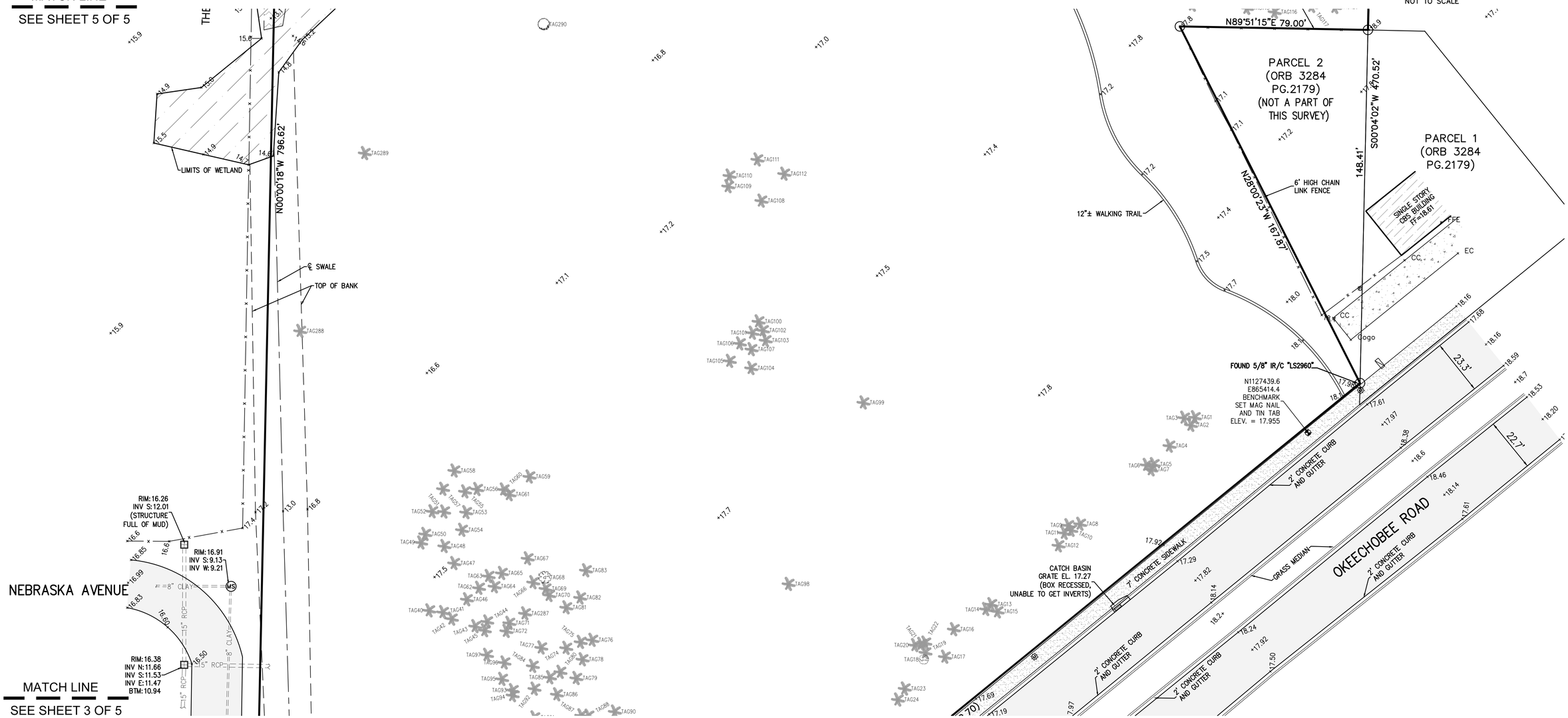


KEY MAP
NOT TO SCALE

MATCH LINE
SEE SHEET 5 OF 5



MATCH LINE
SEE SHEET 3 OF 5

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 4 OF 6

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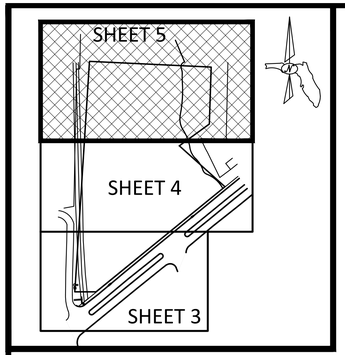

KEY MAP
NOT TO SCALE

LOTS VACANT ON DATE OF SURVEY

LOTS VACANT ON DATE OF SURVEY

℄ WALKING TRAIL

N88°43'25"E 460.00'

N00°00'18"W 796.62'

CHAINLINK FENCE

TOP OF BANK

TOP OF WATER
EL=14.6 ON 11/27/19

TOP OF BANK

EDGE OF WATER

EDGE OF WATER

LIMITS OF WETLAND

CHAINLINK FENCE

WETLAND
AREA=0.186ACRES
(WITHIN PROPOERTY)

TOP OF WATER
EL=13.7 ON 11/27/19

12"± WALKING TRAIL

6' HIGH CHAIN LINK FENCE

S00°04'02"W 322.11'

S00°04'02"W 470.52'

6' HIGH CHAIN LINK FENCE

N89°51'15"E 79.00'

PARCEL 2

MATCH LINE
SEE SHEET 4 OF 5

N

0 10 20 40

SCALE: 1" = 20'

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 5 OF 6

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TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
1	PALM	20	17'
2	PALM	16	17'
3	PALM	18	15'
4	PALM	14	22'
5	PALM	18	18'
6	PALM	16	14'
7	PALM	18	14'
8	PALM	20	18'
9	PALM	16	15'
10	PALM	24	15'
11	PALM	16	18'
12	PALM	16	19'
13	PALM	22	10'
14	PALM	24	15'
15	PALM	24	13'
16	PALM	16	14'
17	PALM	20	17'
18	BANYAN	48	
19	PALM	16	18'
20	PALM	14	18'
21	PALM	16	15'
22	PALM	16	10'
23	PALM	20	14'
24	PALM	18	15'
25	PALM	18	18'
26	PALM	16	15'
27	PALM	20	15'
28	PALM	16	17'
29	PALM	16	11'
30	PALM	18	14'
31	PALM	24	16'
32	PALM	16	7'
33	PALM	18	19'
34	PALM	16	17'
35	PALM	18	17'
36	PALM	18	18'
37	PALM	18	20'
38	PALM	16	21'
39	PALM	14	17'
40	PALM	20	18'
41	PALM	18	20'
42	PALM	16	19'
43	PALM	16	19'
44	PALM	16	21'
45	PALM	18	19'
46	PALM	20	22'
47	PALM	16	19'
48	PALM	16	18'
49	PALM	18	17'
50	PALM	16	20'
51	PALM	18	19'
52	PALM	10	18'
53	PALM	14	18'
54	PALM	18	18'
55	PALM	20	22'
56	PALM	14	19'
57	PALM	10	18'
58	PALM	14	19'
59	PALM	18	16'
60	PALM	16	16'
61	PALM	18	15'
62	PALM	16	23'
63	PALM	16	21'
64	PALM	20	18'
65	PALM	12	19'
66	PALM	18	21'
67	PALM	18	17'
68	OAKK	5	
69	PALM	20	18'
70	PALM	22	20'
71	PALM	20	20'
72	PALM	16	18'
74	PALM	14	18'
75	PALM	14	9'
76	PALM	24	19'
77	PALM	18	18'
78	PALM	18	17'
79	PALM	14	13'
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82	PALM	18	16'
83	PALM	16	15'
84	PALM	16	19'
85	PALM	16	20'
86	PALM	18	17'
87	PALM	16	20'
88	PALM	16	18'
89	PALM	16	16'
90	PALM	18	22'
91	PALM	18	22'
92	PALM	16	19'
93	PALM	18	21'
94	PALM	14	20'
95	PALM	16	20'
96	PALM	18	20'

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
97	PALM	18	20'
98	PALM	18	19'
99	PALM	16	16'
100	PALM	18	17'
101	PALM	16	17'
102	PALM	18	19'
103	PALM	16	18'
104	PALM	16	18'
105	PALM	16	18'
106	PALM	14	15'
107	PALM	10	8'
108	PALM	18	19'
109	PALM	16	35'
110	PALM	14	20'
111	PALM	16	20'
112	PALM	18	18'
113	OAK	6	
114	PALM	14	13'
115	PALM	22	18'
116	PALM	20	20'
117	PALM	10	7'
118	UNKNOWN	12	
119	OAK	38	
120	PALM	14	18'
121	OAK	18	
122	OAK	12	
123	PALM	18	21'
124	PALM	18	16'
125	PALM	16	26'
126	PALM	18	29'
127	OAK	24	
128	PALM	16	32'
129	UNKNOWN	10	
130	PINE	28	
131	PALM	16	24'
132	UNKNOWN	24	
133	OAK	10	
134	OAK	28	
135	PALM	18	30'
136	OAK	40	
137	PALM	18	18'
138	PINE	10	
139	UNKNOWN	8	
140	OAK	36	
141	PALM	16	20'
142	PALM	14	25'
143	PALM	16	25'
144	OAK	20	
145	PALM	14	26'
146	PALM	16	21'
147	PALM	18	23'
148	OAK	16	
149	UNKNOWN	18	
150	PALM	22	18'
151	PALM	14	7'
152	PALM	22	22'
153	PALM	16	20'
154	PALM	22	18'
155	PALM	18	17'
156	PALM	18	16'
157	PALM	16	13'
158	PALM	12	10'
159	OAK	10	
160	OAK	16	
161	PALM	12	7'
162	PALM	18	24'
163	PALM	16	21'
164	OAK	36	
165	UNKNOWN	14	
166	UNKNOWN	10	
167	UNKNOWN	8	
168	OAKK	12	
169	OAKK	22	
170	OAKK	18	
171	PALM	16	17'
172	PALM	18	13'
173	PALM	12	6'
174	UNKNOWN	16	
175	OAKK	16	
176	UNKNOWN	20	
177	PALM	18	28'
178	PALM	8	8'
179	PALM	20	22'
180	PALM	12	6'
181	PALM	18	18'
182	PALM	18	16'
183	PALM	18	17'
184	OAKK	26	
185	PALM	16	28'
186	PALM	14	23'
187	PALM	16	14'
188	PALM	16	18'
189	PALM	16	20'
190	UNKNOWN	24	
191	PALM	16	14'
192	OAKK	36	
193	UNKNOWN	10	

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
194	OAK	36	
195	PALM	18	26'
196	OAK	18	
197	UNKNOWN	8	
198	UNKNOWN	8	
199	UNKNOWN	8	
200	OAK	10	
201	OAK	6	
202	OAK	6	
203	OAK	4	
204	OAK	6	
205	OAK	8	
206	OAK	8	
207	OAK	8	
208	OAK	6	
209	OAK	6	
210	UNKNOWN	10	
211	PALM	16	18'
212	PALM	18	18'
213	PALM	14	
214	OAK	20	
215	OAK	26	
216	OAK	30	
217	UNKNOWN	10	
218	OAK	14	
219	PALM	20	19'
220	OAK	30	
221	UNKNOWN	8	
222	UNKNOWN	12	
223	UNKNOWN	8	
224	PALM	18	20'
225	UNKNOWN	6	
226	UNKNOWN	6	
227	UNKNOWN	4	
228	UNKNOWN	6	
229	OAK	6	
230	UNKNOWN	12	
231	PALM	22	18'
232	UNKNOWN	30	
233	PALM	22	17'
234	OAK	12	
235	OAK	10	
236	UNKNOWN	8	
237	UNKNOWN	6	
238	UNKNOWN	6	
239	OAK	16	
240	OAK	10	
241	UNKNOWN	14	
242	UNKNOWN	8	
243	UNKNOWN	8	
244	UNKNOWN	10	
245	PINE	10	
246	PINE	10	
247	OAK	10	
248	OAK	10	
249	PALM	18	23'
250	PALM	18	20'
251	PINE	10	
252	PALM	16	22'
253	OAK	26	
254	OAK	16	
255	OAK	14	
256	OAK	12	
257	OAK	14	
258	PALM	22	28'
259	UNKNOWN	8	
260	PALM	12	6'
261	PALM	14	10'
262	UNKNOWN	10	
263	PINE	14	
264	OAK	18	
265	PALM	16	21'
266	PALM	18	20'
267	PALM	20	18'
268	PALM	20	20'
269	OAK	20	
270	OAK	10	
271	PALM	16	13'
272	OAK	36	
273	PALM	16	14'
274	UNKNOWN	6	
275	UNKNOWN	6	
276	PALM	16	25'
277	PALM	12	11'
278	PALM	18	18'
279	OAK	18	
280	OAK	18	
281	PALM	18	22'
282	PALM	18	18'
283	PALM	16	10'
284	PINE	16	
285	PINE	12	
286	PINE	10	
287	PALM	18	19'
288	PALM	16	18'
289	PALM	18	19'
290	UNKNOWN	30	

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUNKNOWNHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAKD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

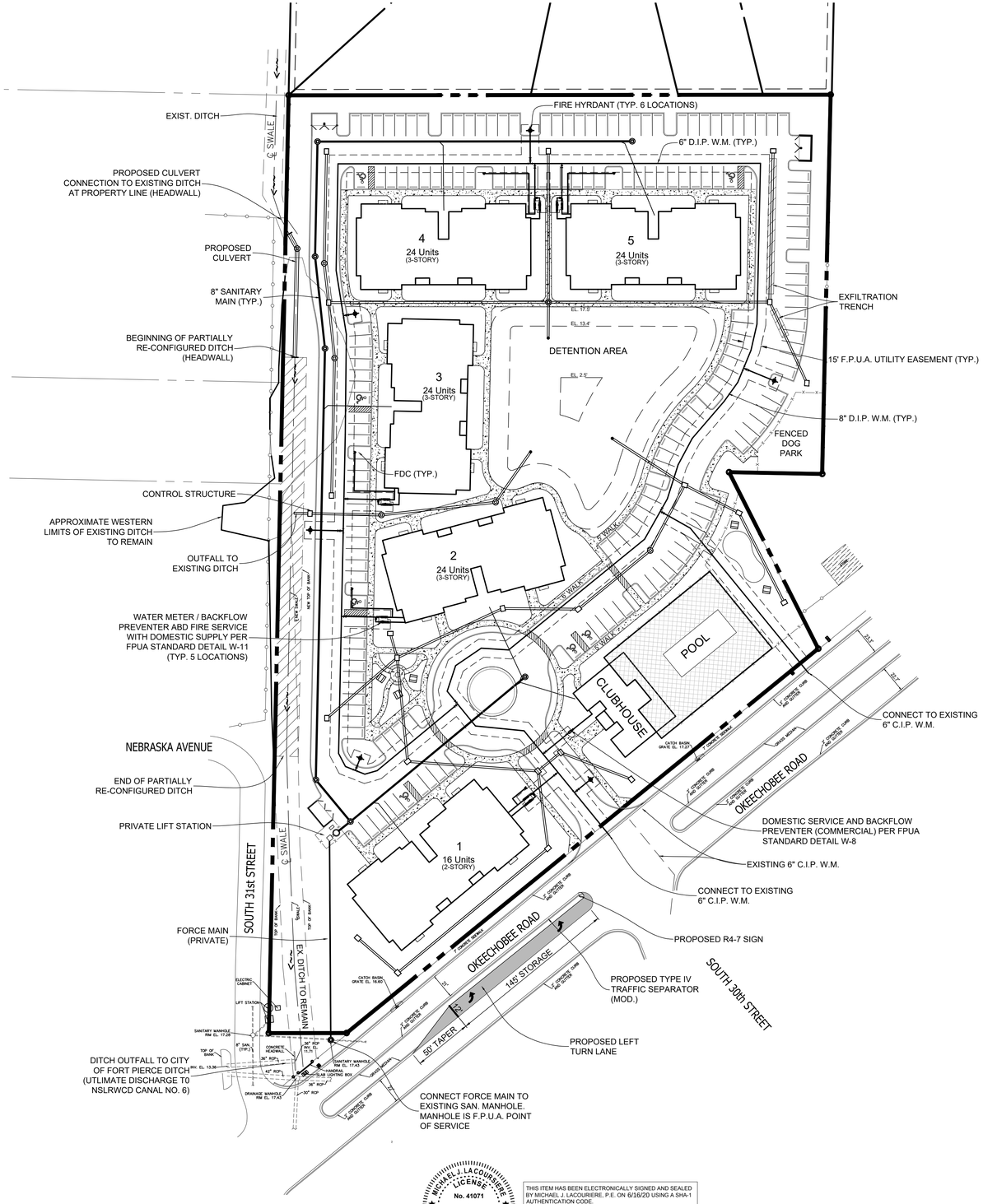
SKETCH OF
BOUNDARY SURVEY

FORT PINEERCE NORTH
PROPERTY
OKEECHOBEE ROAKD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 6 OF 6

C:\Projects\Brown & Phillips\2019\19-098\19-098 Fort Pierce North Property Boundary Survey.dwg, 3/12/2020 10:35:47 PM, AutoCAD PDF (Smallest File).pc3



GRAPHIC SCALE

0 25 50 100 150

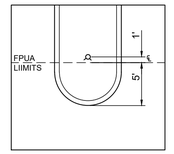
(IN FEET)
1 INCH = 50 FT.

LEGEND

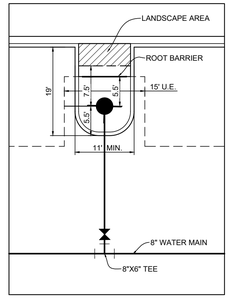
- DRAINAGE PIPE AND INLET (FINAL PIPE SIZES TO BE DETERMINED)
- SANITARY MAIN (8" PVC) AND MANHOLE (SANITARY SYSTEM TO BE PRIVATE)
- WATER MAIN (8" C-900 / D.I.P.)
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT
- RE-CONFIGURED DITCH

NOTES:

1. MINIMUM FINISHED FLOOR ELEVATION TO BE SET AT OR ABOVE 100 - YEAR, 3 - DAY STAGE (ZERO DISCHARGE)
2. MINIMUM PERIMETER ELEVATION TO BE SET AT OR ABOVE 25 - YEAR, 3- DAY STAGE.
3. RESIDENTIAL BUILDINGS TO BE FIRE SPRINKLED. FIRE DEPARTMENT CONNECTIONS TO BE LOCATED 100' MAXIMUM FROM A FIRE HYDRANT.
4. SANITARY SYSTEM TO BE PRIVATE.
5. WATER DISTRIBUTION SYSTEM TO BE PUBLIC, FORT PIERCE UTILITY AUTHORITY.
6. THIS DRAWING UTILIZES BASE SITE PLAN AND SURVEY INFORMATION PREPARED BY LITTERICK LANDSCAPE ARCHITECTURE AND BROWN AND PHILIPS. INC. USED WITH PERMISSION.

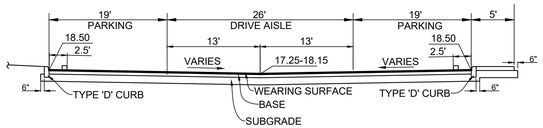


FDC NEAR UTILITY EASEMENT
NOT TO SCALE

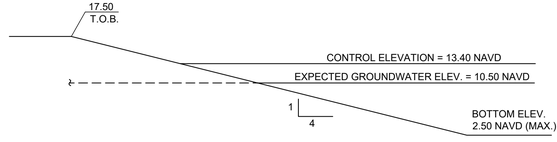


FIRE HYDRANT SHALL HAVE 5' CLEAR ON ALL SIDES
LANDSCAPE MATERIAL SHALL BE LIMITED TO SOD WITHIN 7.5' OF FIRE HYDRANT

HYDRANT LOCATION DETAIL
NOT TO SCALE



TYPICAL PARKING / DRIVE SECTION



DETENTION AREA BANK SECTION

100 YR - 3 D RAINFALL	12.23 INCHES
100 YR - 3 D FLOOD ELEV.	18.58' NAVD
MINIMUM FINISHED FLOOR	19.50' NAVD
25 YR - 3 D RAINFALL	9.5 INCHES
25 YR - 3 D FLOOD ELEV	17.76' NAVD
MINIMUM PERIMETER ELEVATION	17.90' NAVD
10 YR - 1 D RAINFALL	6.0 INCHES
10 YR - 1 D FLOOD ELEV	16.16 NAVD
MINIMUM ROADWAY ELEVATION	17.25' NAVD

CONCEPTUAL SURFACE WATER MANAGEMENT DATA

MICHAEL J. LACOURIERE
LICENSE
No. 41071
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

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MICHAEL B. SCHORAH & ASSOCIATES, INC.
ENGINEERS ◆ SURVEYORS ◆ DEVELOPMENT CONSULTANTS
TEL. (561) 968.0080 LB# 2438
FAX. (561) 642-9726
www.schorah.com
EB# 2438
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FLORIDA 33406

REVISIONS

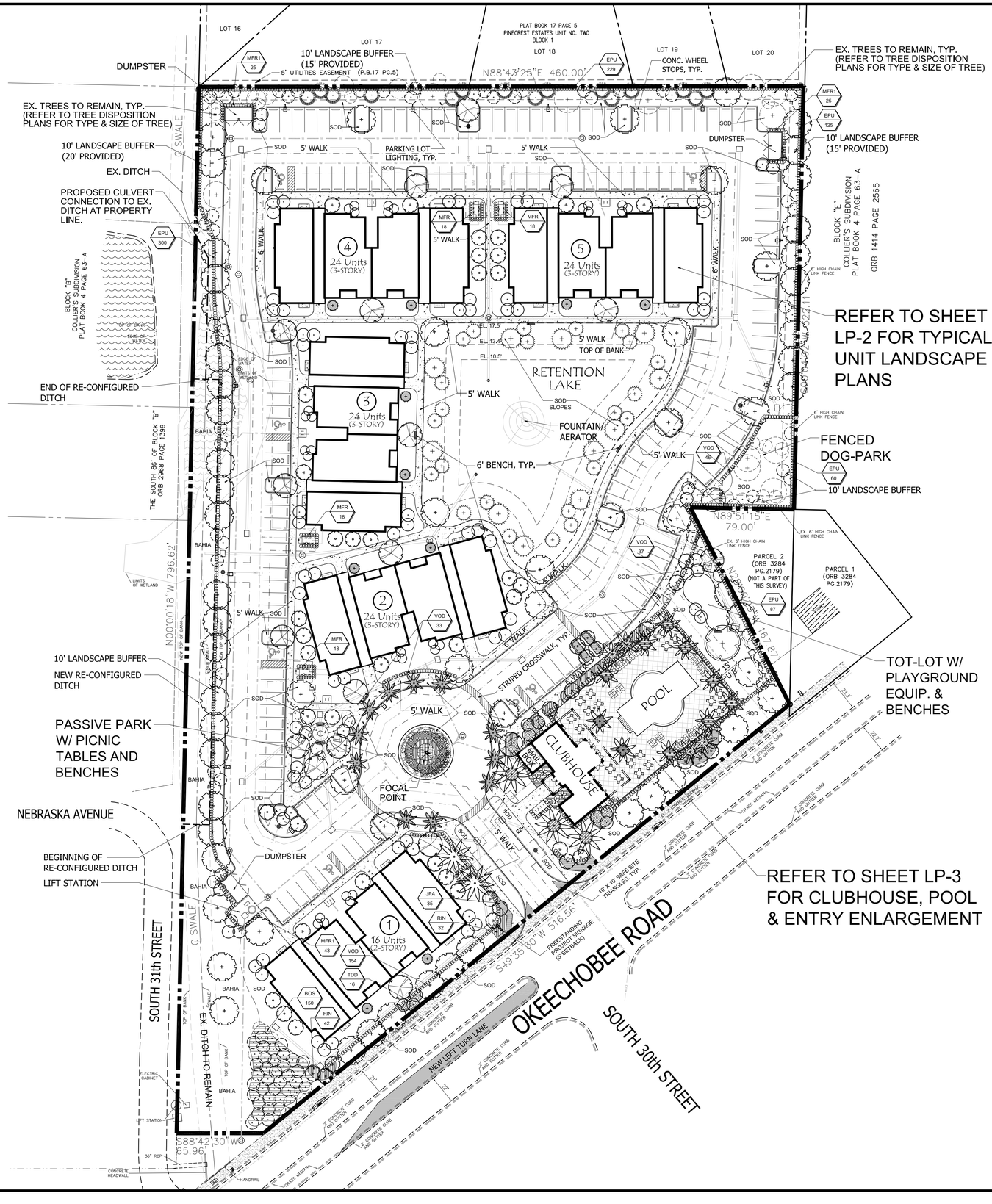
DRAWN/CHECKED: AMG/MJL
SCALE: 1" = 50'
DATE: MARCH 2020

MICHAEL J. LACOURIERE, P.E. FLORIDA LICENSE NO. 41071 FOR MICHAEL B. SCHORAH AND ASSOCIATES, INC.
DATE:

PROJECT: ARIA APARTMENTS
DESCRIPTION: CONCEPTUAL ENGINEERING PLAN

JOB NO. 1769
SHEET NO. 1
OF 1C

Path\Name : P:\1769 FORT PIERCE NORTH\CIVIL\CAD\1769 SITE.dwg
Date\Time : Tue, 16 Jun 2020 - 8:51am



EXISTING TREE LEGEND

	SYMBOL	QUANTITY
EXISTING PALM TO REMAIN	ESP	20
RELOCATED PALM	RSP	155
EXISTING PINE TO REMAIN	EPE	5
EXISTING OAK TO REMAIN	EQL	11

PROPOSED TREE LEGEND

	SYMBOL	QUANTITY
SPECIMEN LIVE OAK, RANCH STYLE *(QUERCUS VIRGINIANA)*	QV1	1
ROYAL POINCIANA *(DELONIX REGIA)*	DR	1
LIVE OAK *(QUERCUS VIRGINIANA)*	QV	67
SYLVESTER PALM *(PHOENIX SYLVESTRIS)*	PS	5
YELLOW TABEBUIA *(TABEBUIA CARAIBA)*	TC	19
CRAPE MYRTLE (MULTI-TRUNK) *(LAGERSTROEMIA INDICA 'MUSKOGEE')*	LM	25
CRAPE MYRTLE (SINGLE TRUNK) *(LAGERSTROEMIA INDICA 'NATCHEZ')*	LI	33
CABBAGE PALM *(SABAL PALMETTO)*	SP	91
WASHINGTON PALM *(WASHINGTONIA ROBUSTA)*	WR	11
COCONUT PALM *(COCOS NUCIFERA)*	CN	14
JAPANESE BLUEBERRY *(ELAEOCARPUS DECIPIENS)*	ED	10
BALD CYPRESS (SMALL) *(TAXODIUM DISTICHUM)*	TD	23
BALD CYPRESS (LARGE) *(TAXODIUM DISTICHUM)*	TD1	11
CHRISTMAS PALM (TRIPLE) *(ADONIDIA MERRILLII)*	AM3	10
S. FLORIDA SLASH PINE *(PINUS ELLIOTTII 'DENSA')*	PE	15

LANDSCAPE DATA

SITE AREA:	296,012.97 S.F. (6.796 ACRES)
VEHICULAR USE AREA:	82,965.43 S.F. (28.0%)
INTERIOR LANDSCAPE AREA REQUIRED:	5,531 S.F. (1 S.F. PER 15 S.F. OF VEH, USE AREA)
INTERIOR LANDSCAPE AREA PROVIDED:	8,284.25 S.F.
INTERIOR TREES REQUIRED:	56 TREES (1 TREE PER 100 S.F. OF REQ'D. INT. LANDSCAPE AREA)
INTERIOR TREES PROVIDED:	166 TREES (110 ADDITIONAL TREES)

PERIMETER LANDSCAPING REQUIREMENTS

BUFFER (SIDE)	LENGTH (L.F.)	REQ'D. WIDTH	PROVIDED WIDTH	REQ'D. AREA (S.F.)	TREES REQ'D.	TREES PROVIDED
NORTH	460'	10'	15'	4,600	*23	33 TREES
SOUTH	582.52'	10'	25'	5,825.2	**20	25 TREES
EAST	568.98'	10'	10-15'	5,689.8	*29	33 TREES
WEST	796.62'	10'	10-20'	7,966.2	*40	46 TREES
				TOTALS:	112	***137 TREES

* REQUIRES 1 TREE PER 200 S.F. OF BUFFER
** REQUIRES 1 TREE PER 300 S.F. OF BUFFER
*** 25 ADDITIONAL TREES

REFER TO SHEET LP-4 FOR PLANT LIST

Landscape Plan

0 20' 40' 80' 120' 160'

Scale: 1" = 40'

NORTH

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LANDSCAPE NOTES

1. ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER AS DEFINED BY THE DIVISION OF PLANT INDUSTRY "GRADES AND STANDARDS" LATEST EDITION.
2. ALL LANDSCAPE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FT. PIERCE CODE.
3. THE LANDSCAPE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS CHANGES WITHOUT THE AUTHORIZATION OF THE CITY OF FT. PIERCE, THE OWNER AND THE LANDSCAPE ARCHITECT.
4. THE LANDSCAPE CONTRACTOR SHALL REVIEW THE PROJECT DRAINAGE AND UTILITY PLANS PRIOR TO CONSTRUCTION AND AVOID ALL CONFLICTS. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS.
6. ALL TREES SHALL BE LOCATED WITHIN A MULCH PLANTING BED WITH A MINIMUM OF TWO (2) FEET OF CLEARANCE TO THE EDGE OF THE BED.
7. ALL SOD SHALL BE STENOTAPHRUM SECONDATUM 'FLORITAM' (ST. AUGUSTINE SOD), UNLESS OTHERWISE NOTED.
8. ALL VEGETATION SHALL BE SELECTED AND POSITIONED SO THAT IT DOES NOT PRESENT OBSTRUCTIONS TO THE LINE OF SIGHT AT INTERSECTIONS PURSUANT TO FLORIDA DEPARTMENT OF TRANSPORTATION SIGHT LINE GUIDELINES.
9. CLEAR VISIBILITY SHALL BE MAINTAINED BETWEEN 30" AND 8' WITHIN SIGHT VISIBILITY TRIANGLES. 10' X 10' SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT THE INTERSECTIONS WITH THE PUBLIC RIGHT OF WAY. IN ADDITION, ALL LANDSCAPING SHALL CONFORM TO THE REQUIREMENTS OF FDOT INDEX 546.
10. ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS, EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN NATIVE SOILS AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.
11. ALL PROPOSED LANDSCAPE AREAS SHALL RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSING DEVICE ACCORDING TO LOCAL AND STATE CODES. IRRIGATION WATER SHALL BE PULLED FROM A WELL SOURCE AND CITY WATER WILL BE USED AROUND BUILDING.
12. ALL ABOVE GROUND UTILITIES SHALL BE SCREENED FROM VIEW ON THREE SIDES WITH AN APPROPRIATE HEDGE MATERIAL. HEIGHT OF PLANT MATERIAL AT TIME OF INSTALLATION SHALL BE AT LEAST AS TALL AS THE UTILITY BEING SCREENED AND SHALL BE SPACED APPROPRIATELY IN ORDER TO PROVIDE COMPLETE SCREENING OF UTILITY WITHIN ONE YEAR OF INSTALLATION.
13. ALL TREES NOT LOCATED WITHIN A LANDSCAPE BED SHALL RECEIVE A 4-5' DIA. MULCH RING.
14. ALL EXOTIC AND NUISANCE VEGETATION SHALL BE REMOVED FROM SUBJECT PROPERTY PRIOR TO ANY CERTIFICATE OF OCCUPANCY.
15. TREES ARE TO BE INSTALLED WITH A 10' SEPARATION FROM FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A 10' SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM. HOWEVER IN NO CASE SHALL A TREE ENCROACH CLOSER THAT 5' WITH A ROOT BARRIER PRESENT. ONLY SOD CAN BE INSTALLED WITHIN 7.5' OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHALL.
16. ALL PLANT MATERIAL SHALL BE INSTALLED AT THE HEIGHT, SPREAD AND DBH SHOWN ON THE PLANT LIST, CONTAINER SIZES ARE GIVEN AS A SUGGESTION ONLY.

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

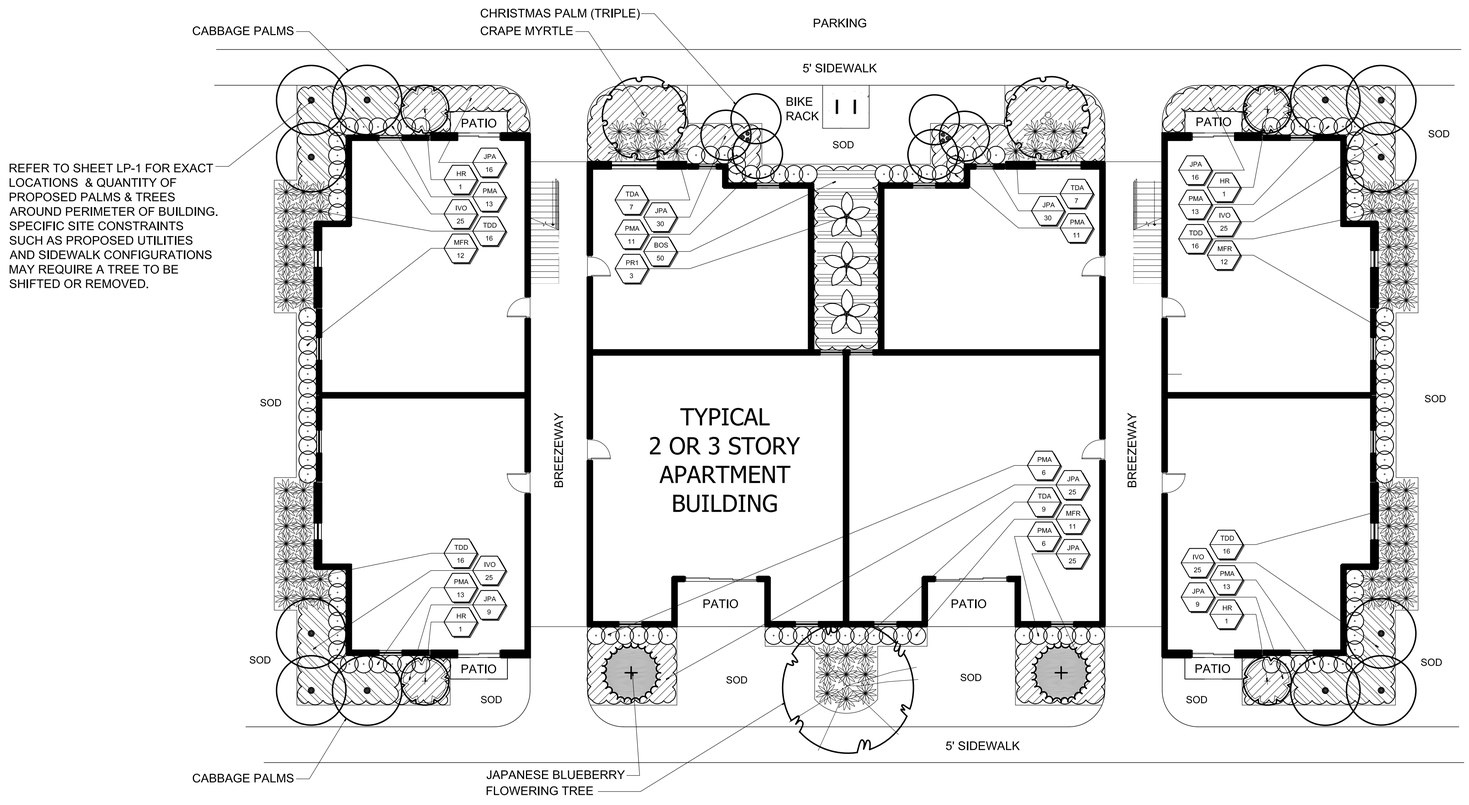
Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

LP-1

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045



TYPICAL UNIT PLANT LIST (5 BUILDINGS)

QUANTITIES ARE FOR EACH BUILDING

TREES

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
M	PR1	3	PHOENIX ROEBELENII	PYGMY DATE PALM (SINGLE)	7' O.A.	7'	FULL & THICK, SINGLE TRUNK SPECIMEN, MATCHED
M	HR	4	HIBISCUS ROSA-SINENSIS	PINK HIBISCUS STD.	6-7' O.A. STD.	3-4'	FULL & THICK, SINGLE TRUNK STD.

SHRUBS & GROUNDCOVERS

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	64	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
* V	TDA	23	TRIPSACUM DACTYLOIDES	FAKAHATCHEE GRASS	#3, 24" O.A.	48" O.C.	FULL & THICK
* V	BOS	50	NEPHROLEPIS EXALTATA	BOSTON FERN	#3, 16" O.A.	24" O.C.	FULL & THICK
M	PMA	86	PODOCARPUS MACROPHYLLUS	PODOCARPUS	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR	35	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	IVO	100	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" O.A.	24" O.C.	FULL & THICK
M	JPA	160	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

SOD: ST. AUGUSTINE 'FLORITAM'
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.

Typical Unit Landscape Plan

0 5' 10' 20' 30' 40'
NORTH
Scale: 1" = 10'

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

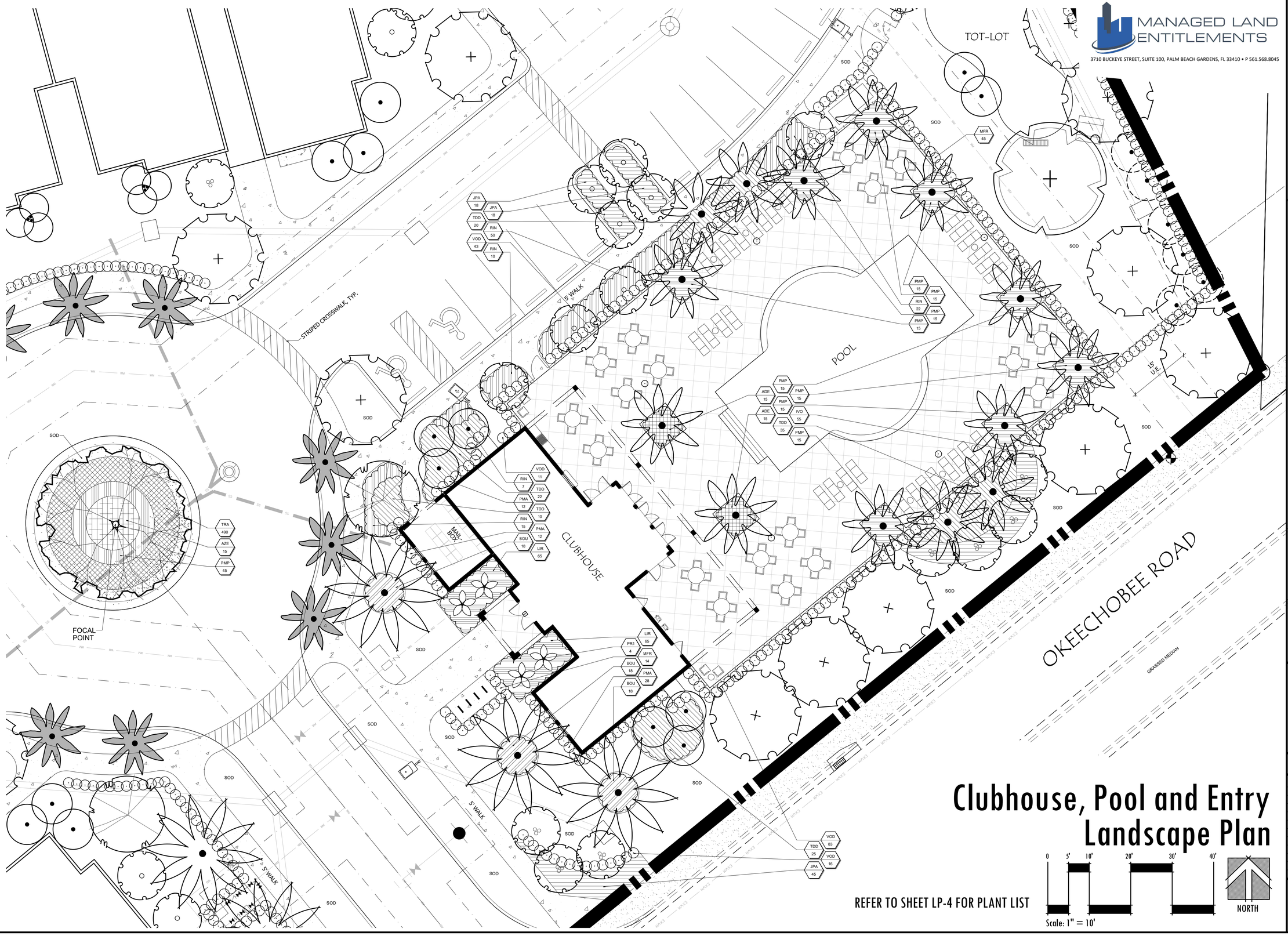
Ft. Pierce, Florida

Landscape Architect of Record
REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA
Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 10'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
LP-2


TOT-LOT
SOD
MFR 45
JPA 18
JPA 18
TDD 20
RIN 50
VOD 43
RIN 10
5' WALK
STRIPED CROSSWALK, TYP.
PMP 15
PMP 15
RIN 22
PMP 15
PMP 15
POOL
15' SET
PMP 15
ADE 15
PMP 15
PMP 15
ADE 15
IVO 55
TDD 35
PMP 15
SOD
SOD
SOD

PLANT LIST (LP-1 & LP-3)

NOTE: DOES NOT INCLUDE PLANTS SPECIFIED ON SHEET LP-2, TYPICAL UNIT LANDSCAPE PLAN

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
* V	RSP	155	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		RELOCATED CABBAGE PALM
* V	ESP	20	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		EXISTING CABBAGE PALM TO REMAIN
* V	EPE	5	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	SEE DISPOSITION CHART		EXISTING SLASH PINE TO REMAIN
* V	EQL	11	QUERCUS LAURIFOLIA	LAUREL OAK	SEE DISPOSITION CHART		EXISTING LAUREL OAK TO REMAIN
* V	PE	15	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
* V	SP	91	SABAL PALMETTO	CABBAGE PALM	12-22' C.T.	N/A	SLICK TRUNK, HURRICANE CUT, STAGGER HEIGHTS
M	DR	1	DELONIX REGIA	ROYAL POINCIANA	14-16' O.A., 3.5" DBH	7'	FULL & THICK, SINGLE TRUNK, 3" CAL.
* V	TD	23	TAXODIUM DISTICHUM	BALD CYPRESS	8' O.A., 1.5" DBH	4'	FULL & THICK, SINGLE TRUNK
* V	TD1	11	TAXODIUM DISTICHUM	BALD CYPRESS	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
M	WR	11	WASHINGTONIA ROBUSTA	WASHINGTON PALM	20' O.A.	N/A	FULL & THICK, MATCHED
* V	QV	67	QUESRCUS VIRGINIANA	LIVE OAK	14' O.A., 3" DBH	6'	FULL & THICK
* V	QV1	1	QUESRCUS VIRGINIANA	RANCH LIVE OAK	20' O.A., 8" DBH	20'	FULL & THICK, RANCH STYLE, MULTI-TRUNK SPECIMEN
V	PS	5	PHOENIX SYLVESTRIS	SYLVESTER PALM	12' WD	-	FULL & THICK, MATCHED SPECIMENS
M	ED	10	ELAEOCARPUS DECIPIENS	JAPANESE BLUEBERRY	14' O.A., 3" DBH	5'	FULL & THICK TO GROUND
M	LM	25	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE (LAVENDER)	14' O.A.	6'	FULL & THICK, MULTI-TRUNK, 5' C.T.
M	LI	33	LAGERSTROEMIA INDICA 'NATCHEZ'	CRAPE MYRTLE (WHITE)	12-14' O.A.	5'	FULL & THICK, SINGLE TRUNK STD., 2.5" DBH
M	TC	19	TABEBUIA CARAIBA	YELLOW TABEBUIA	14' O.A., 3" DBH	5'	FULL & THICK
M	AM3	10	ADONIDIA MERRILLII	CHRISTMAS PALM (TRIPLE)	14' O.A., TRIPLE	-	FULL & THICK, TRIPLE TRUNK
M	CN	14	COCOS NUCIFERA	COCONUT PALM	12' WD.	-	FULL & THICK, MATCHED HEIGHTS
M	PR1	4	PHOENIX ROEBELENII	PYGMY DATE PALM	7' O.A., SINGLE	7'	FULL & THICK, MATCHED HEIGHTS, SINGLE TRUNK

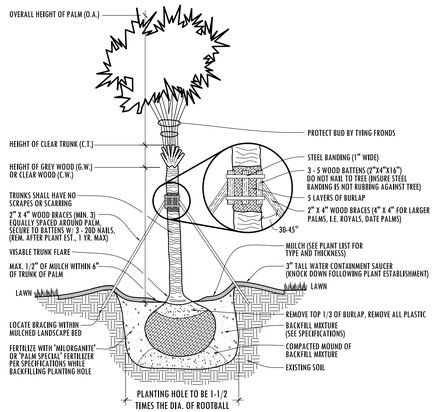
	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	128	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
V	PMA	52	PODOCARPUS MACROPHYLLUS	JAPANESE YEW	#7, 30" O.A.	24" O.C.	FULL & THICK
M	PMP	165	PODOCARPUS MACROPHYLLUS 'PRINGLES'	DWF. PODOCARPUS	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	IVO	55	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	MFR	131	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR1	93	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#7, 36" O.A.	24" O.C.	FULL & THICK
M	VOD	423	VIBURNUM ODORITISSIMUM	SWEET VIBURNUM	#3, 24" O.A.	24" O.C.	FULL & THICK
M	LIR	130	LIRIOPE MUSCARI	GREEN LIRIOPE	#3, 14" X 14"	18" O.C.	FULL & THICK
M	EPU	801	ELEAGNUS PUNGENS	SILVERTHORN	#3, 24" O.A.	24" O.C.	FULL & THICK
M	RIN	178	RAPHIOLEPIS INDICA	INDIAN HAWTHORN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	ADE	30	ASPARAGUS DENSIFLORUS 'MYERII'	FOXTAIL FERN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	JPA	116	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK
* V	BOS	150	NEPHROLEPIS BISSERATA	BOSTON FERN	#3, 16" O.A.	36-48" O.C.	FULL & THICK
V	BOU	54	BOUGAINVILLEA 'HELEN JOHNSON'	DWF. BUGAINVILLEA	#3, 16" X 16"	24" O.C.	FULL & THICK
M	AZE	15	ALPINIA ZERUMBET	VAR. SHELL GINGER	#3, 20" O.A.	36" O.C.	FULL & THICK
M	TRA	490	TRACHELOSPERMUM ASIATICUM 'MINIMA'	DWF. JASMINE	#1, 12" SPD.	12" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

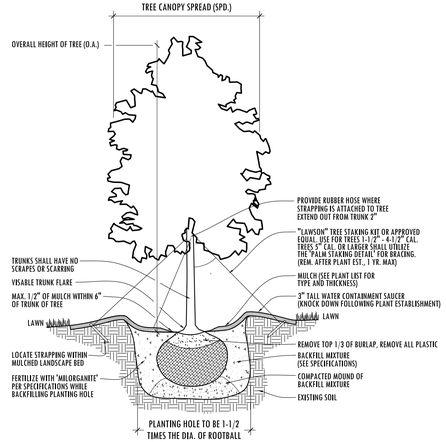
SOD: ST. AUGUSTINE 'FLORITAM' (BAHIA WHERE NOTED)
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.
IRRIGATION WATER SOURCE: WELL & PUMP

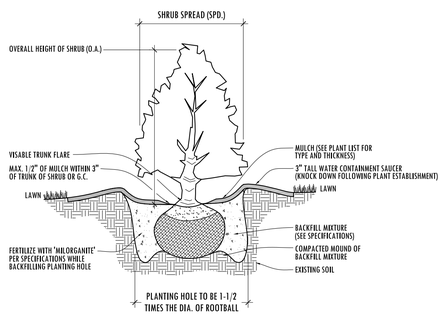
PLANTING DETAILS



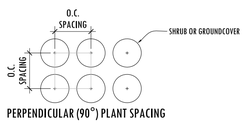
PALM PLANTING DETAIL



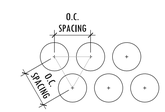
TREE PLANTING DETAIL



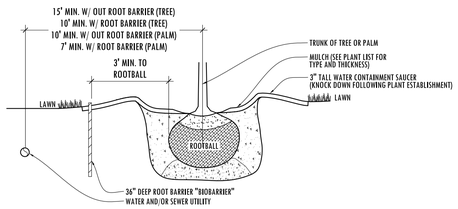
SHRUB & GROUNDCOVER PLANTING DETAIL



PERPENDICULAR (90°) PLANT SPACING



TRIANGULAR PLANT SPACING (RECOMMENDED)



ROOT BARRIER DETAIL

PLANTING SPECIFICATIONS

1. SCOPE OF WORK

LANDSCAPE CONTRACT WORK INCLUDES, BUT IS NOT LIMITED TO, SOIL PREPARATION, FINE OR FINISH GRADING, FURNISHING AND INSTALLING PLANT MATERIAL, WATERING, STAKING, GUYING AND MULCHING.

ALL LABOR AND MATERIAL FOR SOIL AMENDMENTS AND FERTILIZER THAT IS REQUIRED TO INSURE THE SUCCESSFUL ESTABLISHMENT AND SURVIVAL OF THE PROPOSED VEGETATION, AS WELL AS ALL THE COST FOR THE REMOVAL OF UNSUITABLE OR EXCESS BACKFILL MATERIAL, SHALL BE INCLUDED IN THE CONTRACTOR'S BID TO PERFORM THE WORK REPRESENTED IN THIS PLAN SET.

2. QUALITY ASSURANCE

LANDSCAPE CONTRACTOR MUST BE REGULARLY ENGAGED IN THE INSTALLATION OF LIVING PLANT MATERIAL. LABOR CREWS SHALL BE CONTROLLED AND DIRECTED BY A LANDSCAPE FOREMAN WELL VERSED IN LANDSCAPE INSTALLATION, PLANT MATERIALS, READING PLANS AND COORDINATION BETWEEN THE JOB AND NURSERY.

THE LANDSCAPE CONTRACTOR AND IRRIGATION CONTRACTOR SHALL REVIEW LAYOUT AND SCHEDULING PRIOR TO INSTALLATION OF MATERIAL. MINOR ADJUSTMENT TO IRRIGATION DESIGN MAY BE MADE IN RESPONSE TO THE NEEDS OF SPECIFIC PLANT MATERIAL. THE LANDSCAPE ARCHITECT MUST BE NOTIFIED OF SUCH CHANGES.

3. MATERIALS

PLANT SIZE AND QUALITY
PLANT SPECIES AND SIZES SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS, NOMENCLATURE SHALL CONFORM TO STANDARD PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I & II, LATEST EDITION PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE FLORIDA GRADE NUMBER 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. TIGHTLY KNIT PLANT, SO TRAINED OR FAVORED IN ITS DEVELOPMENT THAT FIRST APPEARANCE IS UNQUESTIONABLE AND IT IS OUTSTANDINGLY SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND FREE OF DISEASE AND INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES AND PALMS FOR PLANTING ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY AND FLORIDA NUMBER 1. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANTS SHALL BE FREE OF WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS OF GOOD QUALITY AND BE IN A HEALTHY GROWING CONDITION.

CONTAINER GROWN PLANTS SHALL HAVE A DEVELOPED ROOT STRUCTURE SO THAT THE ROOT MASS STAYS IN TACT WHEN REMOVED FROM CONTAINER. IN NO CASE SHALL THE PLANT CONTAIN CIRCLING ROOTS NOR BE ROOT-BOUND.

QUANTITIES
ALL QUANTITIES INDICATED ON THE PLANT LIST ARE INTENDED AS A GUIDE FOR THE BIDDERS AND DOES NOT RELIEVE THE BIDDER OF HIS RESPONSIBILITY TO DO A COMPREHENSIVE PLANT TAKE OFF. SHALL A DISCREPANCY OCCUR BETWEEN THE BIDDER'S TAKE OFF AN THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT IS TO BE NOTIFIED FOR CLARIFICATION PRIOR TO THE SUBMISSION OF THE BID.

MULCH
MULCH SHALL BE A SHREDDED VARIETY AS SPECIFIED IN THE PLANT LIST. ALL MULCH IS TO BE APPLIED TO A DEPTH OF 3" EXCEPT FOR THOSE SPECIFIC SITUATIONS SHOWN BELOW IN SECTION 4 AND IN PLANTING DETAILS.

FERTILIZER
FERTILIZER IN BACKFILL MIXTURE FOR ALL PLANTS SHALL CONSIST OF 'MILORGANITE' ACTIVATED SLUDGE MIXED WITH THE BACKFILL AT A RATE OF NOT LESS THAN 50 LBS. PER CUBIC YARD.

FERTILIZER FOR TREES AND SHRUBS MAY BE TABLET FORM OR GRANULAR. GRANULAR FERTILIZER SHALL BE UNIFORM IN COMPOSITION, DRY AND FREE-FLOWING. THIS FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED BAGS, EACH BEARING THE MANUFACTURER'S STATEMENT OF ANALYSIS. FERTILIZE ALL NEW PLANTINGS PER RATES SHOWN BELOW:

TREES:
FERTILIZE NEW TREES WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 8' AND SMALLER: 2-4 LBS.
- 8'-12' TALL: 4-6 LBS.
- 12' AND TALER: 6-8 LBS.

(3 CUPS = 1 LB.)

SHRUBS:
FERTILIZE NEW SHRUBS AND ACCENTS WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 4-6" POTS: ⅛ CUP
- 1 GAL.: ¼ CUP
- 3 GAL.: 1 CUP
- 7-10 GAL.: 2 CUPS
- 15 GAL. AND GREATER: 3 CUPS

PALM TREES:
FERTILIZE NEW PALM TREES WITH A "PALM SPECIAL" FERTILIZER IN SLOW RELEASE FORM. FERTILIZER SHALL CONTAIN AN ADDITIONAL MAGNESIUM AND MICRO-NUTRIENT AMENDMENT

SOIL
PLANTING SOIL SHALL BE SANDY LOAM AND SHALL CONTAIN A 25% MINIMUM AMOUNT OF DECOMPOSED ORGANIC MATTER. PLANTING SOIL SHALL BE FREE OF CLAY, STONES, PLANTS, ROOTS AND OTHER FOREIGN MATERIALS WHICH MIGHT BE A HINDRANCE TO PLANTING OPERATIONS OR BE DETRIMENTAL TO GOOD PLANT GROWTH. SOIL SHALL BE DELIVERED IN A LOOSE FRIABLE CONDITION AND APPLIED IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

WATER
WATER FOR PLANTING WILL BE AVAILABLE AT THE SITE AND WILL BE PROVIDED BY THE OWNER. LANDSCAPE CONTRACTOR SHALL NOT ASSUME THAT THE IRRIGATION SYSTEM WILL BE OPERATIONAL AT THE TIME OF PLANTING. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO PROVIDE ALL THE REQUIRED WATER NECESSARY TO MAINTAIN THE PLANT MATERIAL IN A HEALTHY GROWING CONDITION. THE WATERING MAY INCLUDE DEEP WATERING OF TREES ANT THE WATERING OF SHRUB AND GROUND COVER AREAS. ANY PLANT MATERIALS THAT DIE OR THAT ARE NOT IN A HEALTHY GROWING CONDITION DUE TO LACK OF WATER SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. EXECUTION

FIELD GROWN TREES AND PALMS PREVIOUSLY ROOT PRUNED SHALL OBTAIN A ROOT BALL WITH SUFFICIENT ROOTS FOR CONTINUED GROWTH WITHOUT RESULTING SHOCK.

CONTRACTOR SHALL NOT MARK OR SCAR TRUNK IN ANY FASHION.

PLANTS SHALL BE WATERED AS NECESSARY OR WITHIN 24 HOURS AFTER NOTIFICATION BY THE LANDSCAPE ARCHITECT.

THE LOCATIONS OF PLANTS, AS SHOWN IN THESE PLANS, ARE APPROXIMATE. THE FINAL LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS. MAJOR ADJUSTMENTS TO THE LAYOUT ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT.

ALL PLASTIC FABRIC SHALL BE REMOVED FROM PLANT MATERIAL AT TIME OF INSTALLATION.

ALL TREES MUST BE STAKED AS SHOWN ON THE PLANTING DETAILS WITHIN 24 HOURS OF PLANTING. STAKES TO REMAIN FOR A MINIMUM OF 9 MONTHS, BUT NO LONGER THAN 18 MONTHS. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF THE STAKES.

ALL TREES MUST BE PRUNED AS PER LANDSCAPE ARCHITECT'S DIRECTION. SABAL PALMS MAY BE HURRICANE CUT.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

AFTER FINAL SETTLING OF BALLED AND BURLAPED PLANTS, LOOSEN BURLAP WRAPPING EXPOSING THE TOP OF THE ROOTBALL, LEAVING THE BALL UNBROKEN. REMOVE EXCESS AMOUNTS OF BURLAP TO ELIMINATE VOIDS WHICH MAY BE CAUSED UPON DECOMPOSITION.

CONTAINER GROWN PLANTS SHALL, WHEN DELIVERED, SHALL HAVE SUFFICEINCY GROWTH TO HOLD EARTH INTACT WHEN REMOVED FROM CONTAINER AND SHALL NOT BE ROOT BOUND. PLANT PITS FOR CONTAINER MATERIALS SHALL BE FORMED FLAT ON THE BOTTOM TO AVOID AIR POCKETS AT THE BOTTOM OF ROOT BALLS AND CONTAINERS SHALL BE REMOVED CAREFULLY TO PREVENT DAMAGE TO THE PLANT OR ROOT SYSTEMS.

TEST TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE.PERCOLATION IS AVAILABLE. PITS WHICH ARE FOUND NOT TO BE ADEQUATELY DRAINING SHALL BE EXCAVATED TO A A DEPTH SUFFICIENT FOR DRAINAGE AND BACKFILLING WITH GRAVEL OR CRUSHED ROCK. NO ALLOWANCES WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE.

PLANTING BED PREPARATION
ALL PLANTING BEDS SHALL BE PROPERLY PREPARED PRIOR TO THE COMMENCEMENT OF ANY PLANTING. PLANTING AREAS, INCLUDING LAWNS SHALL BE FREE OF ALL WEEDS AND NUISANCE VEGETATION. IF TORPEDO GRASS (PANICUM REPENS) IS PRESENT OR ENCOUNTERED DURING PLANTING, THE LANDSCAPE CONTRACTOR SHALL STOP ALL PLANTING UNTIL IT CAN BE DEMONSTRATED THAT IT HAS BEEN COMPLETELY REMOVED OR ERADICATED. THERE SHALL BE NO EXCEPTIONS TO THIS PROVISION.

ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS AND WILL BE EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN, NATIVE SOIL AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.

PLANTING TREES

EXCAVATE PIT AS PER PLANTING DETAILS. COMPACT LAYER OF TOPSOIL IN PIT WITH A SLIGHTLY DISHED GRADE TO CENTER.

BACKFILL AROUND BALL WITH TOPSOIL AND SLIGHTLY COMPACT, WATER THOROUGHLY AS LAYERS ARE PLACED TO ELIMINATE VOIDS AND AIR POCKETS. BUILD A 6" HIGH BERM OF TOPSOIL BEYOND EDGE OF EXCAVATION. APPLY 3" (AFTER SETTLEMENT) OF MULCH.

PRUNE TREE TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES. DO NOT PRUNE BACK TERMINAL LEADER.

GUY AND STAKE TREE IN ACCORDANCE WIT THE STAKING DETAILS IMMEDIATELY AFTER PLANTING.

PLANTING SHRUBS

LAYOUT SHRUBS TO CREATE A CONTINUOUS SMOOTH FRONT LINE AND FILL IN BEHIND.

EXCAVATE PIT OR TRENCH TO 1-1/2 TIMES THE DIAMETER OF THE BALLS OR CONTAINERS OR 1'-0" WIDER THAN THE SPREAD OF ROOTS AND 3" DEEPER THAN REQUIRED FOR POSITIONING AT PROPER HEIGHT. COMPACT A LAYER OF TOPSOIL IN BOTTOM BEFORE PLACING PLANTS. BACKFILL AROUND PLANTS WITH PLANTING MIXTURE, COMPACTED TO ELIMINATE VOIDS AND AIR POCKETS. FORM GRADE SLIGHTLY DISHED AND BERMED AT EDGES OF EXCAVATION. APPLY 3" OF MULCH.

PRUNE SHRUBS TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES.

PLANTING GROUND COVER

LOOSEN SUBGRADE TO DEPTH OF 4" IN AREAS WHERE TOPSOIL HAS BEEN STRIPPED AND SPREAD SMOOTH.

SPACE PLANTS AS OTHERWISE INDICATED. DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS. COMPACT BACKFILL TO ELIMINATE VOIDS AND LEAVE GRADE SLIGHTLY DISHED AT EACH PLANT. WATER THOROUGHLY. APPLY 3" OF MULCH OVER ENTIRE PLANTING BED, LIFTING PLANT FOLIAGE ABOVE MULCH. PURPLE QUEEN GROUNDCOVER, IF SPECIFIED, SHALL ONLY RECEIVE 1" OF MULCH.

DURING PERIODS OF HOT SUN AND/OR WIND AT TIME OF PLANTING, PROVIDE PROTECTIVE COVER FOR SEVERAL DAYS OR AS NEEDED.

PLANTING SOD

SODDING: SOD TYPE SPECIFIED ON PLANT LIST SHALL BE MACHINE STRIPPED NOT MORE THAN 24 HOURS PRIOR TO LAYING. SOD SHALL BE FIRM, TOUGH TEXTURE, HAVING A COMPACT GROWTH OF GRASS WITH GOOD ROOT DEVELOPMENT, AND SHALL CONTAIN NO BERMUDA GRASS, WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

LOOSEN SUBGRADE TO DEPTH OF 4" AND GRADE WITH TOPSOIL EITHER PROVIDED ON SITE OR IMPORTED TO FINISH DESIGN ELEVATIONS. IF SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO FINISH GRADE ALL LANDSCAPE AREAS, ELIMINATING ALL BUMPS, DEPRESSIONS, STICKS, STONES AND OTHER DEBRIS. ROLL PREPARED LAWN SURFACE. WATER THOROUGHLY, BUT DO NOT CREATE MUDDY SOIL CONDITION.

FERTILIZE SOIL AT THE RATE OF APPROXIMATELY 10 LBS. PER 1,000 S.F. SPREAD FERTILIZER OVER THE AREA TO RECEIVE GRASS BY USING AN APPROVED DISTRIBUTION DEVICE CALIBRATED TO DISTRIBUTE THE APPROPRIATE QUANTITY. DO NOT FERTILIZE WHEN WIND VELOCITY EXCEEDS 15 M.P.H. THOROUGHLY MIX FERTILIZER INTO THE TOP 2" OF TOPSOIL.

LAY SOD STRIPS WITH TIGHT JOINTS, DO NOT OVERLAP, STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. WORK SIFTED SOIL MIX INTO MINOR CRACKS BETWEEN PIECES OF SOD AND REMOVE EXCESS SOIL DEPOSITS FROM SODDED AREAS. SOD ON SLOPES GREATER THAN 3:1 SHALL BE STAKED IN PLACE. ROLL OR STAMP LIGHTLY AND WATER THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING.

5. MISCELLANEOUS LANDSCAPE WORK

LANDSCAPE MAINTENANCE
MAINTAIN LANDSCAPE WORK IMMEDIATELY AFTER PLANTING AND UNTIL FINAL ACCEPTANCE IS ISSUED BY THE OWNER'S REPRESENTATIVE. INCLUDE WATERING, WEEDING, CULTIVATING, RESTORATION OF GRADE, MOWING AND TRIMMING GRASS, PRUNING TREES AND SHRUBS, PROTECTION FROM INSECTS AND DISEASES, FERTILIZING AND SIMILAR OPERATIONS AS NEEDED TO INSURE NORMAL GROWTH AND GOOD HEALTH FOR LIVE PLANT MATERIAL. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE, PLANTING SAUCERS RESTORED, AND DEFECTIVE WORK CORRECTED.

IN THE EVENT OF SERIOUS DAMAGE FROM INSECTS OR DISEASE PRIOR TO FINAL ACCEPTANCE, THE PLANTS SHALL BE TREATED BY PREVENTATIVE OR REMEDIAL MEASURES APPROVED FOR GOOD HORTICULTURAL PRACTICE AT NO ADDITIONAL COST TO THE OWNER.

CLEAN UP
THE LANDSCAPE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR DEBRIS CAUSED BY HIS CREWS DURING THE PERFORMANCE OF THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROMPTLY REMOVE ALL WASTE MATERIALS, DEBRIS, UNUSED PLANT MATERIAL, EMPTY PLANT CONTAINERS AND ALL EQUIPMENT FROM THE PROJECT SITE.

ANY SOIL, PEAT OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO ANY PAVED AREAS SHALL BE REMOVED PROMPTLY KEEPING THESE AREAS CLEAN AS THE WORK PROGRESSES. UPON COMPLETION OF THE PLANTING, ALL EXCESS SOIL, STONES AND DEBRIS WHICH HAS NOT BEEN PREVIOUSLY CLEANED UP SHALL BE REMOVED FROM THE SITE.

INSPECTION & ACCEPTANCE
THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT UPON COMPLETION OF THE WORK TO REQUEST A FINAL INSPECTION OF THE INSTALLATION AND PLANT MATERIALS. THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE WILL NOTIFY THE LANDSCAPE CONTRACTOR OF ANY DEFICIENCIES VIA A "PUNCH LIST" WHICH SHALL BE PROMPTLY CORRECTED BY THE LANDSCAPE CONTRACTOR. CONDITIONAL LANDSCAPE ACCEPTANCE OF ALL PLANT MATERIAL AND WORKMANSHIP WILL BE GIVEN IN WRITING BY THE LANDSCAPE ARCHITECT AFTER ALL "PUNCH LIST" ITEMS HAVE BEEN CORRECTED AND ANY PLANT REPLACEMENTS MADE. THIS ACCEPTANCE WILL BEGIN THE WARRANTEE PERIOD. DEFICIENCIES NOTED AFTER THE CONDITIONAL LANDSCAPE ACCEPTANCE SHALL BE RECTIFIED DURING THE WARRANTEE PERIOD AND PRIOR TO FINAL LANDSCAPE ACCEPTANCE.

GUARANTEE AND REPLACEMENT
ALL PLANT MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR FOR A PERIOD OF SIX (6) MONTHS FROM THE DATE OF CONDITIONAL LANDSCAPE ACCEPTANCE BY THE LANDSCAPE ARCHITECT. ANY PLANT MATERIAL OR WORKMANSHIP THAT IS DEFICIENT OR HAS DIED SHALL BE REPLACED AT THE SAME SPECIFICATION NOTED IN THE APPROVED LANDSCAPE PLANS. REPLACEMENTS SHALL BE MADE BY THE LANDSCAPE CONTRACTOR WITHIN TWO (2) WEEKS OF NOTIFECTION BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER. WARRANTEES OF REPLACEMENT MATERIAL SHALL BE SIX (6) MONTHS FROM THE DATE OF REPLACEMENT INSTALLATION. DEATH OR DAMAGE RESULTING FROM LIGHTNING, VANDALISM OR AUTOMOBILES OR BY NEGLIGENCE BY THE OWNER SHALL NOT BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. UNLESS OTHERWISE ARRANGED WITH THE OWNER, THE CONTRACTOR IS RESPONSIBLE FOR GENERAL PLANT MAINTENANCE INCLUDING WATERING AND MOWING UP UNTIL THE DATE OF CONDITIONAL ACCEPTANCE.

PLANT MATERIAL SUBSTITUTION

THERE WILL BE NO SUBSTITUTION OF PLANT MATERIAL UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND/OR OWNER. THIS INCLUDES SPECIES AND SIZE OF PLANT MATERIAL.

Landscape Specifications & Planting Details

ARROW FORT PIERCE NORTH

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
SA	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T3-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SB	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SC	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W-HSS-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SD	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T4-FINISH-S / ARPA2	UNV	LED	N/A	99W	13' POLE	NOTE 1, 3
SE	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T5-FINISH-S / ARPA2	UNV	LED	N/A	86W	13' POLE	NOTE 1, 3
SF	LED BOLLARD	ILP	BLDT-15WLED-UNIV-4000K	UNV	LED	N/A	16.5W	IN-GROUND	
SW	LED WALL PACK	McGRAW-EDISON	GWC-AF-01-LED-E1-T4FT-FINISH-600	UNV	LED	N/A	34W	WALL	NOTE 1

FIXTURE SCHEDULE NOTES

NOTE 1: ADVISE FINISH

NOTE 2: FIXTURE MOUNTED ON 20' CONCRETE POLE #: USI28TI+4-9666

NOTE 3: FIXTURE MOUNTED ON 13' DIRECT BURIAL ALUMINUM POLE #: 1208-30504TE TO ACHIEVE 15FT AFG

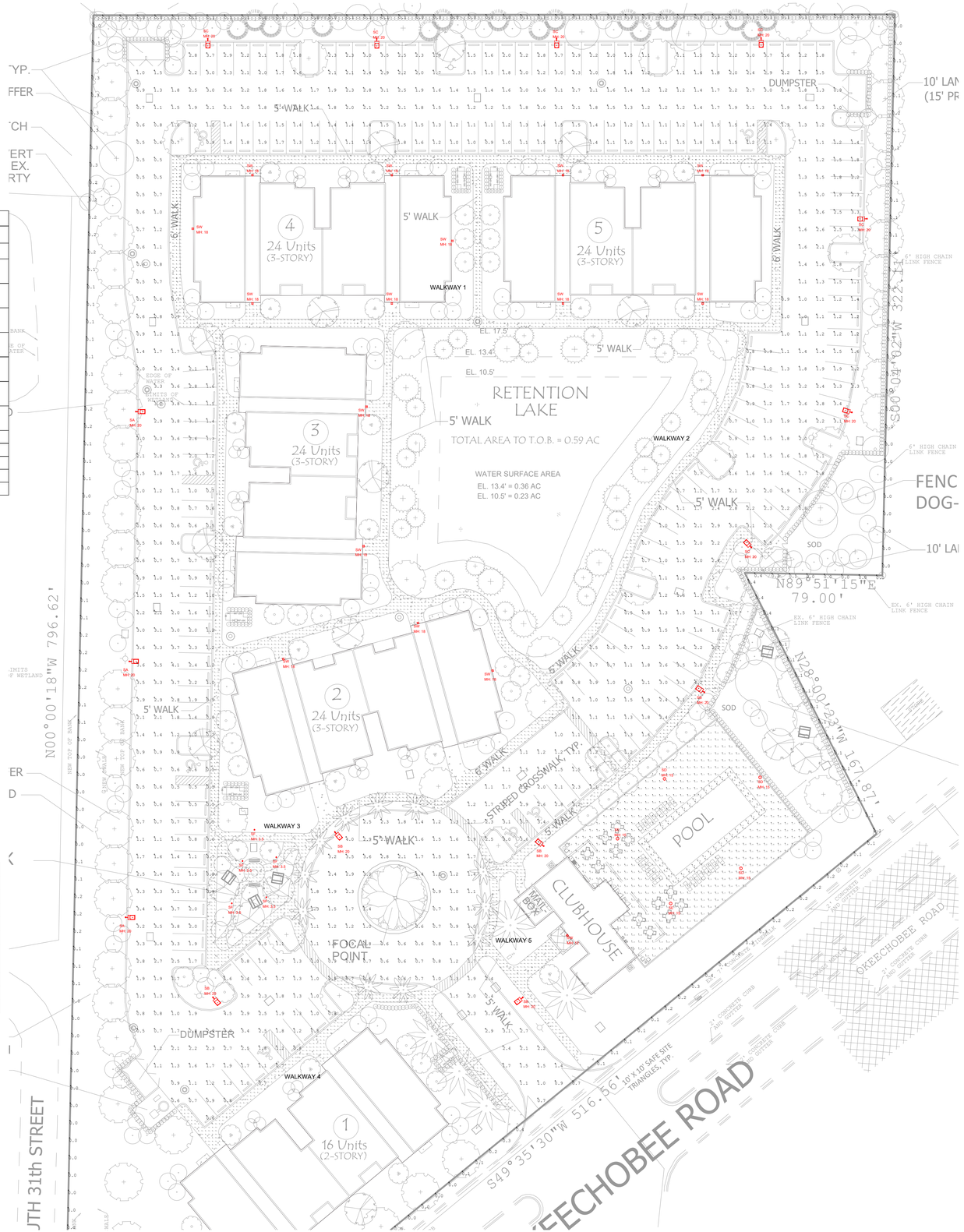
FOR QUESTIONS PERTAINING TO THIS FIXTURE SCHEDULE PLEASE CONTACT RYAN HUFF @ LIGHTING DYNAMICS- 772-285-7169

Photometrics Calculation Software Generated Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
	3	SA	SINGLE	15749	15749	0.900	112	112
	5	SB	SINGLE	15560	15560	0.900	112	112
	7	SC	SINGLE	11268	11268	0.900	112	112
	3	SD	SINGLE	8200	8200	0.900	99	99
	2	SE	SINGLE	9131	9131	0.900	86	86
	5	SF	SINGLE	1209	1209	0.900	16.5	16.5
	16	SW	SINGLE	4311	4311	0.900	34	34

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING & ROADWAY	Illuminance	Fc	1.65	4.5	0.5	3.30	9.00
POOL AREA	Illuminance	Fc	2.79	5.2	0.7	3.99	7.43
PROPERTY LINE	Illuminance	Fc	0.08	0.4	0.0	N.A.	N.A.
WALKWAY 1	Illuminance	Fc	1.10	2.0	0.4	2.75	5.00
WALKWAY 2	Illuminance	Fc	0.95	2.0	0.3	3.17	6.67
WALKWAY 3	Illuminance	Fc	1.29	15.1	0.4	3.23	37.75
WALKWAY 4	Illuminance	Fc	0.67	1.3	0.3	2.23	4.33
WALKWAY 5	Illuminance	Fc	2.11	4.4	0.3	7.03	14.67
WET DECK	Illuminance	Fc	3.65	5.3	3.0	1.22	1.77



LIGHTING DYNAMICS INCORPORATED

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine applicability of the layout to existing or future field conditions. This lighting pattern represents illumination levels calculated from laboratory data taken under controlled conditions utilizing current industry standard lamp ratings in accordance with Illuminating Engineering Society approved methods. Actual performance of any manufacturer's luminaire may vary due to variation in electrical voltage, tolerance in lamps and other variable field conditions.

NOTES:

No.	Revision/Issue	Date
3	UPDATE LFS	06/22/20
2	PHOTOMETRIC STUDY	06/19/20
1	PHOTOMETRIC STUDY	06/17/20

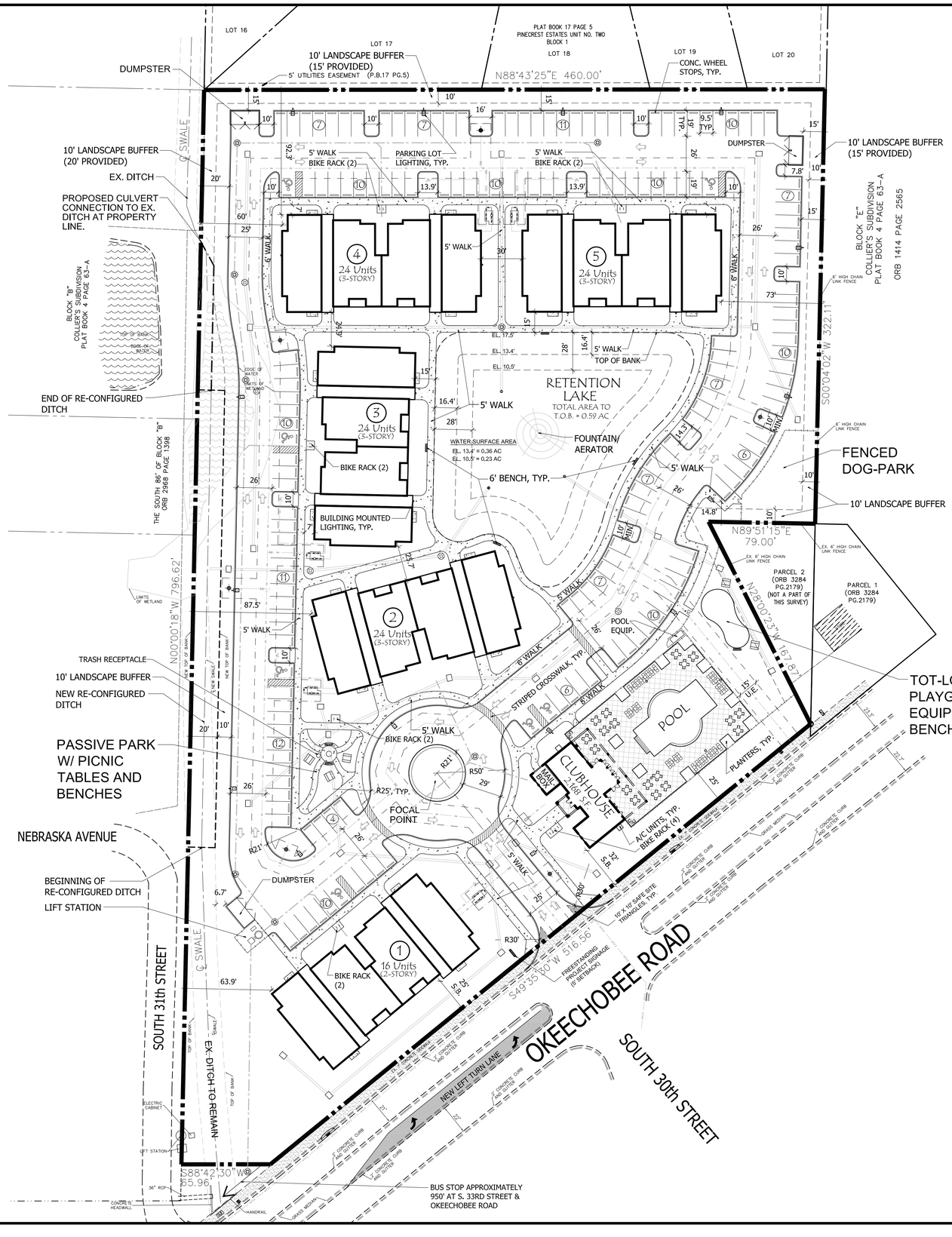
LIGHTING DYNAMICS, INC.
7835 West Commercial Blvd.
Tamarac, FL 33351
(954) 944-0286
www.lightingdynamics.com

Project Name and Address

ARROW FORT PIERCE
Site lighting layout
Fort Pierce, FL

FILE P:\PROJECTS\2020\MARCH
CLIENT Managed Land Entitlements

Project	Arrow Fort Pierce North
Date	06/22/2020
Scale	1/32" = 1'-0"
Sheet	L0
DRAWN BY	E.MONTERO



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (C3)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	102,259.94 S.F. (34.5%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	127,934.57 S.F. (43.2%)
MAX. BUILDING COVERAGE:	50% (148,006.5 S.F.)
BUILDING COVERAGE PROVIDED:	18.0% (53,184 S.F.)

SETBACKS

SETBACK	REQUIRED:	PROVIDED:
FRONT	25'	25'
SIDE:	10'	60'
REAR:	20'	92.3'

BUILDING HEIGHT

REQUIRED:	45' (MAX)
PROVIDED:	39'-0"

PARKING DATA:

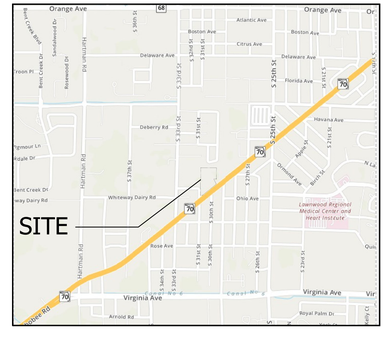
PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES

REFER TO SHEET SP-2 FOR SITE PLAN DETAILS

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champios, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Disher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
Michael B. Schorah & Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-968-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd., #199
Palm City, Florida 34990
Contact: Jason LItterick (561-719-3876)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-615-3988)

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-1

STANDARD LIGHTING POLE DETAIL

(1) LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 170 MPH WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.

(2) INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.

(3) LIGHT FIXTURE CONNECTIONS. REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C). CONDUCTORS TO BE UL LISTED "FIXTURE" CONDUCTORS. (UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED.) OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.

(4) CONDUITS. CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THWN CONDUCTORS.

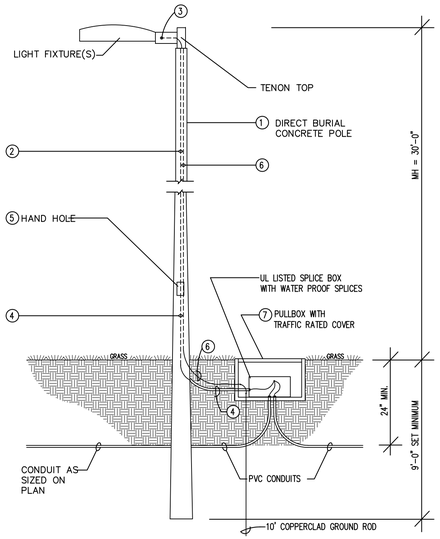
(5) HAND HOLE. HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES.

(6) GROUND WIRE IN POLE. CONNECT BOTTOM TO #4 BARE GROUND CONDUCTOR. CONNECT TOP TO GROUND LUG IN FIXTURES.

(7) TRAFFIC RATED PULL BOX. HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 5,000 LBS OVER A 10" SQUARE. COVER LETTERING = "LIGHTING". DO NOT PLACE IN PAVED AREA, KEEP IN GRASSED AREAS. QUAZITE COMPOSOLITE PX STYLE. 1-800-346-3067

(8) MUCK. IF SOFT SOILS ARE FOUND ON THE PROPERTY, THIS POLE DESIGN WILL BE MODIFIED TO ACCOMMODATE. NOTIFY ENGINEER IMMEDIATELY.

(9) SITE CONDITIONS. IF SITE CONDITIONS ARE DISCOVERED WHICH REQUIRE ANY POLE (S) TO BE MOVED OVER 4 FEET, NOTIFY THE ENGINEER IMMEDIATELY.



CONCRETE LIGHT POLE DETAIL

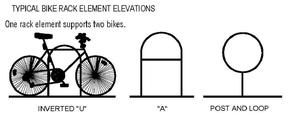
TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



"LANDSCAPEFORMS - CHASE PARK LITTER"

TRASH RECEPTACLE DETAIL

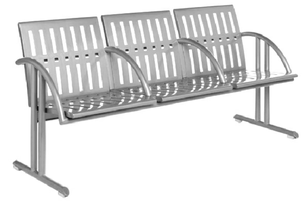
N.T.S.



- ELEMENT STYLE CONSISTENT WITH THE ABOVE TYPICAL ELEVATION TO BE SELECTED BY OWNER AT TIME OF BUILDING PERMIT, SUBJECT TO APPROVAL BY ZONING STAFF.
- A RACK IS ONE OR MORE ELEMENTS JOINED ON A COMMON BASE
- BIKE RACK AND RACK AREA DIMENSIONAL CRITERIA BASED ON RECOMMENDATIONS FROM THE ASSOCIATION OF PEDESTRIAN AND BICYCLE PROFESSIONALS (APBP)

BIKE RACK DETAIL

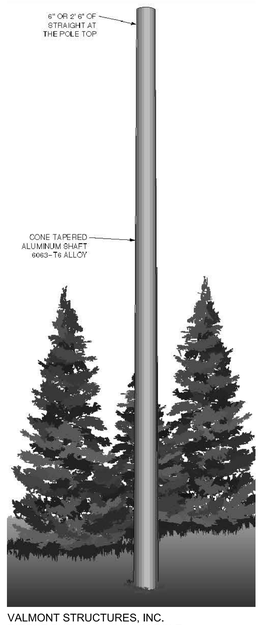
N.T.S.

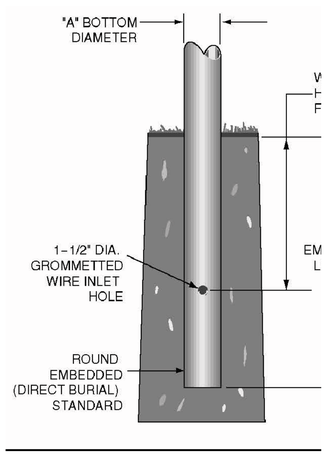


LANDSCAPE FORMS - CHASE PARK BENCH
CAST ALUM. W/ STEEL FRAMES & DIVIDER ARMS

BENCH DETAIL

N.T.S.

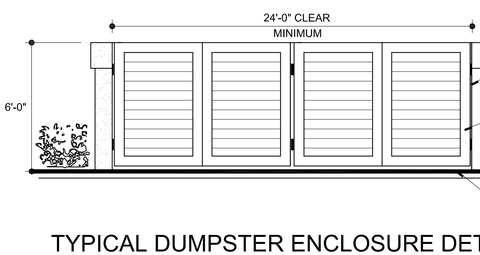




VALMONT STRUCTURES, INC.
DIRECT BURIAL ALUMINUM POLE

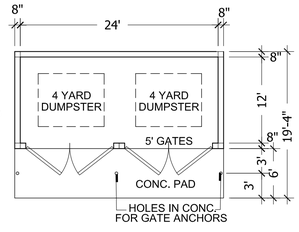
ALUMINUM LIGHT POLE DETAIL

TO BE USED ON ALL POOL LIGHTING (13' MOUNTING HEIGHT) N.T.S.

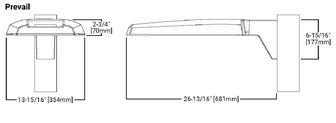


TYPICAL DUMPSTER ENCLOSURE DETAIL

N.T.S.







VALMONT STRUCTURES, INC.
DIRECT BURIAL CONCRETE POLE

PARKING LOT LIGHTING FIXTURE

TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



LXS LUXESCAPE COLLECTION

DECORATIVE LUMINAIRE

INVUE LED LIGHT FIXTURE
ON DIRECT BURIAL ALUMINUM POLE

POOL AREA LIGHTING FIXTURE

TO BE USED ON ALL POOL AREA POLE LIGHTING (13' MOUNTING HEIGHT) N.T.S.



ILP 15W LED BOLLARD

BOLLARD LIGHTS

N.T.S.



GWC GALLEON WALL

1-2 Light Squares
Solid State LED

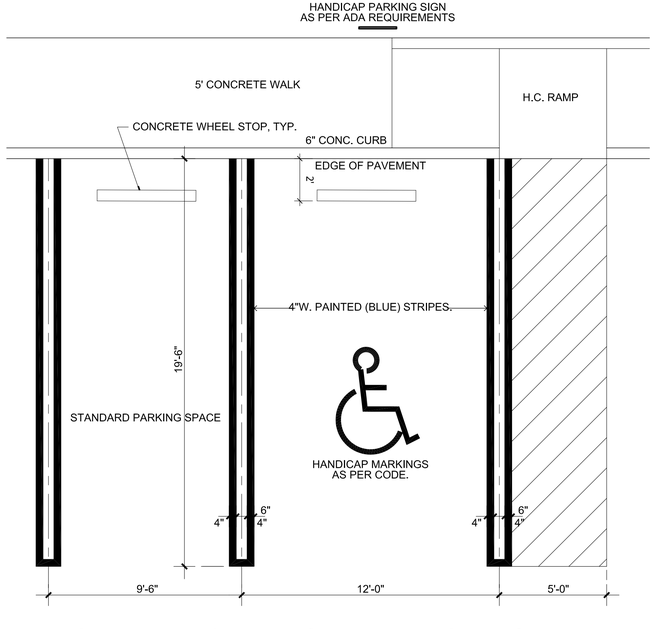
WALL MOUNT LUMINAIRE

WaveLinx

MCGRAW - EDISON WALL MOUNT LED LUMIERE

BUILDING MOUNTED LIGHTING

N.T.S.



STANDARD & HANDICAP PARKING LAYOUT

N.T.S.

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

Site Plan Details

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

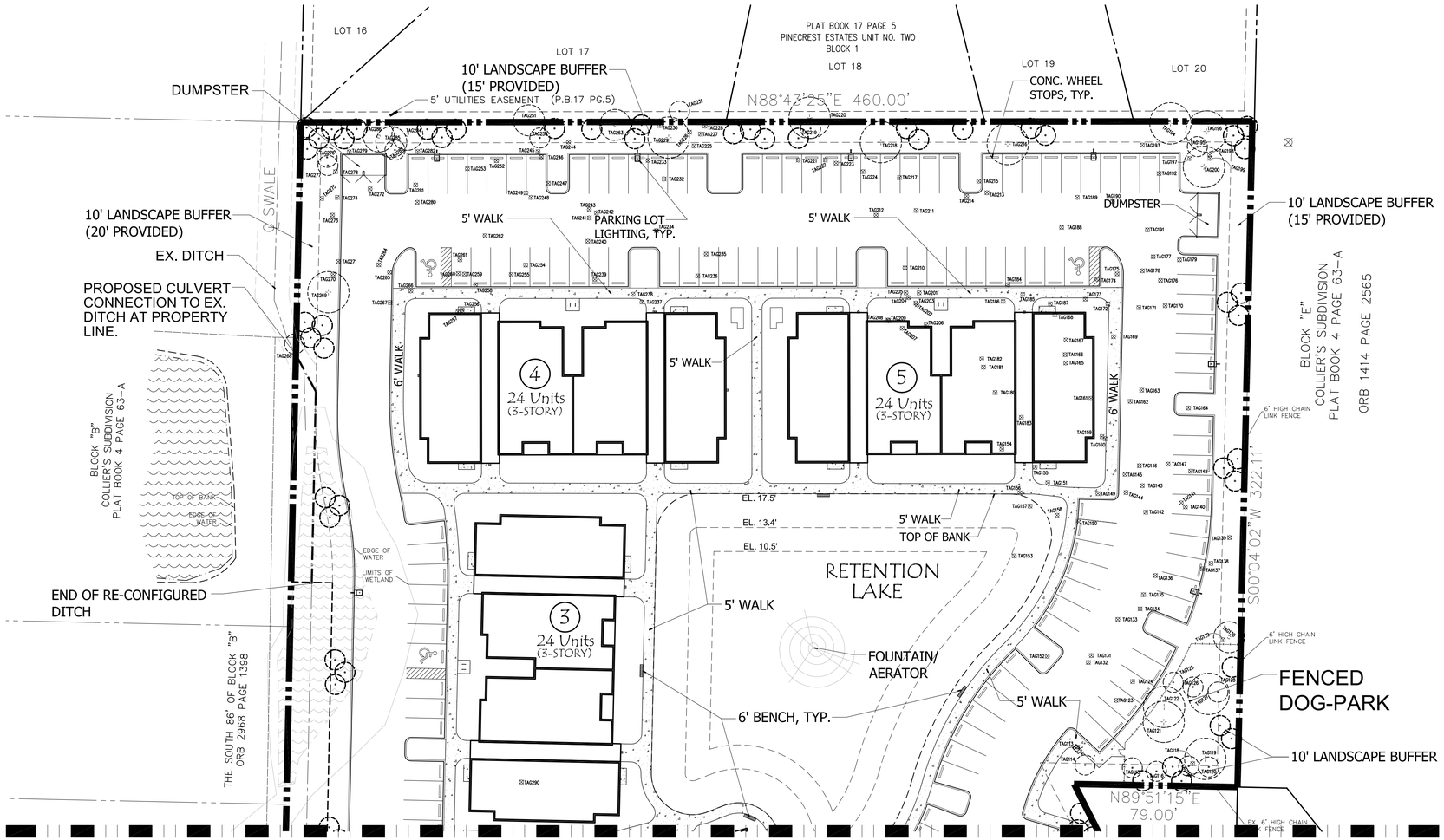
Jason M. Litterick, RLA
(LA0001677)

Scale: As Noted

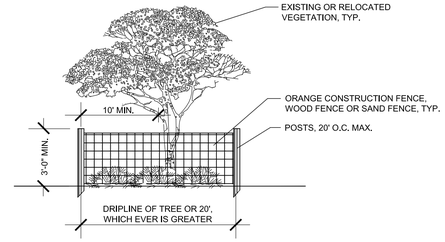
Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-2



MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045



FENCING OF UNDISTURBED AREAS AND/OR EXISTING TREES:

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE ENTIRE UNDISTURBED AREA, OR TREE, WITHIN A FENCE OR SIMILAR BARRIER AS SHOWN. THE PLACEMENT OF SUCH BARRIER OR FENCE SHALL BE LOCATED NO CLOSER THAN THE DRIP LINE OF THE PRESERVED OR RELOCATED TREE OR A MIN. OF 10' FROM TRUNK, WHICHEVER IS GREATER. WOODEN (OR EQUIVALENT) POSTS AT LEAST 2 x 2 INCHES SHALL BE IMPLANTED IN THE GROUND DEEP ENOUGH TO BE STABLE AND WITH AT LEAST 3 FEET VISIBLE ABOVE THE GROUND. THE PROTECTIVE POSTS SHALL BE PLACED NOT MORE THAN 20 FEET APART, AND SHALL BE LINKED TOGETHER BY ORANGE NET FENCE FABRIC, OR OTHER. NO HEAVY EQUIPMENT, VEHICLES, STORAGE OF MATERIALS, ETC., SHALL OCCUR WITHIN THE VEG. PROTECTION ZONE. EXTREME CARE SHALL BE TAKEN WHEN WORKING NEAR THE BASE OF TREES. NO FINISH GRADE FILL SHALL BE PLACED WITHIN A ZONE OF 2/3 THE DIAMETER OF THE TREE CANOPY.

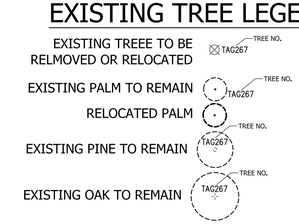
CONSTRUCTION WITHIN CANOPY & TREE BARRICADE SHALL BE BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL.

UTILITY WORK (TRENCHING) WITHIN THE CANOPY & TREE BARRICADE SHALL BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL. THE TREE BARRICADE WILL BE MODIFIED TEMPORARILY TO ALLOW ONLY THE MINIMUM WORK ZONE TRESPASS INTO THE CANOPY AREA, CONTINUING TO PROTECT THE REST OF THE CANOPY AREA WITH BARRICADE. NO FILL, EVEN TEMPORARY, SHALL BE PLACED IN ANY PROTECTED ZONE. AT THE CONCLUSION OF SAID ACTIVITY, THE WORKZONE SHALL BE CLEANED UP & TREE BARRICADES REPLACED TO THEIR ORIGINAL CONFIGURATION.

TREE PROTECTION DETAIL

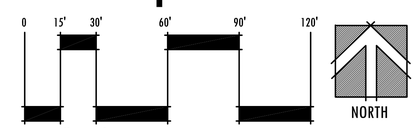
N.T.S.

EXISTING TREE LEGEND



REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

Tree Dispostion Plan



Scale: 1" = 30'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

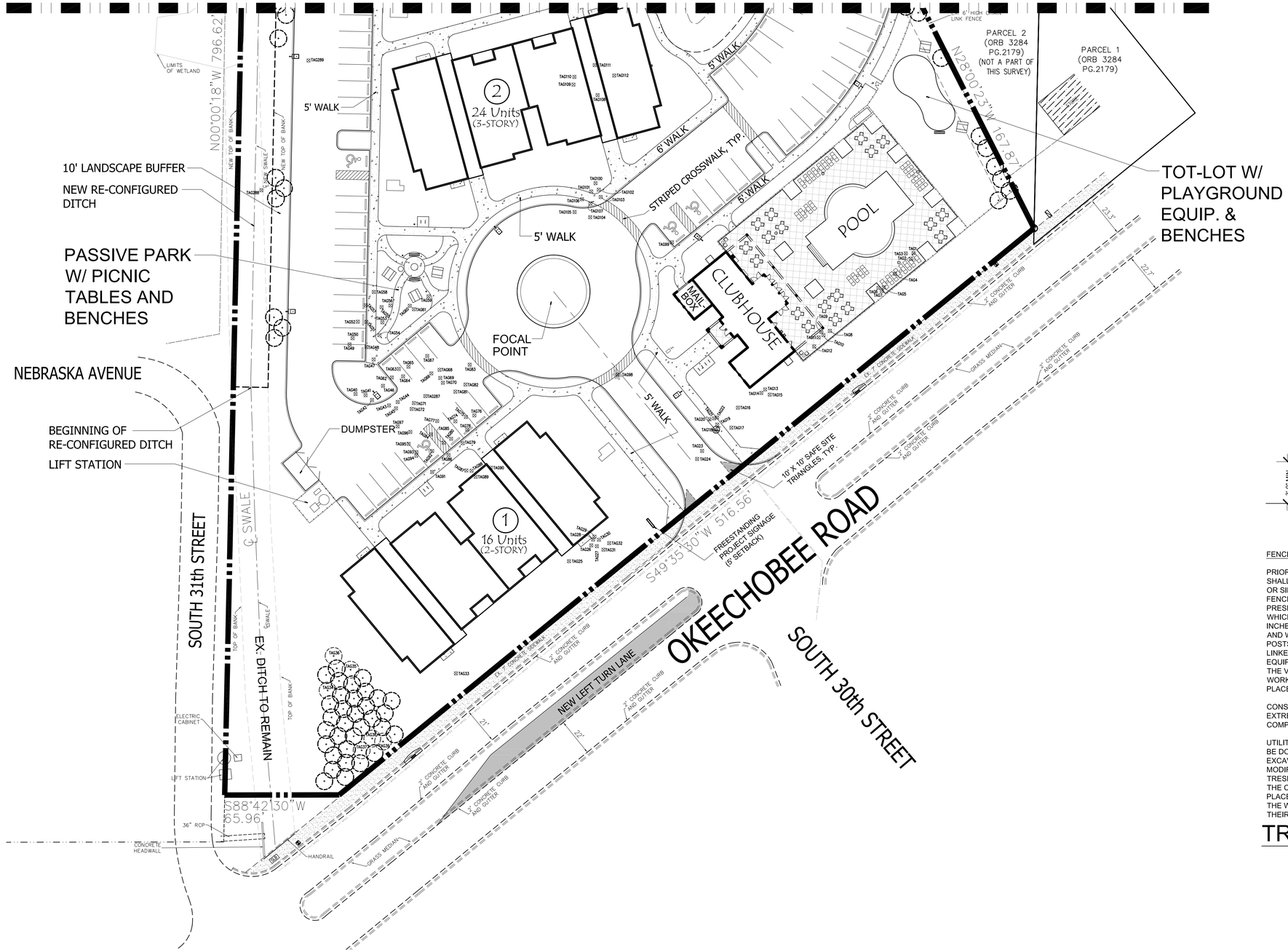
Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

TR-1

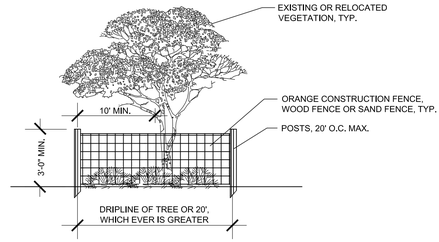
MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

MATCHLINE (SEE SHEET TR-1)



EXISTING TREE LEGEND

EXISTING TREEE TO BE RELMOVED OR RELOCATED — TREE NO. TAG267
EXISTING PALM TO REMAIN — TREE NO. TAG267
RELOCATED PALM — TREE NO. TAG267
EXISTING PINE TO REMAIN — TREE NO. TAG267
EXISTING OAK TO REMAIN — TREE NO. TAG267



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PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE ENTIRE UNDISTURBED AREA, OR TREE, WITHIN A FENCE OR SIMILAR BARRIER AS SHOWN. THE PLACEMENT OF SUCH BARRIER OR FENCE SHALL BE LOCATED NO CLOSER THAN THE DRIP LINE OF THE PRESERVED OR RELOCATED TREE OR A MIN. OF 10' FROM TRUNK, WHICHEVER IS GREATER. WOODEN (OR EQUIVALENT) POSTS AT LEAST 2 x 2 INCHES SHALL BE IMPLANTED IN THE GROUND DEEP ENOUGH TO BE STABLE AND WITH AT LEAST 3 FEET VISIBLE ABOVE THE GROUND. THE PROTECTIVE POSTS SHALL BE PLACED NOT MORE THAN 20 FEET APART, AND SHALL BE LINKED TOGETHER BY ORANGE NET FENCE FABRIC, OR OTHER. NO HEAVY EQUIPMENT, VEHICLES, STORAGE OF MATERIALS, ETC., SHALL OCCUR WITHIN THE VEG. PROTECTION ZONE. EXTREME CARE SHALL BE TAKEN WHEN WORKING NEAR THE BASE OF TREES. NO FINISH GRADE FILL SHALL BE PLACED WITHIN A ZONE OF 2/3 THE DIAMETER OF THE TREE CANOPY.

CONSTRUCTION WITHIN CANOPY & TREE BARRICADE SHALL BE BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL.

UTILITY WORK (TRENCHING) WITHIN THE CANOPY & TREE BARRICADE SHALL BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL. THE TREE BARRICADE WILL BE MODIFIED TEMPORARILY TO ALLOW ONLY THE MINIMUM WORK ZONE TRESPASS INTO THE CANOPY AREA, CONTINUING TO PROTECT THE REST OF THE CANOPY AREA WITH BARRICADE. NO FILL, EVEN TEMPORARY, SHALL BE PLACED IN ANY PROTECTED ZONE. AT THE CONCLUSION OF SAID ACTIVITY, THE WORKZONE SHALL BE CLEANED UP & TREE BARRICADES REPLACED TO THEIR ORIGINAL CONFIGURATION.

TREE PROTECTION DETAIL

N.T.S.

Tree Dispostion Plan

REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

0 15' 30' 60' 90' 120'
Scale: 1" = 30'

NORTH

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-2

TREE DISPOSITION CHART

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
1	PALM	YES	20	17'	RELOCATE	
2	PALM	YES	16	17'	RELOCATE	
3	PALM	YES	18	15'	RELOCATE	
4	PALM	YES	14	22'	RELOCATE	
5	PALM	YES	18	18'	RELOCATE	
6	PALM	YES	16	14'	RELOCATE	
7	PALM	YES	18	14'	RELOCATE	
8	PALM	YES	20	18'	RELOCATE	
9	PALM	YES	16	15'	RELOCATE	
10	PALM	YES	24	15'	RELOCATE	
11	PALM	YES	16	18'	RELOCATE	
12	PALM	YES	16	19'	RELOCATE	
13	PALM	YES	22	10'	RELOCATE	
14	PALM	YES	24	15'	RELOCATE	
15	PALM	YES	24	13'	RELOCATE	
16	PALM	YES	16	14'	RELOCATE	
17	PALM	YES	20	17'	RELOCATE	
18	BANYAN	NO	48		REMOVE	
19	PALM	YES	16	18'	RELOCATE	
20	PALM	YES	14	18'	RELOCATE	
21	PALM	YES	16	15'	RELOCATE	
22	PALM	YES	16	10'	RELOCATE	
23	PALM	YES	20	14'	RELOCATE	
24	PALM	YES	18	15'	RELOCATE	
25	PALM	YES	18	18'	RELOCATE	
26	PALM	YES	16	15'	RELOCATE	
27	PALM	YES	20	15'	RELOCATE	
28	PALM	YES	16	17'	RELOCATE	
29	PALM	YES	16	11'	RELOCATE	
30	PALM	YES	18	14'	RELOCATE	
31	PALM	YES	24	16'	RELOCATE	
32	PALM	YES	16	7'	REMOVE	NONE
33	PALM	YES	18	19'	RELOCATE	
34	PALM	YES	16	17'	REMAIN	
35	PALM	YES	18	17'	REMAIN	
36	PALM	YES	18	18'	REMAIN	
37	PALM	YES	18	20'	REMAIN	
38	PALM	YES	16	21'	REMAIN	
39	PALM	YES	14	17'	REMAIN	
40	PALM	YES	20	18'	RELOCATE	
41	PALM	YES	18	20'	RELOCATE	
42	PALM	YES	16	19'	RELOCATE	
43	PALM	YES	16	19'	RELOCATE	
44	PALM	YES	16	21'	RELOCATE	
45	PALM	YES	18	19'	RELOCATE	
46	PALM	YES	20	22'	RELOCATE	
47	PALM	YES	16	19'	RELOCATE	
48	PALM	YES	16	18'	RELOCATE	
49	PALM	YES	18	17'	RELOCATE	
50	PALM	YES	16	20'	RELOCATE	
51	PALM	YES	18	19'	RELOCATE	
52	PALM	YES	10	18'	RELOCATE	
53	PALM	YES	14	18'	RELOCATE	
54	PALM	YES	18	18'	RELOCATE	
55	PALM	YES	20	22'	RELOCATE	
56	PALM	YES	14	19'	RELOCATE	
57	PALM	YES	10	18'	RELOCATE	
58	PALM	YES	14	19'	RELOCATE	
59	PALM	YES	18	16'	RELOCATE	
60	PALM	YES	16	16'	RELOCATE	
61	PALM	YES	18	15'	RELOCATE	
62	PALM	YES	16	23'	RELOCATE	
63	PALM	YES	16	21'	RELOCATE	
64	PALM	YES	20	18'	RELOCATE	
65	PALM	YES	12	19'	RELOCATE	
66	PALM	YES	18	21'	RELOCATE	
67	PALM	YES	18	17'	RELOCATE	
68	OAK	YES	5		REMOVE	NONE
69	PALM	YES	20	18'	RELOCATE	
70	PALM	YES	22	20'	RELOCATE	
71	PALM	YES	20	20'	RELOCATE	
72	PALM	YES	16	18'	RELOCATE	
74	PALM	YES	14	18'	RELOCATE	
75	PALM	YES	14	9'	REMOVE	NONE
76	PALM	YES	24	19'	RELOCATE	
77	PALM	YES	18	18'	RELOCATE	
78	PALM	YES	18	17'	RELOCATE	
79	PALM	YES	14	13'	RELOCATE	
80	PALM	YES	18	18'	RELOCATE	
81	PALM	YES	24	19'	RELOCATE	
82	PALM	YES	18	16'	RELOCATE	
83	PALM	YES	16	15'	RELOCATE	
84	PALM	YES	16	19'	RELOCATE	
85	PALM	YES	16	20'	RELOCATE	
86	PALM	YES	18	17'	RELOCATE	
87	PALM	YES	16	20'	RELOCATE	
88	PALM	YES	16	18'	RELOCATE	
89	PALM	YES	16	16'	RELOCATE	
90	PALM	YES	18	22'	RELOCATE	
91	PALM	YES	18	22'	RELOCATE	
92	PALM	YES	16	19'	RELOCATE	
93	PALM	YES	18	21'	RELOCATE	
94	PALM	YES	14	20'	RELOCATE	
95	PALM	YES	16	20'	RELOCATE	
96	PALM	YES	18	20'	RELOCATE	

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	0"
TOTAL PRESERVED TREES (IN)	0"
TOTAL RELOCATED PALMS	86 PALMS

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
97	PALM	YES	18	20'	RELOCATE	
98	PALM	YES	18	19'	RELOCATE	
99	PALM	YES	16	16'	RELOCATE	
100	PALM	YES	18	17'	RELOCATE	
101	PALM	YES	16	17'	RELOCATE	
102	PALM	YES	18	19'	RELOCATE	
103	PALM	YES	16	18'	RELOCATE	
104	PALM	YES	16	18'	RELOCATE	
105	PALM	YES	16	18'	RELOCATE	
106	PALM	YES	14	15'	RELOCATE	
107	PALM	YES	10	8'	REMOVE	NONE
108	PALM	YES	18	19'	RELOCATE	
109	PALM	YES	16	35'	RELOCATE	
110	PALM	YES	14	20'	RELOCATE	
111	PALM	YES	16	20'	RELOCATE	
112	PALM	YES	18	18'	RELOCATE	
113	OAK	YES	6		REMOVE	NONE
114	PALM	YES	14	13'	REMAIN	
115	PALM	YES	22	18'	REMAIN	
116	PALM	YES	20	20'	REMAIN	
117	PALM	YES	10	7'	REMAIN	
118	UNKNOWN	NO	12		REMOVE	NONE
119	OAK	YES	38		REMAIN	
120	PALM	YES	14	18'	REMAIN	
121	OAK	YES	18		REMAIN	
122	OAK	YES	12		REMAIN	
123	PALM	YES	18	21'	RELOCATE	
124	PALM	YES	18	16'	RELOCATE	
125	PALM	YES	16	26'	REMAIN	
126	PALM	YES	18	29'	REMAIN	
127	OAK	YES	24		REMAIN	
128	PALM	YES	16	32'	REMAIN	
129	UNKNOWN	NO	10		REMOVE	NONE
130	PINE	YES	28		REMAIN	
131	PALM	YES	16	24'	RELOCATE	
132	UNKNOWN	NO	24		REMOVE	NONE
133	OAK	YES	10		REMOVE	NONE
134	OAK	YES	28		REMOVE	28"
135	PALM	YES	18	30'	RELOCATE	
136	OAK	YES	40		REMOVE	40"
137	PALM	YES	18	18'	RELOCATE	
138	PINE	YES	10		REMOVE	NONE
139	UNKNOWN	NO	8		REMOVE	NONE
140	OAK	YES	36		REMOVE	36"
141	PALM	YES	16	20'	RELOCATE	
142	PALM	YES	14	25'	RELOCATE	
143	PALM	YES	16	25'	RELOCATE	
144	OAK	YES	20		REMOVE	20"
145	PALM	YES	14	26'	RELOCATE	
146	PALM	YES	16	21'	RELOCATE	
147	PALM	YES	18	23'	RELOCATE	
148	OAK	YES	16		REMOVE	16"
149	UNKNOWN	NO	18		REMOVE	NONE
150	PALM	YES	22	18'	RELOCATE	
151	PALM	YES	14	7'	REMOVE	NONE
152	PALM	YES	22	22'	RELOCATE	
153	PALM	YES	16	20'	RELOCATE	
154	PALM	YES	22	18'	RELOCATE	
155	PALM	YES	18	17'	RELOCATE	
156	PALM	YES	18	16'	RELOCATE	
157	PALM	YES	16	13'	RELOCATE	
158	PALM	YES	12	10'	RELOCATE	
159	OAK	YES	10		REMOVE	NONE
160	OAK	YES	16		REMOVE	16"
161	PALM	YES	12	7'	REMOVE	
162	PALM	YES	18	24'	RELOCATE	
163	PALM	YES	16	21'	RELOCATE	
164	OAK	YES	36		REMOVE	36"
165	OAK	YES	14		REMOVE	14"
166	OAK	YES	10		REMOVE	NONE
167	POINCIANA	NO	8		REMOVE	NONE
168	OAK	YES	12		REMOVE	NONE
169	OAK	YES	22		REMOVE	22"
170	OAK	YES	18		REMOVE	18"
171	PALM	YES	16	17'	RELOCATE	
172	PALM	YES	18	13'	RELOCATE	
173	PALM	YES	12	6'	REMOVE	
174	UNKNOWN	NO	16		REMOVE	NONE
175	OAK	YES	16		REMOVE	16"
176	UNKNOWN	NO	20		REMOVE	NONE
177	PALM	YES	18	28'	RELOCATE	
178	PALM	YES	8	8'	REMOVE	NONE
179	PALM	YES	20	22'	RELOCATE	
180	PALM	YES	12	6'	REMOVE	
181	PALM	YES	18	18'	RELOCATE	
182	PALM	YES	18	16'	RELOCATE	
183	PALM	YES	18	17'	RELOCATE	
184	OAK	YES	26		REMOVE	26"
185	PALM	YES	16	28'	RELOCATE	
186	PALM	YES	14	23'	RELOCATE	
187	PALM	YES	16	14'	RELOCATE	
188	PALM	YES	16	18'	RELOCATE	
189	PALM	YES	16	20'	RELOCATE	
190	UNKNOWN	NO	24		REMOVE	NONE
191	PALM	YES	16	14'	RELOCATE	
192	OAK	YES	36		REMOVE	36"
193	UNKNOWN	NO	10		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	324"
TOTAL PRESERVED TREES (IN)	120"
TOTAL RELOCATED PALMS	49

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
194	OAK	YES	36		REMAIN	
195	PALM	YES	18	26'	REMAIN	
196	OAK	YES	18		REMAIN	
197	UNKNOWN	NO	8		REMOVE	
198	UNKNOWN	NO	8		REMOVE	
199	UNKNOWN	NO	8		REMOVE	
200	OAK	YES	10		REMAIN	
201	OAK	YES	6		REMOVE	NONE
202	OAK	YES	6		REMOVE	NONE
203	OAK	YES	4		REMOVE	NONE
204	OAK	YES	6		REMOVE	NONE
205	OAK	YES	8		REMOVE	NONE
206	OAK	YES	8		REMOVE	NONE
207	OAK	YES	8		REMOVE	NONE
208	OAK	YES	6		REMOVE	NONE
209	OAK	YES	6		REMOVE	NONE
210	UNKNOWN	NO	10		REMOVE	NONE
211	PALM	YES	16	18'	RELOCATE	
212	PALM	YES	18	18'	RELOCATE	
213	PALM	YES	14		RELOCATE	
214	OAK	YES	20		REMOVE	26"
215	OAK	YES	26		REMOVE	26"
216	OAK	YES	30		REMAIN	
217	SILK OAK	NO	10		REMOVE	NONE
218	OAK	YES	14		REMAIN	
219	PALM	YES	20	19'	REMAIN	
220	OAK	YES	30		REMAIN	OFF-SITE
221	UNKNOWN	NO	8		REMOVE	NONE
222	UNKNOWN	NO	12		REMOVE	NONE
223	UNKNOWN	NO	8		REMOVE	NONE
224	PALM	YES	18	20'	RELOCATE	
225	UNKNOWN	NO	6		REMOVE	NONE
226	UNKNOWN	NO	6		REMOVE	NONE
227	UNKNOWN	NO	4		REMOVE	NONE
228	UNKNOWN	NO	6		REMOVE	NONE
229	OAK	YES	6		REMAIN	
230	UNKNOWN	NO	12		REMOVE	NONE
231	PALM	YES	22	18'	REMAIN	OFF-SITE
232	UNKNOWN	NO	30		REMOVE	NONE
233	PALM	YES	22	17'	RELOCATE	
234	OAK	YES	12		REMOVE	NONE
235	OAK	YES	10		REMOVE	NONE
236	UNKNOWN	NO	8		REMOVE	NONE
237	UNKNOWN	NO	6		REMOVE	NONE
238	UNKNOWN	NO	6		REMOVE	NONE
239	OAK	YES	16		REMOVE	16"
240	OAK	YES	10		REMOVE	NONE
241	UNKNOWN	NO	14		REMOVE	NONE
242	UNKNOWN	NO	8		REMOVE	NONE
243	UNKNOWN	NO	8		REMOVE	NONE
244	UNKNOWN	NO	10		REMOVE	NONE
245	PINE	YES	10		REMOVE	NONE
246	PINE	YES	10		REMOVE	NONE
247	OAK	YES	10		REMOVE	NONE
248	OAK	YES	10		REMOVE	NONE
249	PALM	YES	18	23'	RELOCATE	
250	PALM	YES	18	20'	REMAIN	
251	PINE	YES	10		REMAIN	OFF-SITE
252	PALM	YES	16	22'	RELOCATE	
253	OAK	YES	26		REMOVE	26"
254	OAK	YES	16		REMOVE	16"
255	OAK	YES	14		REMOVE	14"
256	OAK	YES	12		REMOVE	NONE
257	OAK	YES	14		REMOVE	14"
258	PALM	YES	22	28'	RELOCATE	
259	UNKNOWN	NO	8		REMOVE	NONE
260	PALM	YES	12	6'	REMOVE	NONE
261	PALM	YES	14	10'	RELOCATE	
262	UNKNOWN	NO	10		REMOVE	NONE
263	PINE	YES	14		REMAIN	
264	OAK	YES	18		REMOVE	18"
265	PALM	YES	16	21'	RELOCATE	
266	PALM	YES	18	20'	RELOCATE	
267	PALM	YES	20	18'	RELOCATE	
268	PALM	YES	20	20'	REMAIN	OFF-SITE
269	OAK	YES	20		REMAIN	
270	OAK	YES	10		REMOVE	NONE
271	PALM	YES	16	13'	RELOCATE	
272	OAK	YES	36		REMOVE	36"
273	PALM	YES	16	14'	RELOCATE	
274	UNKNOWN	NO	6		REMOVE	NONE
275	UNKNOWN	NO	6		REMOVE	NONE
276	PALM	YES	16	25'	REMAIN	
277	PALM	YES	12	11'	REMAIN	
278	PALM	YES	18	18'	RELOCATE	
279	OAK	YES	18		REMOVE	18"
280	OAK	YES	18		REMOVE	18"
281	PALM	YES	18	22'	RELOCATE	
282	PALM	YES	18	18'	RELOCATE	
283	PALM	YES	16	10'	REMAIN	
284	PINE	YES	16		REMAIN	
285	PINE	YES	12		REMAIN	
286	PINE	YES	10		REMAIN	
287	PALM	YES	18	19'	RELOCATE	
288	PALM	YES	16	18'	RELOCATE	
289	PALM	YES	18	19'	RELOCATE	
290	UNKNOWN	NO	30		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	228"
TOTAL PRESERVED TREES (IN)	196"
TOTAL RELOCATED PALMS	20

TOTAL RELOCATED PALMS: 155 PALMS
TOTAL MITIGATION REQUIRED (IN.): 552"
TOTAL PRESERVED TREES (IN.): 316"
TOTAL MITIGATION: 236"

ADDITIONAL TREES PROVIDED ON LANDSCAPE PLANS: 135 TREES OR 337.5" @ 2.5" PER TREE

SINCE THE ADDITIONAL TREES PROVIDED AMOUNT TO MORE DBH INCHES THAN IS REQUIRED TO BE MITIGATED, NO ADDITIONAL MITIGATION IS NEEDED.

Tree Dispostion Plan

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential
Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: Not to Scale

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-3

ORDINANCE NO. 20-0xx

AN ORDINANCE BY THE CITY COMMISSION OF THE CITY OF FORT PIERCE, FLORIDA; **REZONING** THE PROPERTY LOCATED AT **PARCEL ID: 2417-504-0020-001-6**, FROM C-3, GENERAL COMMERCIAL ZONE, TO R-4, MEDIUM DENSITY RESIDENTIAL ZONE; PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR REPEAL OF ORDINANCES OR PARTS THEREOF IN CONFLICT; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the subject property is located at Parcel ID: 2417-504-0020-001-6, within the City of Fort Pierce, Florida, representing approximately 6.796 Acres of land; and

WHEREAS, the subject site is presently designated General Commercial Zone (C-3); and

WHEREAS, the applicant seeks rezoning the subject site, Parcel ID: 2417-504-0020-001-6, from General Commercial Zone (C-3) to Medium Density Residential Zone (R-4); and

WHEREAS, the proposed zoning atlas amendment (rezoning) is consistent with the comprehensive plan, and will not have an adverse effect on the ability of the city to satisfy land and water use needs, and meet transportation demands and provide community facilities and services, and will promote and protect the public health, safety and general welfare as required by City Code section 22-131; and

WHEREAS, the City of Fort Pierce Planning Board, at their August 11th, 2020 meeting, voted _____ to recommend approval of the proposed Zoning Atlas Amendment for this parcel.

NOW, THEREFORE, BE IT ORDAINED by the City Commission of the City of Fort Pierce, Florida as follows:

SECTION 1. From and after the effective date hereof, the following property legally described as:

Parcel ID: 2417-504-0020-001-6
LEGAL DESCRIPTION:
BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA; THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING; THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D; THENCE RUN N 88°43'25" E, ALONG THE

NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET; THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET; THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING, ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE, NORTH 28°001/23" W, A DISTANCE OF 167.87 FEET; THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D; THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.

SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST,
CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

Shall be and the same is hereby rezoned from C-3, General Commercial Zone, to R-4, Medium Density Residential Zone; said property being located at Parcel ID: 2417-504-0020-001-6 in Fort Pierce, Florida.

SECTION 2. The provisions of this Ordinance are declared to be severable and if any section, sentence, clause, or phrase of this Ordinance shall, for any reason, be held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining sections, sentences, clauses, and phrases of this Ordinance but shall remain in effect, it being the legislative intent that this Ordinance shall stand notwithstanding the invalidity of any part.

SECTION 3. All ordinances or parts of ordinances in conflict herewith are and the same shall be repealed and shall be of no further force or effect whatsoever.

SECTION 4. This Ordinance is and the same shall become effective immediately upon final passage.

APPROVED AS TO FORM & CORRECTNESS:

_____
Peter J. Sweeney, Esq.
City Attorney

STATE OF FLORIDA

COUNTY OF ST. LUCIE

WE, THE UNDERSIGNED, Mayor Commissioner and the City Clerk of the City of Fort Pierce, Florida, do hereby certify that the foregoing and above Ordinance No. 20-0xx was duly advertised by title only in the St. Lucie News Tribune on September 6th, 2020; copy of said Ordinance was made available at the office of the City Clerk to the public upon request; said Ordinance was duly introduced, read by title only, and passed on first reading by the City Commission of the City of Fort Pierce, Florida, on September 21st, 2020; and was duly introduced, read by title only, and passed on second and final reading October 5th, 2020 by the City Commission of the City of Fort Pierce, Florida.

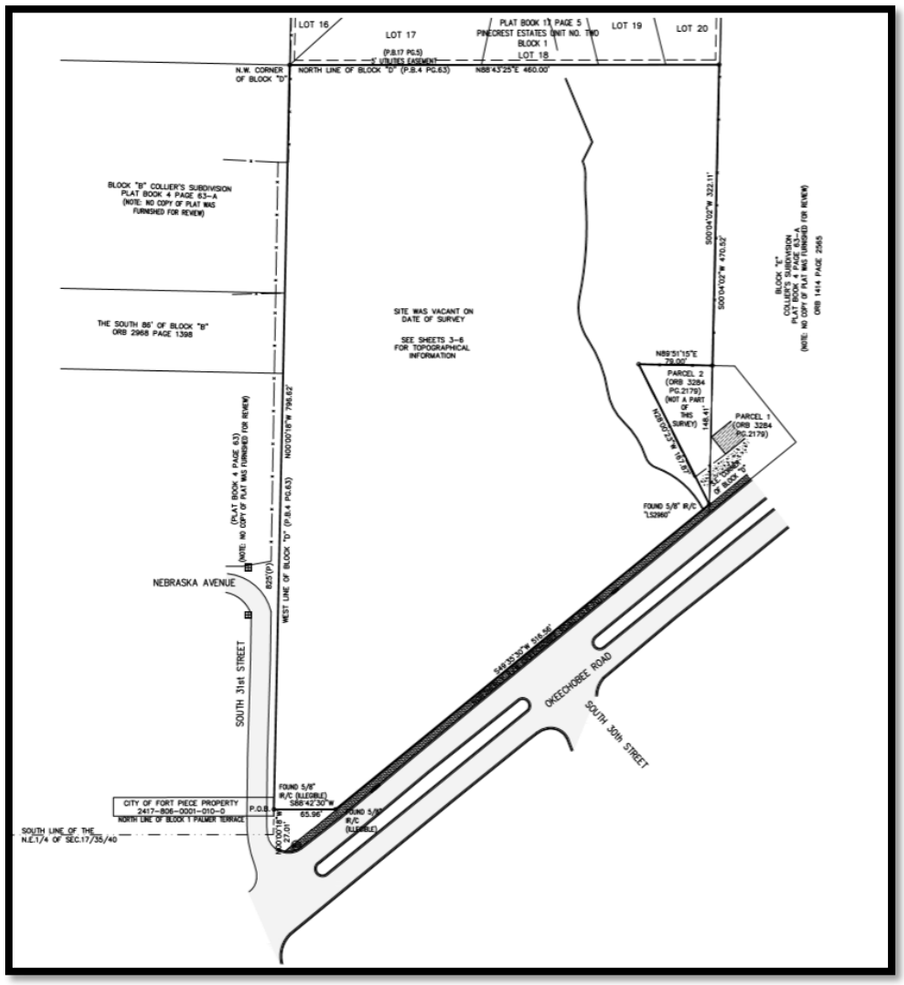
IN WITNESS HEREWITH, we hereunto set our hands and affix the Official Seal of the City of Fort Pierce, Florida, this 6th day of October, 2020.

_____
Linda Hudson
MAYOR COMMISSIONER

_____
Linda W. Cox
CITY CLERK

(CITY SEAL)

EXHIBIT A
Sketch & Legal Description of Subject Property



Parcel ID: 2417-504-0020-001-6
LEGAL DESCRIPTION:
BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA; THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING; THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D; THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET; THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET; THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING, ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70]; THENCE, NORTH 28°001/23" W, A DISTANCE OF 167.87 FEET; THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D; THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.

SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST,
CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

July 16, 2020

Michael Sanchez/Managed Land Entitlements
3710 Buckeye Street, Suite 100
Palm Beach Gardens, FL 33410

Subject: 3000 Okeechobee Road – TRC Comments for July 16th, 2020 conference call

City of Fort Pierce Planning Department

1. Install a landscaped area around the proposed monument sign base which extends a minimum distance of three (3) feet in all directions. Such landscaped area shall be completely covered by ground cover and shrubs, hedges or similar vegetative materials. Vegetation in the area surrounding said sign shall be maintained at a height of less than twelve (12) inches.

2. Provide a separate gated entrance to the refuse collection areas for resident and employee access.

3. Pursuant to City Code Section 22-62(b)(4) Sidewalks. In order to provide continual access for pedestrians, sidewalks and sidewalk linkages shall be required to be provided by the property owner or permit applicant, when plans are submitted for condition use applications or pay a payment into the city sidewalk fund pursuant to City Code Section 22-62(g).

   Please submit payment in-lieu for sidewalks that would be otherwise required along S. 31st Street and the Southwest corner of the subject property to the City of Fort Pierce within ninety (90) days of Conditional Use Approval.

4. Please note that the City of Fort Pierce will have a new Code of Ordinances effective July 20, 2020. This new code represents a renumbering and reshuffling of code sections from what the current code reflects. The new Planning sections will start with Chapter 111, which is Historic Preservation through Chapter 125, which is Zoning. Should you have any questions; the new proposed code can be found on the City Website, under Agenda & Minutes, City Commission 7/6/2020, Item 12(i).

Fort Pierce Engineering Department

Recommends approval.

Advisory Comment: 1. The drainage plan was reviewed as a conceptual plan and will be further reviewed at time of Building Permit submittal.

Fort Pierce Utility Authority

FPUA W/WW Engineering: Water and sewer services are available to serve this location. Please Submit 3 complete sets of utility construction plan along with a completed commercial service application to Water and Wastewater Engineering for review at 1701 S 37th Street Fort Pierce Florida. For more information, please contact John Biggs at 772 466 1600 ext. 3474 or click on the following link below: https://www.fpua.com/Business/StartStopNewServices/DevelopmentServicesResponsibilitiesWWW.asp

FPUA Electric & Gas Engineering: Approved - Electric service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide electric load information for the AutoCAD drawing. Customer will be responsible for all transformer pads, conduits and secondary conductors. For more information and project coordination, please contact Sal Scimeca. Engineering Technician II Electric and Gas Engineering 1701 S. 37th Street, Fort Pierce, FL 34947 sscimeca@fpua.com Office: (772)466-1600 Ext. 6957

Gas service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide a copy of the gas riser diagram with the anticipated load (if developer is interested in natural gas service to the propose complex). For more information and incentive available, please contact Billy Dupre. Business Development Representative Gas Operations 1701 S. 37th Street, Fort Pierce, FL 34947 Bdupre@fpua.com Office: (772)-466-1600 Ext.4705

Utility easement will be required for all propose FPUA electric and gas facilities within the site. If the developer should have any questions, please have them contact individuals listed above. Attached are copies of the FPUA GIS Maps (Electric and Gas).

Please see attached utility maps of the area.

Fort Pierce Building Department

The Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

Fort Pierce Police Department

Overall, a very nice project and site plan that would, once finished, bring "substantial enhancement to the area" as stated in the project narrative.
I do, however, have one concern. It is to do with the "indented, mini-courtyard like" area in the center of each of the apartment structures. That indented area is part of the building's design and is shown on the "front elevation" and floor plans. Specifically, it is the open courtyard like space that is between the two "one bedroom" apartment units. Even though there are a total of four (or six in the 3 story building) windows (located in "bedroom 3" of the

3 bedroom apartment units) which allow residents to see into that courtyard like area, it is still an area that may have potential use for nefarious activity as it offers a fair amount of concealment. The "indent" creates an area that may offer cover for abnormal users and unwanted activities.
One suggestion to mitigate this concern is to place an additional window in each of the one bedroom apartment's bedroom on the wall that currently does not feature a window. This will allow for greater levels of natural surveillance by residents into that courtyard area which would aide in the deterrence of unwanted activities. Additionally, consider some form of pedestrian scale illumination to ensure that courtyard area receives adequate illumination to deter (or identify) unwanted activities (but with consideration to light trespass into the bedrooms)

Officer Damian Spotts
Crime Prevention Practitioner
Fort Pierce Police Department.

City of Fort Pierce Arborist

Please contact Paul Bertram for further review. He will need to send the Planning Department his comments as well.

Paul Bertram
Office: 772-467-3821
Email: PBertram@cityoffortpierce.com

St. Lucie County Planning Department

No Comments

St. Lucie County PW/Engineering

1. A County Roadway Improvement Agreement, Right-of-Way permit, and bond will be required for turn lane construction to Okeechobee Road. Plans and cost estimates should be provided to Grant Chambers, P.E. at chambersg@stlucieco.org .
2. The County asks to be copied on the correspondence regarding the City's review of the traffic impact analysis.

City Clerk Office

No Comments

St Lucie County Fire District

This entity had issues opening your file packet, please contact Lieutenant Wayne Boyer:

Lieutenant Wayne Boyer, M.S., FO, C.F.E.I.
Water Supply Officer
Community Risk Reduction Bureau
St. Lucie County Fire District
Office: 772-621-3322 Mobile: 772-631-8877
Email: WBoyer@slcfd.org

Lieutenant Boyd will need to send the Planning Department his comments as well.

Code Enforcement

No Comments

Florida Department of Transportation

No Comments



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
  - Pad Mount
- Valves
  - Gas
  - Water
  - Raw Water
  - Waste Water
- Fire Hydrant
- Well
- Lift Station

Disclaimer:

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811 Know what's below. Call before you dig.

Date: 7/6/2020

FPUA COMMUNITY PROUD

N

1 inch = 181 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
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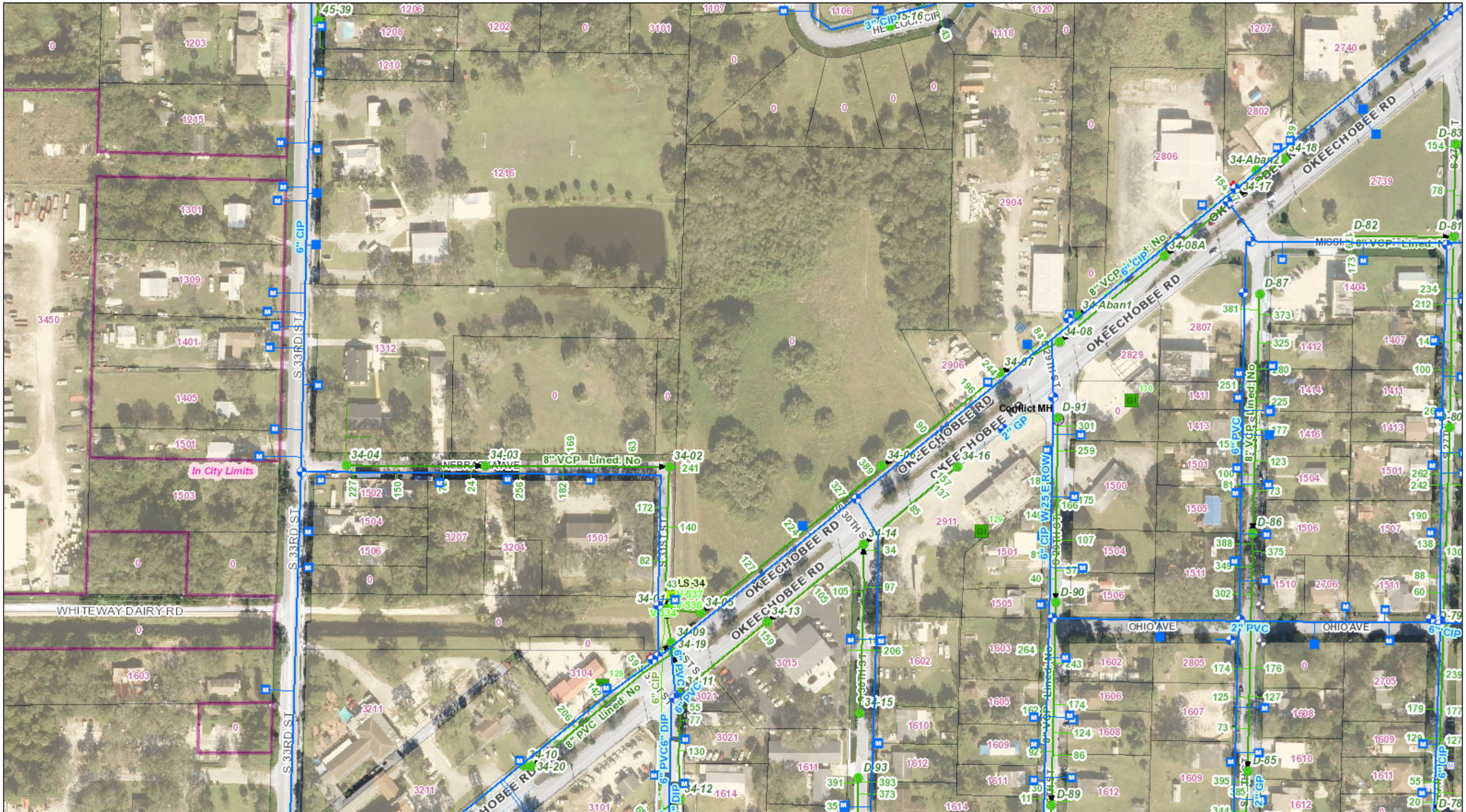
1 inch = 181 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main

- Pole
- Fuse

Transformers

- Overhead
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Valves

- Gas
- Water
- Raw Water
- Waste Water

- Fire Hydrant
- Well
- PS Lift Station

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811 Know what's below. Call before you dig.

Date: 7/7/2020

FPUA COMMUNITY PROUD

N

1 inch = 170 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938

Planning Board - 2 PM **7. b.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Rezoning- Willow Lakes - NW corner of West Midway Road and I-95

LOCATION

The NW corner of W Midway Road and I-95, Fort Pierce, Florida

RESPONSIBLE STAFF

Vennis Gilmore, Planner
Technical Review Committee

RECOMMENDATION

The requested Application for Zoning Atlas Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare. Therefore, Staff recommends **APPROVAL** of the proposed Rezoning from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD.

Attachments

Staff Report
Location Map
FLU Map
Zoning Maps
Application & Supporting Documents
Traffic Analysis
Draft Ordinance
TRC Comments

Form Review

Form Started By: Vennis Gilmore Started On: 08/03/2020 08:24 PM
Final Approval Date: 08/05/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director
FROM:	Vennis Gilmore, Planner
RE:	**Application for Zoning Atlas Map Amendment** **Willow Lakes Planned Development**
BOARD DATE:	August 11, 2020

STAFF REPORT

Property Owner:	Willow Lakes, LLC 433 S. Main St., Suite 300 West Hartford, CT 06110
Applicant:	Dean, Mead, Minton, & Zwemer 1901 S. 25th Street, Suite 200 Fort Pierce, FL 34947
Requested Action:	Approval to Rezone one (1) parcel from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD.
Site Location:	At or near the northwestern interchange of West Midway Road and Interstate 95.
Parcel IDs:	3302-212-0001-000-4
Existing Use:	Vacant/Agricultural
Parcel Size:	200.3 +/- Acres
Current Future Land Use:	Mixed Use Development (MXD)
Current Zoning:	AG-2.5, Agricultural, 1 du/2.5 ac (St. Lucie County Zoning)
Proposed Zoning:	Planned Development (PD)

	North	East	South	West
Surrounding FLU:	Mixed Use Development (MXD)	Industrial (SLC Future Land Use)	ROI/CG/CS/SLC MXD/SLC TU (PSL Future Land Use)	Mixed Use Development (MXD)
Surrounding Zoning:	Planned Development (PD)	Industrial Light (SLC Zoning)	Planned Unit Development (PSL Zoning)	Planned Development (PD)

Staff Analysis

Request

The subject Zoning Atlas Map Amendment from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD will provide for a land use that is consistent with the applicant's proposed vision of a Mixed-Use Urban Resort Village for the subject site. The existing Mixed-Use Development (MXD) Future Land Use Category, as defined in the Future Land Use Element of the City's Comprehensive Plan, is intended to promote intensification, redevelopment, and revitalization of the areas targeted for live/work environments. This area is characterized by development that promotes the creation of well-planned centers designed to integrate a variety of complementary uses. This land use designation allows a maximum density of 15 dwelling units per acre and a maximum FAR of 1.5. All MXD designated areas shall contain a minimum of three (3) of the following general land uses:

- Residential (single-family and/or multi-family)
- Commercial – General and/or Neighborhood
- Commercial – Town Center
- Hotel (minimum 100 units)
- Office Uses – Professional and/or medical
- Industrial
- Institutional

Residential uses shall comprise a minimum of 40% of the total floor area of the Mixed-Use Development future land use designation. The requested Zoning Atlas Map Amendment keeps City's Zoning Map and Land Development Regulations consistent with the Future Land Use and accompanying land use category specifications contained in the Future Land Use Element.

Willow Lakes Resort Village and Community is envisioned as a vibrant, mixed-use urban village at the crossroads of Florida's Turnpike, Interstate 95, and the City of Fort Pierce. Situated on 200.23 acres of land lying immediately north of Midway Road and west of I-95 within the City of Fort Pierce, Willow Lakes will be an east coast destination that will bring together local residents and regional, national and international visitors in a lively, pedestrian-oriented, and healthy environment of inviting public spaces, walkable streets, and authentic neighborhoods in which to live, work, play and learn.

The vision is that of a typical beach community that celebrates outdoor activity and a healthy lifestyle. A place where residential, retail, and commercial uses will be combined to provide a critical mass of activity that will bring year-round life to the Village. This community will be one of a kind in Florida, situated not on a lone beach, but around the newest and largest world-class surf park in the country. The Wavegarden at Willow Lakes will deliver high quality waves and authentic surfing experiences year-round for new and existing surfers of all ages, experience and ability. Beyond the Wavegarden, the Village will be comprised of several distinct neighborhoods, knit together by a network of walkable, pedestrian-oriented streets, and navigable flow-ways designed for maximum environmental and recreational purposes. The result will be an inclusive environment where visitors, residents, and professionals have fun, keep fit and feel part of a community that shares their passion and respect for surfing, the ocean, others and the planet.

Neighborhoods are the traditional building blocks of villages, towns and cities. They provide an organic, localized sense of place, identity and community within the larger fabric of a town. Willow Lakes Resort Village and Community is conceived as a series of small, local places organized in a framework of larger neighborhood types or areas. The primary neighborhoods that make up Willow Lakes will include the Wavegarden surf resort village and hotels, the mixed-use main and village streets immediately surrounding it, a town center plaza, an entertainment retail zone, and two residential areas, accompanied by adjacent undeveloped open space/conservation area. Within the larger, primary areas will be the smaller commercial and residential places that create variety, scale, local identity, and texture. The concentration of this series of neighborhoods will facilitate shared pedestrian accessibility to the many activities and residential options, the creation of vibrant commercial areas, and the simultaneous introduction of a system of recreational flow-ways linking the natural spring-fed lake in the heart of the project to the neighborhoods and open space conservation areas throughout.

The street system proposed in this plan emphasizes connectivity and the importance of the streetscape as a place of value to the community. Where vehicle traffic is envisioned, parking is planned as an essential part of the project and will be encouraged on the streets, contributing to the availability of convenient parking spaces and to a sense of traffic-calming in pedestrian-oriented areas that have concentrated street-front commercial activity. Streets and parking facilities will be designed to support single-trip visits to Willow Lakes for multiple activities. While the basic accommodation of cars is essential to the life of the project, and any similar project in Florida, Willow Lakes is fundamentally a place for people. The design of all streets and

the associated public realm reflects a focus on pedestrians, accommodations for bicycles, and the enduring qualities of livable, active public spaces for human interaction.

The submitted Planned Development Site Plan is conceptual in nature. Site Plans for the proposed ten (10) phases of this Planned Development require Development Review and Design Review for conformance with Section 125-212(c)(2) shall be submitted for final approval by the City Commission.

Future Land Use and Zoning Designation Comparison

The subject property currently has a Future Land Use of Mixed-Use Development, (MXD) and Zoning designation that is AG-2.5, Agricultural, 1 du/2.5 ac (St. Lucie County Zoning). This is an inappropriate zoning designation because the vacant site abuts the major corridor of West Midway Road, intersects with Federal Interstate 95 and the applicant is proposing a Mixed-Use Development. Mixed-Use Land Uses are intended to promote intensification, redevelopment, and revitalization of the areas targeted for live/work environments. This area is characterized by development that promotes the creation of well-planned centers designed to integrate a variety of complementary uses in the City of Fort Pierce. Uses allowed within this Mixed-Use Development, (MXD) designation include residential (single-family/multi-family), commercial (general/neighborhood), commercial (town center), hotel (minimum 100 units), office uses (professional/medical), industrial, and institutional. This land use designation allows for a maximum density of 15 dwelling units per acre and a maximum FAR of 1.5. Development shall include a minimum of three (3) of the allowed general land uses.

As the development of the subject parcel is a vital component to the development pattern envisioned throughout the City of Fort Pierce, the appropriate Zoning is Planned Development, (PD) with the compatible Future Land Use classification of Mixed-Use Development (MXD).

Standards for Review

Pursuant to Article IX, City Code of Ordinances, a proposed change of district or text may be initiated by the city commission, the city planning board or by petition of one or more of the property owners or affected residents within the area proposed to be changed or affected by a change in the district map or text.

The following standards must be satisfied per Section 125-136 of the City Code prior to the approval of the requested amendment:

(1) The amendment is consistent with the Comprehensive Plan.
(2) The amendment will not have an adverse effect on the ability of the City to:
    a. Satisfy land and water use needs; and
    b. Meet transportation demands and provide community facilities and services.
(3) The amendment will promote and protect the public health, safety, and general welfare.

The proposed amendment is consistent with and furthers the Goals, Objectives, and Policies of the City's Comprehensive Plan. The Zoning Atlas Map Amendment promotes and protects the public health, safety, and general welfare as the request as proposed is in character and similar with the surrounding area, land uses and zoning designations.

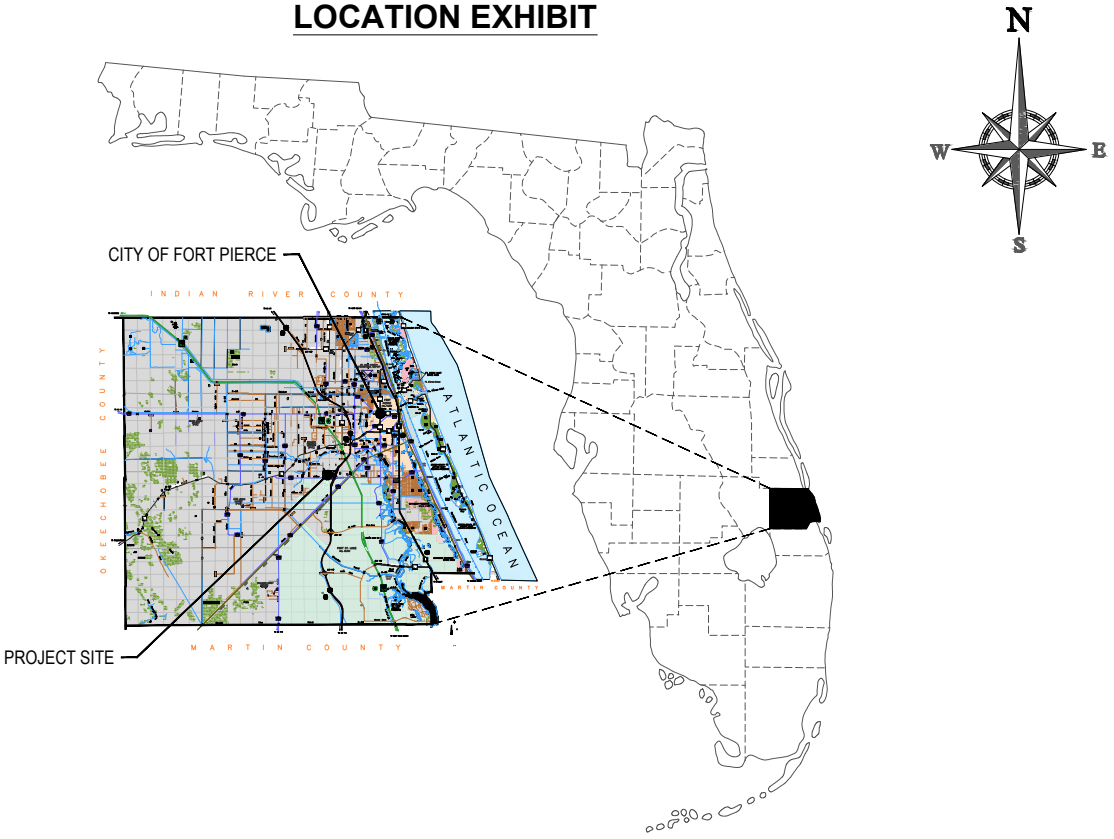
Technical Review Committee (TRC)

All affected City and County Departments have reviewed the proposed Future Land Use Map and Zoning Atlas Map Amendments and there were no comments from the TRC.

Staff Recommendation Zoning Atlas Map Amendment

The requested Application for Zoning Atlas Map Amendment meets the criteria specified in Section 125-136 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare. Therefore, Staff recommends **APPROVAL** of the proposed Rezoning from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD.

LOCATION EXHIBIT





WILLOW LAKES, LLC

LOCATION EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE:1"=80,000' & 1,000' DATE: 01/20/2020

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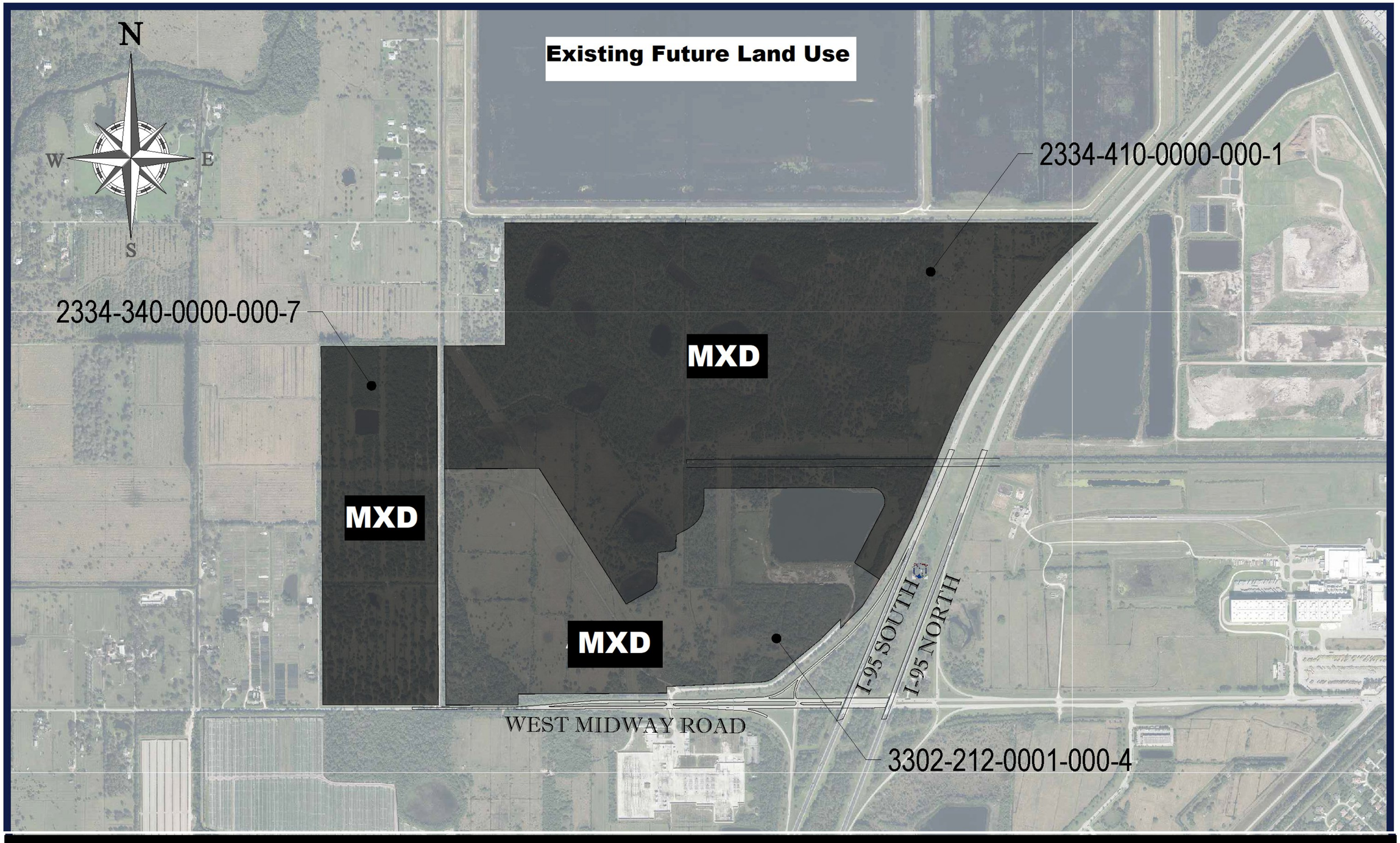

WILLOW LAKES, LLC

Future Land Use Exhibit

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE:1"=2,000' DATE: 01/20/2020

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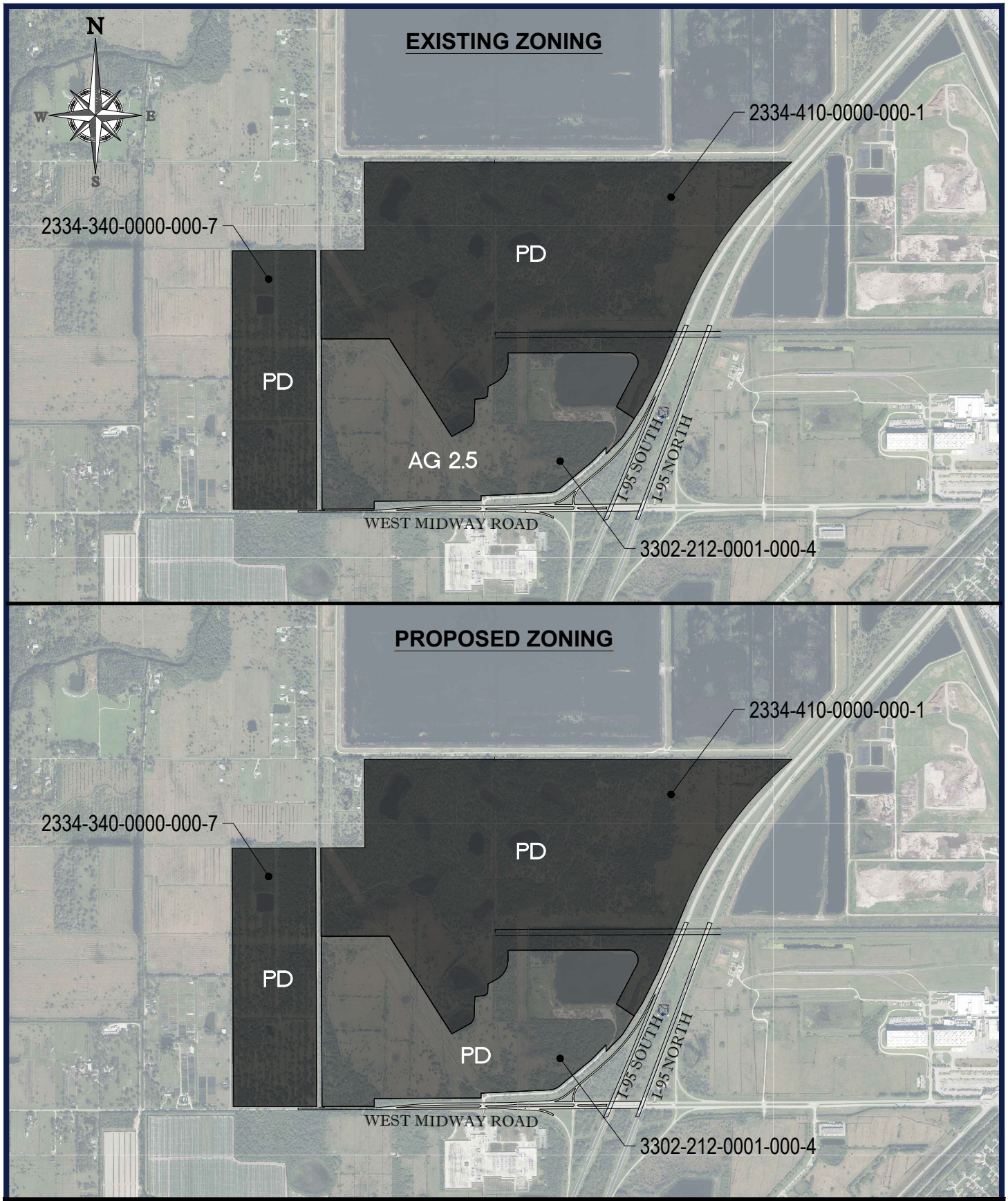

WILLOW LAKES, LLC

ZONING EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE:1"=2,000' DATE: 01/20/2020

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DEAN MEAD
ATTORNEYS AT LAW

City of Fort Pierce
Development Review Application

for

WILLOW LAKES, LLC

W. Midway Road
Fort Pierce, FL
St. Lucie County

Prepared By:
W. Lee Dobbins, Esq.
Dean, Mead, Minton & Zwemer
1903 South 25th Street, Suite 200
Fort Pierce, FL 34947
772-464-7700

DeanMead.com
Orlando | Fort Pierce/Stuart | Tallahassee | Viera/Melbourne

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THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

DEVELOPMENT REVIEW

Property address or Location TBD - General Location: Lying northwesterly of the interchange of W. Midway Road and I-95 (Section 02 and 03, Township 36S, Range 39E)

Parcel ID #(s) 3302-212-0001-000-4

Project description Resort village and community with residential, retail and commercial uses

Willow Lakes, LLC	Willow Lakes, LLC c/o Dean, Mead, Minton & Zwemer
Property Owner(s)	**Applicant/Representative, Title, Company**
433 S. Main St. Ste 300	1903 S 25th Street Suite 200
Street Address	Street Address
West Hartford CT 06110	Fort Pierce FL 34947
City State Zip	City State Zip
561-827-5742	772-464-7700
Phone Number	Phone Number
clabonte@eaglebridgecapital.com	ldobbins@deanmead.com
Email Address	Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

C P L, MANAGER

Property Owner(s) Signature(s)

STATE OF ~~FLORIDA~~ CT COUNTY Fairfield

The foregoing instrument was acknowledged before me this 31 day of March, 2020, by Chad P Labonte who is personally known to me or has produced CT Drivers License as identification.

Signature of Notary 156897 (seal)

DELOIS LENNON
Notary Public, State of Connecticut
My Commission Expires July 31, 2020

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____
Intake Planner_____
Planner Assigned_____
Approved By_____ Date _____
Comments_____

Fees_____ Control #_____ B. Permit #_____

Intake Date Stamp

❑ DEVELOPMENT REVIEW

General Information

- ❑ Incomplete application packets cannot be accepted.
- ❑ Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type		
❑ Site Plan	❑ Conditional Use with New Const.	❑ Major Amendment
❑ Conceptual Development Plan		❑ Minor Amendment

Site Information:

Non-Residential: Proposed Sq. Ft.: 650,000 + 700 hotel rooms Residential: Proposed Units: 1,000

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- ❑ Complete notarized application
- ❑ Warranty Deed
- ❑ SLC Property Record Card
- ❑ Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- ❑ General location map (see Section 22-58.d.2)
- ❑ Survey (see Section 22-58.d.3)
- ❑ Site Plan (see Section 22-58.d.4)
- ❑ Landscaping Plan (see Section 22-187)
- ❑ Storm Drainage Plan (see Section 22-58.d.6)
- ❑ Environmental Impact Report
- ❑ Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- ❑ Lighting Plan (see Section 22-58.d.8)
- ❑ Design Review submittals (see Design Review application)
- ❑ Traffic Impact Report
- ❑ Concurrency Review submittals (see Concurrency Review application)

JOANNE HOLMAN, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
File Number: 2454543 OR BOOK 2035 PAGE 1421
Recorded:08/04/04 14:05

This instrument prepared by:
DOUGLAS E. GONANO, ESQUIRE
Gonano & Harrell, Chartered
1600 S. Federal Highway, Suite 200
Fort Pierce, FL 34950-5178
(772) 464-1032

Parcel I.D. No: _____

Grantee(s) S.S. #(s): _____

* Doc Assump:	$	0.00
* ~~Doc~~ Tax	: $	30,333.80
* Int Tax	: $	0.00

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED made this 30th day of July, 2004, by **HYMAN B. HENDLER and ALVIN D. SCHWARTZ, ,: (a) individually and as Co-Trustees under the provisions of an unrecorded Trust Agreement known as The Restated and Amended Revocable Land Trust Agreement for HHHP Associates, dated January 2, 1995, and (b) individually and as Co-Trustees under the provisions of an unrecorded Trust Agreement known as The Restated and Amended Revocable Land Trust Agreement for HHHP Properties, dated January 2, 1995, as their respective interests may appear** whose post office address is 900 N.E. Spanish River Boulevard, Unit 4-W, Boca Raton, Florida 33431, hereinafter called the Grantor, to **WILLOW LAKES, LLC, a Florida limited liability company,** whose post office address is 222 South US Highway One, #209, Tequesta, Florida 33469, hereinafter called the Grantee:

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

WITNESSETH: That the Grantor, for and in consideration of the sum of $10.00, and other valuable consideration, receipt of which is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the Grantee, all that certain land situate in St. Lucie County, Florida, which is more particularly described on Exhibit "A" as attached hereto and incorporated herein by reference.

THE ABOVE DESCRIBED PROPERTY IS NOT THE HOMESTEAD OF THE GRANTOR. GRANTOR FURTHER WARRANTS THAT THE ABOVE DESCRIBED PROPERTY DOES NOT NOW AND NEVER HAS CONSTITUTED GRANTOR'S HOMESTEAD; IS NOT NOW AND NEVER HAS BEEN CONTIGUOUS TO GRANTOR'S HOMESTEAD.

TOGETHER, with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining and subject to: (a) all rights of way for public roads and drainage canals, if any, (b) utility easements of record, (c all other covenants, restrictions, easements, limitations and reservations provided this reference shall not operate to reimpose the same, (d) and taxes accruing subsequent to December 31, 2003, and (e) zoning and governmental regulations.

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

AND the Grantor hereby covenants that the premises are free from all encumbrances made by Grantor and Grantor does hereby bind Grantor and Grantor's heirs, successors, and assigns to warrant and forever defend the title to the property to the Grantee above named and Grantee's heirs, successors, and assigns, against every person lawfully claiming the property, or any part thereof, by, through, or under the Grantor, but not otherwise.

mail - Hale Shaw & Pfaffenberger

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

Signed, sealed, and delivered
in our presence:

Print Name: Douglas E Conard

Print Name:

Print Name: Douglas E Conard

Print Name: Lawrence C. Griffin

x HB Hendler TTEE

HYMAN B. HENDLER, individually and as Co-Trustee under the provisions of the unrecorded Trusts referenced above

x Alvin D. Schwartz

ALVIN D. SCHWARTZ, individually and as Co-Trustee under the provisions of the unrecorded Trusts referenced above

STATE OF Florida
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me this 30th day of July, 2004, by **HYMAN B. HENDLER, individually and as Co-Trustee under the unrecorded Trusts referenced above,** who is:
___ personally known to me, or
_X_ who has produced a drivers license as identification
and who __did/_X_ did not take an oath.

[Notary Seal]

JULIE N. KRAUSS
Commission # DD0028324
Expires 6/3/2005
Bonded through
(800-432-4254) Florida Notary Assn., Inc.

Julie N Krauss
Notary Public, State of
Printed Name:
My Commission Expires:

STATE OF Florida
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me this 30th day of July, 2004, by **ALVIN D. SCHWARTZ, individually and as Co-Trustee under the unrecorded Trusts referenced above,** who is:
___ personally known to me, or
_X_ who has produced a drivers license as identification
and who __did/_X_ did not take an oath.

[Notary Seal]

JULIE N. KRAUSS
Commission # DD0028324
Expires 6/3/2005
Bonded through
(800-432-4254) Florida Notary Assn., Inc.

Julie N Krauss
Notary Public, State of
Printed Name:
My Commission Expires:

WILLOW LAKES PARCEL

EXHIBIT "A"

Parcel 1

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF-WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY

OR BOOK 2035 PAGE 1423

LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY); THENCE N89°52'26"W ALONG THE NORTH RIGHT-OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

Parcel 2

A PARCEL OF LAND 60.00 FEET IN WIDTH LYING IN THE NE ¼ OF SECTION 35, TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PORTION OF THE NE ¼ OF SAID SECTION 35 LYING 60.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES) THE WEST RIGHT-OF-WAY LINE OF THE NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 96 AS RECORDED IN OFFICIAL RECORDS BOOK 396, PAGE 2511, LYING WEST OF THE WEST RIGHT-OF-WAY LINE OF INTERSTATE 95 (STATE ROAD 9)

Parcel 3

A PARCEL OF LAND 60.00 FEET IN WIDTH LYING IN THE NW ¼ OF SECTION 36 TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 36, TOWNSHIP 35 SOUTH, RANGE 39 EAST, THENCE N89°45'07"E, ALONG THE NORTH LINE OF SAID SECTION 36, A DISTANCE OF 824.95 FEET; THENCE S00°12'26"W A DISTANCE OF 662.15 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL:

THENCE S47°45'46'E A DISTANCE OF 60.00 FEET THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD 9 (INTERSTATE ROAD 95); THENCE ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE THE FOLLOWING THREE COURSES AND DISTANCES; S42°14'14"W A DISTANCE OF 83.45 FEET; THENCE S37°39'48"W A DISTANCE OF 200.64 FEET; THENCE S42°14'14"W A DISTANCE OF 955.24 FEET TO THE EAST RIGHT-OF-WAY LINE OF CANAL NO. 96; THENCE N00°08'06"E ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 89.49 FEET; TO A POINT 60.00 FEET NORTHWESTERLY OF (AS MEASURED AT RIGHT ANGLES) THE NORTHWESTERLY RIGHT-OF-WAY LINE OF INTERSTATE-95; THENCE N42°14'14"E PARALLEL WITH SAID NW RIGHT-OF-WAY LINE A DISTANCE OF 886.45 FEET; THENCE N37°39'48"E A DISTANCE OF 200.54 FEET; THENCE N42°14'14"E A DISTANCE OF 85.85 FEET TO THE POINT OF BEGINNING.

Parcel 4

A PARCEL OF LAND 80.00 FEET IN WIDTH LYING IN SW ¼ OF SECTION 25, TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 35 SOUTH, RANGE 39 EAST, THENCE NORTH 89°45'07"EAST, ALONG THE SOUTH LINE OF SAID

SECTION 25, A DISTANCE OF 824.95 FEET; THENCE N00°12'26"E A DISTANCE OF 871.61 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL:

THENCE CONTINUE N00°12'26"E A DISTANCE OF 197.52 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF THE SUNSHINE STATE PARKWAY; THENCE N23°41'09"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 320.73 FEET TO THE NORTH LINE OF THE SW ¼ OF THE SW ¼ OF SAID SECTION 25; THENCE N89°51'53"W ALONG SAID NORTH LINE A DISTANCE OF 650.74 FEET TO THE EAST RIGHT-OF-WAY LINE OF NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 96; THENCE S00°11'53"W ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 80.00 FEET; THENCE S89°51'53"E PARALLEL WITH SAID NORTH LINE A DISTANCE OF 598.70 FEET TO A POINT 80.00 FEET (AS MEASURED AT RIGHT ANGLES) SOUTHWEST OF THE WESTERLY RIGHT-OF-WAY OF THE SUNSHINE STATE PARKWAY; THENCE S23°41'09"E PARALLEL WITH SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 449.19 FEET TO THE POINT OF BEGINNING.

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OR BOOK 2035 PAGE 1425

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	TBD
Parcel ID:	3302-212-0001-000-4
Account #:	156019
Map ID:	33/02N
Use Type:	6000
Zoning:	
City/County:	Fort Pierce

Ownership

Willow Lakes LLC

433 S Main ST Ste 300
West Hartford, CT 06110

Legal Description

2/3 36 39 FROM NW COR OF SEC 3-36-39 RUN N 89 46 35 W ALG N LI OF SEC 3 2622 FT TO E R/W LI OF NSLRWCD CANAL NO. 93, TH S 00 02 49 W ALG E R/W LI 52.50 FT TO N R/W LI OF 200 FT FP&L ESMT AND POB,TH S 89 46 35 ALG N R/W LI 1026.62 FT TO E R/W LI OF 60 FT FP&L ESMT,TH S 32 18 17 E ALG E R/W LI 1746.02 FT,TH N 61 15 41 E 335.12 FT,TH N 31 56 28 E 78.35 FT,TH N 02 37 14 E 332.85 FT,TH N 85 17 03 E 146.97 FT,TH N 53 57 44 E 58.71 FT,TH N 01 56 01 E 142.19 FT,TH N 62 33 43 E 139.15 FT TO CURVE CONC NW,R OF 335 FT,TH NELY ALG ARC 365.79 FT,TH N 00 00 00 W 142.46 FT,TH S 89 50 50 E 1811.20 FT TO CURVE CONC SW,R OF 150 FT,TH SELY ALG ARC 308.52 FT,TH S 27 59 51 W 671.72 FT,TH S 56 07 55 E 323.59 FT TO W R/W LI OF I-95,TH S 32 49 14 W ALG W R/W LI 346.97 FT,TH S 44 46 35 W 339.92 FT,TH N 00 04 30 E 99.51 FT,TH S 44 46 35 W 303.05 FT, TH S 50 43 56 W 631.70 FT TO CURVE CONC N,R OF 266 FT,TH WLY ALG ARC 171.53 FT,TH S 87 40 44 W 1027.79 FT,TH S 00 01 50 E 72 FT,TH S 89 58 10 W 1610.26 FT,TH S 00 01 50 E 117.14 FT TO N R/W LI OF MIDWAY RD,TH N 89 52 26 W ALG N R/W LI 786.26 FT TO E R/W LI OF NSLRWCD CANAL NO. 93,TH N 00 02 49 E ALG E R/W LI 2564.70 FT TO N R/W LI OF FP&L ESMT AND POB-(200.30 AC - 8,725,068 SF) (OR 2658-2617: 2035-1421)



Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	200.3
Land Size (SF):	8,725,068

Current Values

Just/Market Value:	$1,509,043
Assessed Value:	$55,083
Exemptions:	$0
Taxable Value:	$55,083

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Taxes for this parcel: SLC Tax Collector's Office

Download TRIM for this parcel: Download PDF

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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STATEMENT OF OWNERSHIP AND CONTROL

The land which is the subject of this application is 100% owned and controlled by Willow Lakes, LLC (see Special Warranty Deed included in this submittal). Attached hereto is a copy of the printout from the Florida Secretary of State (Sunbiz) and the Articles of Organization of Willow Lakes, LLC, showing that it is a manager-managed limited liability company, and the current Managers are Roland G. Labonte and Chad Labonte.

The character and intended use of the project are described in detail in the Project Narrative, set forth in the Planned Development Guidelines.



Detail by Entity Name

Florida Limited Liability Company
WILLOW LAKES, LLC

Filing Information

Document Number	L03000007328
FEI/EIN Number	54-2099867
Date Filed	02/27/2003
State	FL
Status	ACTIVE
Last Event	LC AMENDMENT
Event Date Filed	10/30/2019
Event Effective Date	NONE

Principal Address

c/o DEI Property Management LLC
433 South Main Street
218
West Hartford, CT 06110

Changed: 02/15/2016

Mailing Address

c/o DEI Property Management LLC
433 South Main Street
218
West Hartford, CT 06110

Changed: 02/15/2016

Registered Agent Name & Address

LABONTE, Roland G
376 Eagle Drive
Jupiter, FL 33477

Name Changed: 02/15/2016

Address Changed: 02/15/2016

Authorized Person(s) Detail

Name & Address

Title MGR

LABONTE, ROLAND G
376 Eagle Drive
JUPITER, FL 33477

Title MGR

LABONTE, CHAD
298 S BENSON RD
FAIRFIELD, CT 06824

Annual Reports

Report Year	Filed Date
2018	01/17/2018
2019	01/29/2019
2020	01/17/2020

Document Images

01/17/2020 -- ANNUAL REPORT	View image in PDF format
10/30/2019 -- LC Amendment	View image in PDF format
01/29/2019 -- ANNUAL REPORT	View image in PDF format
01/17/2018 -- ANNUAL REPORT	View image in PDF format
04/19/2017 -- ANNUAL REPORT	View image in PDF format
02/15/2016 -- ANNUAL REPORT	View image in PDF format
02/11/2015 -- ANNUAL REPORT	View image in PDF format
03/19/2014 -- ANNUAL REPORT	View image in PDF format
02/07/2013 -- ANNUAL REPORT	View image in PDF format
01/04/2012 -- ANNUAL REPORT	View image in PDF format
02/21/2011 -- ANNUAL REPORT	View image in PDF format
01/15/2010 -- ANNUAL REPORT	View image in PDF format
03/19/2009 -- ANNUAL REPORT	View image in PDF format
04/15/2008 -- ANNUAL REPORT	View image in PDF format
12/18/2007 -- LC Amendment	View image in PDF format
01/31/2007 -- ANNUAL REPORT	View image in PDF format
04/13/2006 -- ANNUAL REPORT	View image in PDF format
04/13/2005 -- ANNUAL REPORT	View image in PDF format
06/14/2004 -- ANNUAL REPORT	View image in PDF format
01/06/2004 -- Reg. Agent Change	View image in PDF format
02/27/2003 -- Florida Limited Liabilites	View image in PDF format

B03000065809

FILED
03 FEB 27 PM 8:20
SECRETARY OF STATE
TALLAHASSEE, FLORIDA

ARTICLES OF ORGANIZATION

OF

WILLOW LAKES, LLC

The undersigned authorized representative of a member, for the purpose of forming a limited liability company under the Florida Limited Liability Act, Florida Statutes Chapter 608 (the "Act"), hereby makes, acknowledges and files the following Articles of Organization:

ARTICLE I – NAME

The name of the limited liability company shall be WILLOW LAKES, LLC (the "Company").

ARTICLE II - ADDRESS

The mailing address and street address of the principal office of the Company is 433 South Main Street, Suite 300, West Hartford, CT 06110.

ARTICLE III - REGISTERED AGENT

The name of the registered agent of the Company in the State of Florida is WL Enterprises, LLC, a Florida limited liability company, and its address is 222 South U.S. Highway #1, Suite 209, Tequesta, Florida 33469.

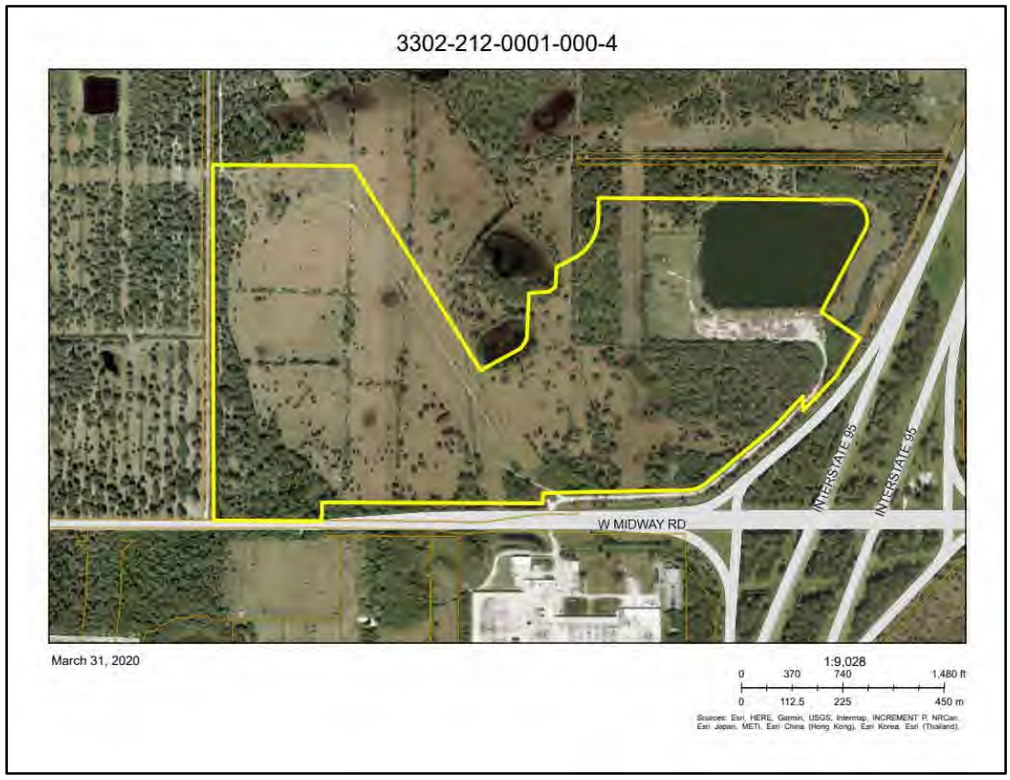
ARTICLE IV – MANAGEMENT BY MANAGERS

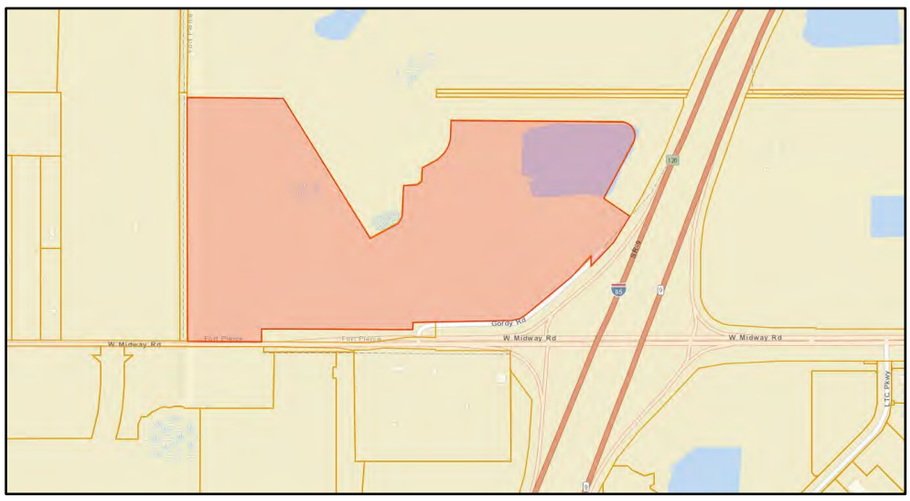
The Company is to be a manager-managed limited liability company.

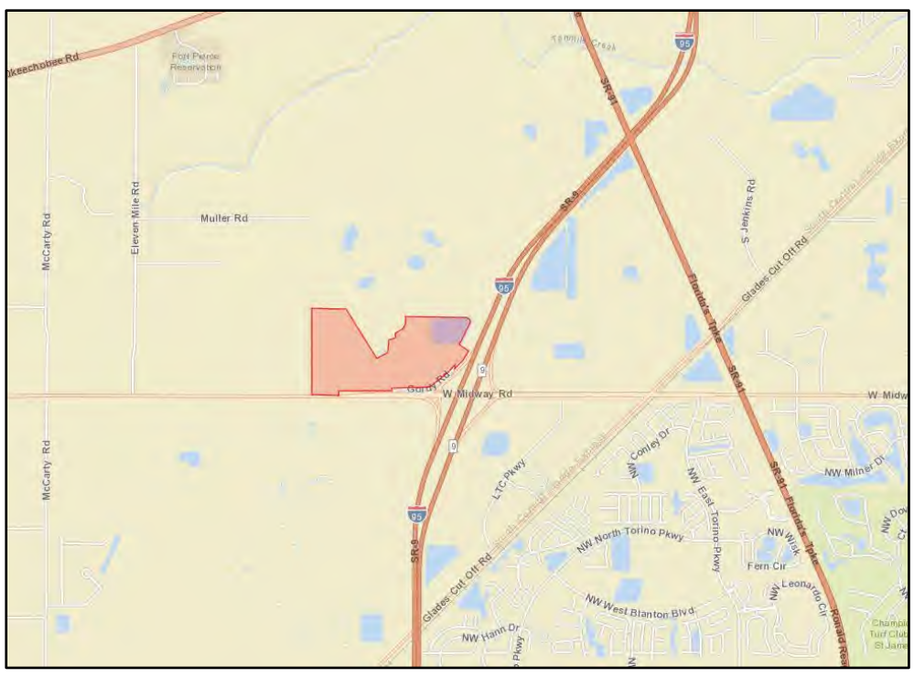
IN WITNESS WHEREOF, the undersigned has made, subscribed and affirmed these Articles of Organization under the penalties of perjury as the duly authorized representative of a Member of the Company at North Palm Beach, Florida, this 27th day of February, 2003.

James H. Schnare II
as Authorized Representative

GENERAL LOCATION MAPS
WILLOW LAKES, LLC







BOUNDARY & TOPOGRAPHIC SURVEY

PREPARED FOR

CAPTEC Engineering, Inc.

SITUATED IN

SECTIONS 2 AND 3
TOWNSHIP 36 SOUTH, RANGE 39 EAST
ST. LUCIE COUNTY, FLORIDA

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF -WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO I A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY) ; THENCE N89°52'26"W ALONG THE NORTH RIGHT -OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

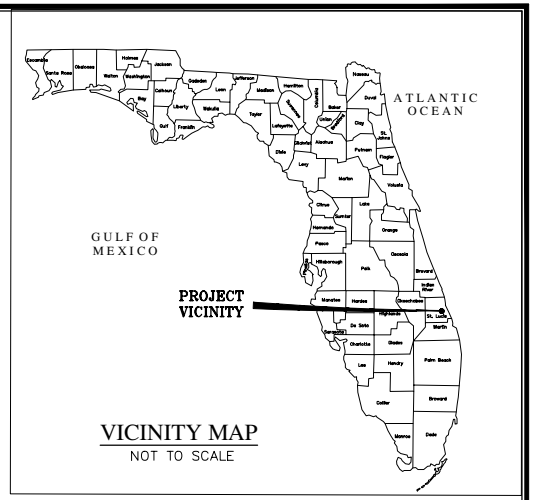
CONTAINING 197.90 ACRES, MORE OR LESS

TOGETHER WITH;

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR I-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

GENERAL NOTES:

1) Not valid without the original signature and the raised seal of a Florida Licensed Surveyor and Mapper.
2) Description shown hereon provided by the client and/or their agent.
3) The last date of field work was 11/13/2019.
4) Overall parcel contains 200.23 Acres, more or less.
5) Bearings shown hereon are relative to the North line of Section 3, Township 36 South, Range 39 East, which bears S89°53'59"W and all other bearings are relative thereto.
6) Underground utilities, utility services, foundations and improvements were not located as a part of this survey.
7) The property shown hereon is located within areas having Flood Zone Designations of "X" as shown on Flood Rate Maps No. 12111C0170 J and 12111C0260 J effective dates February 12, 2012, St. Lucie County County, State of Florida, which is the current Flood Insurance Rate Maps for the community in which said premises is situated.
8) Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
9) All interior improvements were located and are shown hereon.
10) No Jurisdictional or Wetlands were determined or located as part of this survey.
11) Bearings and distances shown hereon are the same as deed unless otherwise stated.
12) Additions Or Deletions To Survey Maps Or Reports By Other Than The Signing Party Or Parties Is Prohibited Without Written Consent Of The Signing Party Or Parties.
13) The horizontal datum for this survey is referenced to Florida State Plane, East Zone, NAD 83(2011) adjustment, as established by Florida Department Of Transportation FPRN.
14) The features shown hereon were acquired using RTK GPS and Trigonometric methods and were verified through a redundancy of measurements for an expected horizontal accuracy of 0.10'.
15) Elevations shown hereon are based on the National Geodetic Vertical Datum of 1929 (NGVD 29). The project benchmark used to establish said elevations is an aluminum disk stamped SLC Vertical Control "Gulfstream" having a published elevation of 21.248' relative to the NAVD 88 datum. A factor of +1.467 was used to convert this to elevation 22.72 relative to NGVD 29 datum.

Digitally signed by Thomas P Kiernan
Date: 2020.04.02 14:33:02 -04'00'

THOMAS P. KIERNAN — DATE
Professional Surveyor & Mapper
Florida Certificate No. 6199

VICINITY MAP, LOCATION MAP, GENERAL NOTES, LEGAL DESCRIPTIONS & CERTIFICATION

COMPUTER FILE REF.	FIELD BK./PG.
19-253 Boundary & Topo	1706/54

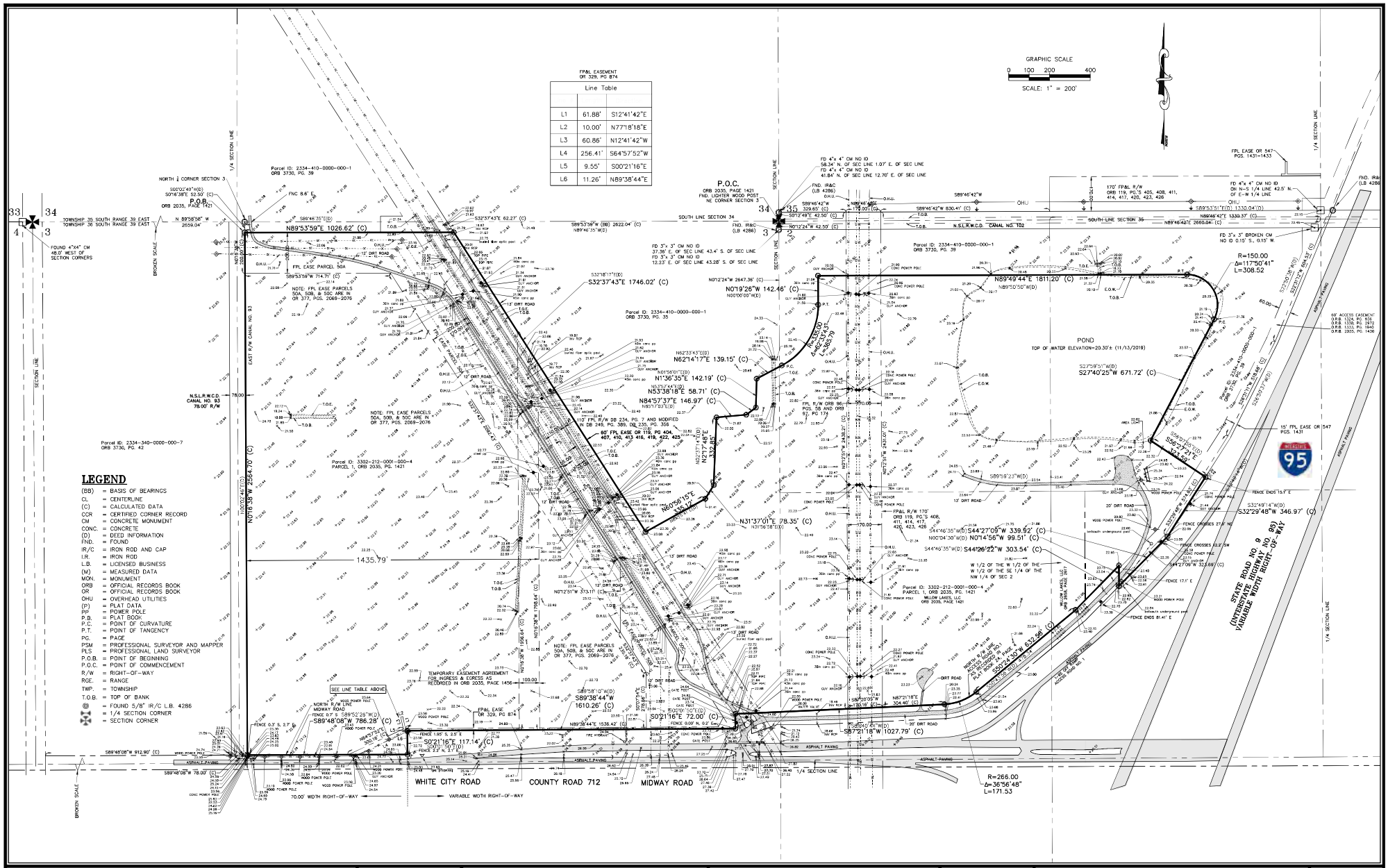
CULPEPPER & TERPENING INC
2960 SOUTH 25th STREET • FORT PIERCE, FLORIDA 34981
PHONE 772-464-3537 • FAX 772-465-9497 • www.ctt-eng.com
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4286

– REVISIONS –	BY	DATE

	BY	DATE
FIELD	SG	11/13/19
CALCS.		
DRAWN	BKH	12/03/19
DETAILED		
CHECKED		
APPROVED		

Boundary & Topographic Survey
PREPARED FOR
CAPTEC Engineering, Inc.

DATE: 12/03/2019
HORIZ. SCALE: 1"=200'
VERT. SCALE: N/A
JOB No. 19-253
SHEET 1 of 2



GRAPHICS

COMPUTER FILE REF.	FIELD BK./PG.
19-253 Boundary & Topo	1706/54

CULPEPPER & TERPENING INC
2980 SOUTH 25th STREET ■ FORT PIERCE, FLORIDA 34981
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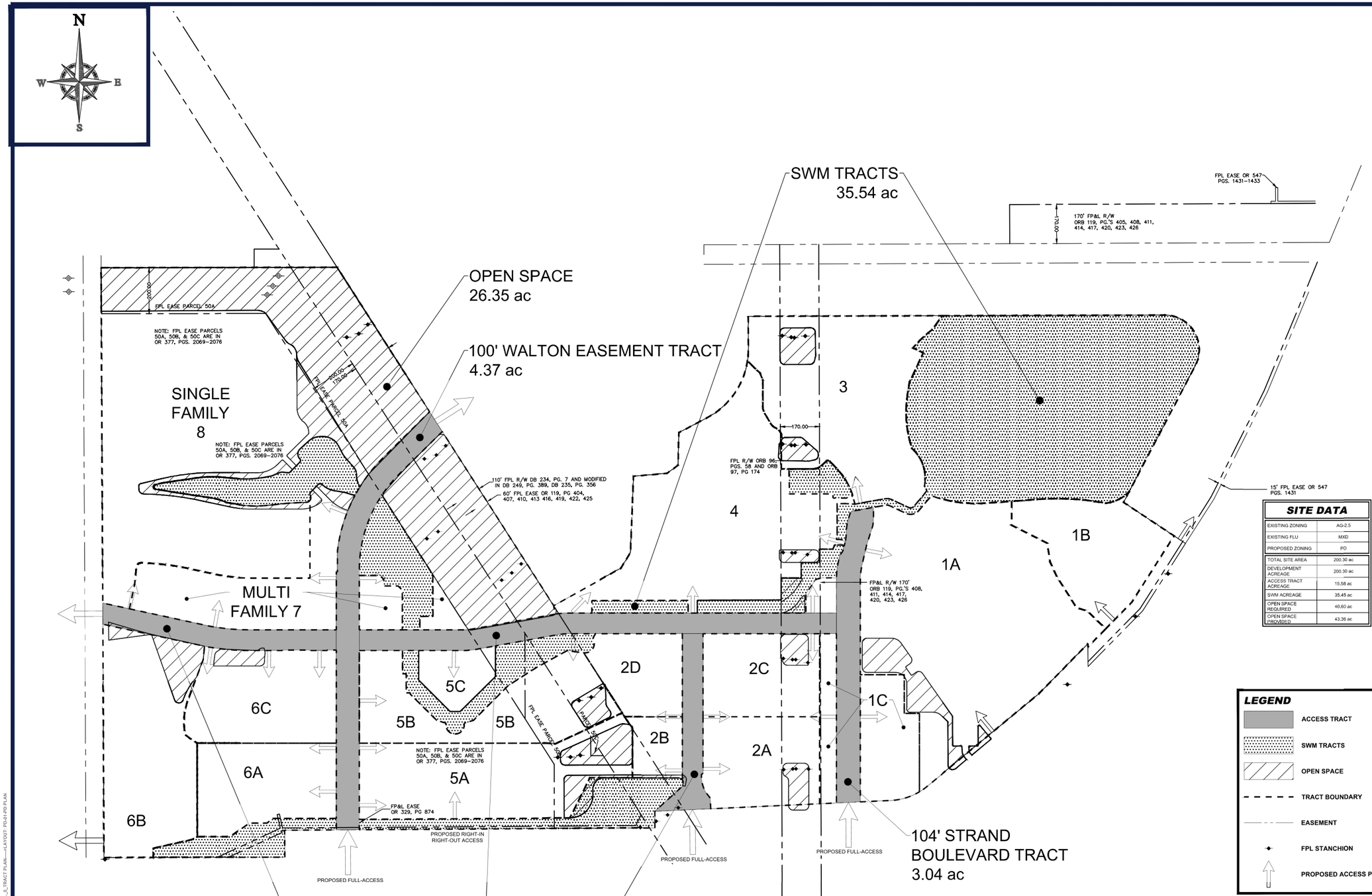
Boundary & Topographic Survey

PREPARED FOR

CAPTEC Engineering, Inc.

DATE: 12/03/2019
HORIZ. SCALE: 1"=200'
VERT. SCALE: N/A
JOB No. 19-253
SHEET 2 of 2



SITE DATA	
EXISTING ZONING	AG-2.5
EXISTING FLU	MXD
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWM ACREAGE	35.45 ac
OPEN SPACE REQUIRED	40.60 ac
OPEN SPACE PROVIDED	43.36 ac

LEGEND

- ACCESS TRACT
- SWM TRACTS
- OPEN SPACE
- TRACT BOUNDARY
- EASEMENT
- FPL STANCHION
- PROPOSED ACCESS POINT

GENERAL NOTES

1. REFER TO PLANNED DEVELOPMENT DOCUMENTS FOR PERMITTED USES AND INTENSITIES AND OTHER RELATED TO FUTURE DEVELOPMENT WITHIN TRACTS.
2. PROPOSED ACCESS POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE BASED ON DETAILED DEVELOPMENT PLANS.

200 100 50 0 200
1"= 200'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

811 Know what's below. Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: CT191015
DRAWN BY: BTJ
CHECKED BY: GPF
DATE: 03/23/20
CAD I.D.: CT191015-CVL_0

PROJECT:

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR

WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA
MAP ID: 33/02N

BOHLER
16 OLD FORGE ROAD, SUITE A
ROCKY HILL, CT 06067
Phone: (860) 333-8900
Fax: (508) 480-9080
2255 GLADES ROAD, SUITE 305E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0280
Fax: (561) 571-0281
www.BohlerEngineering.com

G.P. FITZGERALD
PROFESSIONAL ENGINEER

SHEET TITLE:

PLANNED DEVELOPMENT SITE PLAN

SHEET NUMBER:

PD-01

ORG. DATE - 03/23/20

P:\2019\191015\DRAWINGS\SITE\[BTJ]ROAD TRACT PLAN\CT191015-CVL_0_TRACT PLAN——LAYOUT PD-01-SITE PLAN

BTJ

LANDSCAPING PLAN - N/A

WILLOW LAKES, LLC

PROJECT NO. 1888

CONCEPTUAL STORMWATER MASTER PLAN

PREPARED FOR:

CITY OF FORT PIERCE

PREPARED BY:

CAPTEC Engineering, Inc.
Civil Engineering Professionals
Engineering Business # EB-0007657

Joseph W. Capra, P.E.
Florida P.E. License # 37638

CAPTEC Engineering, Inc.
301 NW Flagler Avenue
Stuart, Florida 34994
(772) 692-4344

JOSEPH W. CAPRA LICENSE No. 37638 STATE OF FLORIDA PROFESSIONAL ENGINEER

April 2, 2020

WILLOW LAKES, LLC
FORT PIERCE, FLORIDA

CONCEPTUAL STORMWATER MASTER PLAN

The purpose of this Report is to present the Conceptual Stormwater Master Plan design for the proposed ~200.30-acre project. The site is located on the northwest corner of the intersection of Midway Road (CR 712) and Interstate 95 in Sections 2 & 3, Township 36 South, Range 39 East, in the St Lucie County, Florida. The latitude of the project site is 27° 22' 36" North and the longitude is 80° 25' 00" West.

This Report is prepared to support the rezoning of the project site to the Planned Development (PD) zoning. The project will consist of residential, commercial, retail, restaurant, office, hotel, entertainment, and recreational uses, and will include buildings, recreational facilities, roadway, parking, walkways, preserve areas, and associated stormwater management, drainage, paving, grading, and utility improvements in accordance with Ft. Pierce land development regulations.

SECTION I: PRE – DEVELOPMENT CONDITIONS

The site is undeveloped and was previously used for cattle and agriculture; and contains existing drainage ditches, drainage canals, wetlands and natural vegetation. The site contains a large ~ 35.54-acre lake adjacent to Interstate I-95 that was excavated as a soil borrow area. The drainage ditches generally drain the site from the west to east and the site ranges in elevation from approximately 21 ft NAVD (in portions of the ditches) to approximately 24 ft NAVD (in the ridge areas). The average elevation of the site is predominately 22 ft NAVD. The on-site wetlands outfall through the site via the existing drainage ditches.

The project site is located in the North St. Lucie River Water Control District (NSLRWCD). Two (2) NSLRWCD Canals drain the site: Canal No. 93 borders the western boundary; and Canal 102 borders the northeast boundary.

The site was previously permitted with the Walton property to the north as The Provences under SFWMD Conceptual Environmental Resource Permit (ERP) No. 56-02538-P. This permit provided for discharge into the NSLRWCD Canals noted above. The allowable discharge into NSLRWCD Canals is the volumetric equivalent of 2 inches per acre per day for the 10-year 3-day storm event. Please refer to the Conceptual Stormwater Master Plan (**Exhibit 1**) showing the discharge rate calculation and direction of flow for the project site.

SECTION II: POST – DEVELOPMENT CONDITIONS

Exhibit 1 depicts the proposed Stormwater Management (SWM) System layout which includes multiple wet detention ponds, canals, and lakes that will outfall into the existing lake adjacent to Interstate I-95. The conceptual SWM System plan design depicts the proposed basin boundaries, flow directions, and control elevation of the existing lake, and includes over 20% of the project site area for lakes, canals, and flow ways.

1. All storm drainage facilities shall conform to Chapters 17 and 18 of the Fort Pierce Code of Ordinances and the “Standard Specifications” adopted by the City Commission on February 13, 1973, as amended.

2. The proposed SWM System will be designed as a Flow Way to convey stormwater drainage runoff into the existing lake. The existing lake will be modified with littoral plantings and will outfall into the NSLRWCD Canal 102.

3. The SWM Flow Way will consist of stormwater piping, canals, ponds, and lakes that will be designed to provide an earthwork fill source for the development areas, and to minimize storm sewer piping and inlets.

4. The Flow Way and existing lake system will be designed to meet NSLRWCD flow capacity requirements and may be modified as part of the SWM System.

5. The Flow Way and existing lake will provide water quality treatment, nutrient reduction, and peak discharge attenuation for the proposed development using littoral plantings and deep cell areas in accordance with South Florida Water Management District (SFWMD) and NSLRWCD regulatory criteria and design requirements, prior to outfall into NSLRWCD Canal 102.

6. The SWM System will consist of storm sewer systems and canals in the developed areas to conduct the site runoff to the wet detention lakes and Flow Way System.

7. It is important to note that the Wavegarden Cove Surf Park will not be part of the stormwater management system. The Surf Park design contains its own water treatment system that will reuse and recirculate the surf lagoon water.

SECTION III: STORMWATER MANAGEMENT DESIGN FOR THE DEVELOPED AREAS

1. The SWM System for the developed areas will consist of a combination of storm sewer systems, canals, lakes and the Flow Way System to provide required water quality treatment, detention storage, conveyance and discharge attenuation in accordance with City of Fort Pierce, NSLRWCD and SFWMD development requirements and regulatory criteria.

2. Planted Stormwater Treatment Areas (STAs), littoral zones, meandering canals, and wet detention systems will be incorporated into the SWM System as part of the required water quality treatment, storage, conveyance and discharge attention system.

3. Treated stormwater will be used to maintain recommended wetland hydro-periods for all wetland areas to remain.

4. Normal water/control elevations, design storm peak stages (10 yr/25 yr/100 yr), and allowable discharge rates and volumes for the SWM System will be determined by detailed hydraulic and hydrologic modelling, based on City of Fort Pierce, NSLRWCD and SFWMD regulatory criteria.

5. Minimum Finished Floor elevations will be set by the 100 yr/3-day peak stage, perimeter berms and canal conveyance minimum elevations will be set by the 25 yr/3-day design stage, and minimum road grades and minimum parking area elevations will be set by the 10 yr/1-day peak stage.

SECTION IV: PERMITTING

The project will require stormwater management system construction permit approvals from:

- City of Ft. Pierce
- Army Corps of Engineers (ACOE)
- NSLRWCD
- SFWMD

Several Pre-Application Meetings were held with the City, NSLRWCD, and SFWMD. The project will require multiple SFWMD Environmental Resource Permits (ERP) depending on the project phasing:

- A Conceptual SFWMD Individual ERP is required for the total site development;
- A Construction SFWMD General ERP is required for the Phase 1 project development;
- Additional SFWMD General ERPs will be required for future development phases.

An ACOE master ERP will be required for the project and SFWMD construction dewatering and irrigation water use permits will also be required for each phase of development.

END OF CONCEPTUAL SURFACE WATER MASTER PLAN

LEGEND

C.E. = CONTROL ELEVATION
CS = CONTROL STRUCTURE
= DRAINAGE FLOW DIRECTION
= BASIN BOUNDARY
= DRAINAGE STRUCTURES AND PIPING
= PROPOSED FLOW WAY / LAKE

SITE DATA	
EXISTING ZONING	AG-2.5
EXISTING FLU	MXD
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWMB ACREAGE	35.45 ac
OPEN SPACE REQUIRED	40.60 ac
OPEN SPACE PROVIDED	43.36 ac

NOTES:

1. ALL STORM DRAINAGE FACILITIES SHALL CONFROM TO CHAPTERS 17 AND 18 OF THE FORT PIERCE CODE OF ORDINANCES AND THE "STANDARD SPECIFICATIONS" ADOPTED BY THE CITY COMMISSION ON FEBRUARY 13, 1973, AS AMENDED.
2. ALL ELEVATIONS SHOWN ARE IN N.A.V.D.

Allowable Discharge

a) Evaluation Area (A)

Basin Area = ***200.30 Ac.***

b) Allowable Discharge Rate

10yr. - 3 day Storm Discharge Rate[1] = ***16.83 cfs***

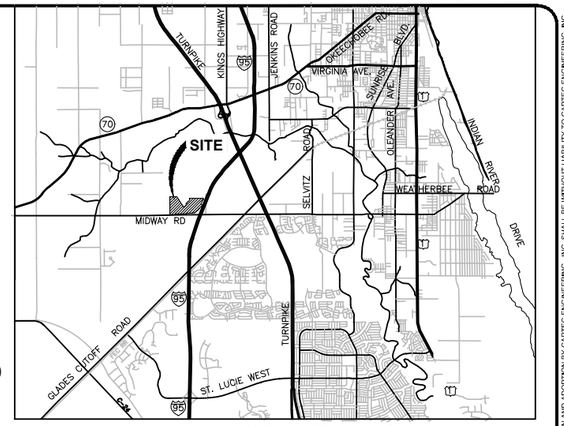
25 yr. - 3 day Storm Discharge = (16.83 cfs * 1.25) = ***21.04 cfs***

1. NSLRWCD has a 2" allowable discharge restriction for the 10yr/3day storm event over 24 hours

NORTH

200 0 200 400

SCALE: 1" =400'



LOCATION MAP

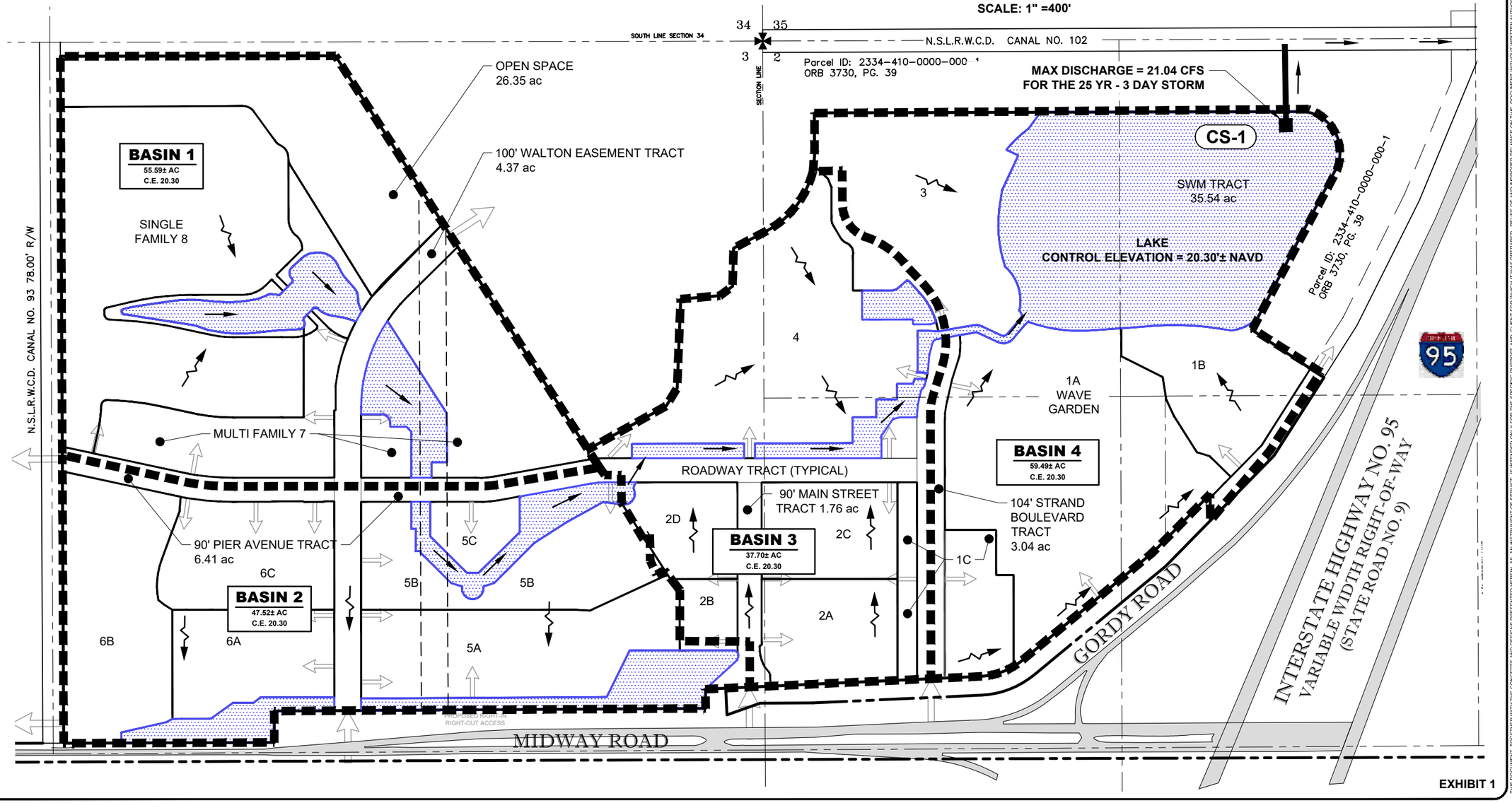


EXHIBIT 1

CAPTEC Engineering, Inc.
Civil Engineering Professionals
• 301 NW Flagler Ave
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE: 03/27/20
DRAWN BY: MDB
DESIGNED BY: SPM
CHECKED BY: JWC
PROJECT No.: 1888
HORZ. SCALE: 1" = 400'
VERT. SCALE: N/A
CADD FILE:

NO.	DATE	BY	REVISIONS

SCALE VERIFICATION
0 1
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

WILLOW LAKES, LLC
CITY OF FT. PIERCE, FLORIDA
CONCEPTUAL STORMWATER MASTER PLAN

JOSEPH W. CAPRA
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

JOB No.: 1806
SHEET 1 OF 1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADOPTION BY CAPTEC ENGINEERING, INC. SHALL BE WITHOUT LIABILITY TO CAPTEC ENGINEERING, INC.

EW Consultants, Inc.
Natural Resource Management, Wetland, and Environmental Permitting Services

ENVIRONMENTAL ASSESSMENT

WILLOW LAKES

FORT PIERCE, FLORIDA

Prepared for:

Willow Lakes, LLC

Prepared by:

EW Consultants, Inc.

March 2020

© 2020 EW Consultants, Inc.

1000 SE Monterey Commons, Suite 208 • Stuart, FL 34996 • 772-287-8771 • Fax 772-287-2988

www.ewconsultants.com

I. INTRODUCTION –

This Environmental Assessment documents and summarizes the various natural resources and man-made alterations present on the property referred to as the Willow Lakes site. The project site, as shown on Figure 1, in Appendix A is ± 200.3 acres and is located at the northwest corner of I-95 and Midway Road (S.R. 709). The property lies within Sections 2 & 3, Township 36 South, Range 39 East in the City of Fort Pierce, St. Lucie County, Florida (see Figure 2, USGS Quadrangle Map in Appendix A).

II. GENERAL PROPERTY DESCRIPTION –

The property is bounded to the north and west by undeveloped lands, to the east by undeveloped land and the Gordy Road, and to the south by Midway Road (please refer to Figure 3, Aerial Photograph, in Appendix A for existing surrounding conditions). The property is undeveloped and is comprised of a combination of open and wooded pastures, areas dominated by exotic vegetation, man-made surface waters, and freshwater wetlands. Electrical transmission lines are present on the site, as well; one set in a south-to-north orientation and one in a southeast-to-northwest orientation. Detailed discussions of land cover types are described in subsequent sections of this report.

III. SOIL TYPES -

A Soils Report generated by the United States Department of Agriculture/Natural Resources Conservation Service is provided in Appendix B of this report. The soils report identifies mainly sand-based soils and open water throughout the project site.

IV. EXISTING LAND COVER TYPES –

The following is a summary of the land cover types and vegetative communities found on the subject site. Land cover and vegetation community classifications are mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida Department of Transportation. Field reconnaissance and aerial photograph interpretation were employed in the mapping of the vegetative communities on the subject property.

There are several different FLUCFCS classifications present on the site based on fieldwork conducted by EW Consultants, Inc. in February, 2020. They include Improved Pastures (211); Woodland Pastures (213); Pine Flatwoods (411); Brazilian Pepper (422); Reservoirs larger than 10 acres but less than 100 acres (533); and Freshwater Marshes (641). The Electrical Transmission Lines on-site (832) contain Improved Pasture (211), Woodland Pasture (213), and Freshwater Marsh (641) within their alignments. A graphic of the observed land cover types is included as Figure 4 in Appendix A of this report. The land cover types on the property are described as follows:

211 Improved Pastures

This is a sub-category of the FLUCFCS Agriculture classification and includes areas that contain a sparse tree canopy or no tree canopy at all. Dominant vegetation includes a variety of non-native grass species that have been introduced to the property as forage for livestock as well as naturally-occurring ruderal grasses and weeds. These species are typical of pasture lands in the region and includes, but is not limited to, smut grass, Bahia grass, torpedo grass, Caesar-weed, beggars ticks, and ragweed. Native canopy trees that are present within this land cover type include slash pine, cabbage palm, laurel oak, and live oak. Other native species were also observed in areas where native trees occur and include saw palmetto, gallberry, grape vine, smilax vine, poison ivy, and swamp fern.

213 Woodland Pastures

This classification and includes areas where woodlands are used for cattle grazing. While the vegetative understory layer has been cleared, native canopy trees remain and native grasses have partially regenerated. For the 213 areas on the subject site, the tree canopy is dominated by slash pine (*Pinus elliottii*), and can be found generally within the far western and far eastern edges of the site (small patches occur in the south-central portion of the site), typically surrounded by improved pasture. These areas have been impacted by years of cattle grazing activities. Slash pine and various broomsedge and bluestem grasses are the dominant plants species within this land cover category.

411 Pine Flatwoods

This is a sub-category of the FLUCFCS Upland Forests classification and includes areas where the tree canopy is dominated by slash pine (*Pinus elliottii*). The soil is typically poorly to moderately well-drained with occasional organic layers associated with the sandy layers. The native areas of pine flatwoods are generally found in the north-central portion of the site. While most of this habitat appears to be in good ecological condition, lack of regular land management activities such as burning and roller-chopping have allowed the understory plants to dominate thus restricting native grasses from spreading. Slash pine (*Pinus elliottii*), saw palmetto (*Serenoa repens*), and gallberry (*Ilex glabra*) are the dominant plants species within this land cover category.

422 Brazilian Pepper

These areas on-site are dominated by the exotic Brazilian pepper tree. This tree tends to dominate a landscape once present, shading out the forest floor and prohibiting desirable native species from establishing. Therefore, these areas provide very little wildlife habitat potential.

533 Reservoirs Larger Than 10 Acres/Less Than 100 Acres

A man-made reservoir exists within the northeastern portion of the site just west of I-95/Gordy Road. It is generally rectangular in shape, and its banks consist of cattails, Carolina willow, primrose willow, torpedo grass, and other weedy species.

641 Freshwater Marshes

This is a sub-category of the FLUCFCS wetlands classification and includes long-hydroperiod aquatic vegetation generally associated with depressional wetlands. These wetlands may contain water throughout the year, or go completely dry during prolonged drought periods. Such habitats provide a variety of wildlife with foraging and nesting opportunities. The marsh wetlands occur throughout the site within the pasture areas (both improved and woodland), and are generally in poor to fair ecological condition due to the historic agricultural use of the site as well as the routine maintenance of the powerline easements. The vegetation in these marshes predominantly includes the following species: chestnut sedge (*Fimbristylis spadicea*), seedbox (*Ludwigia alternifolia*), St. John's wort (*Hypericum brachyphyllum*), pickerelweed (*Pontederia cordata*), bladderwort (*Utricularia* spp.), maidencane (*Panicum hemitomon*), Tracy's beakrush (*Rhynchospora tracy*), spatterdock (*Nuphar* spp.), corkwood (*Stillingia aquatica*), and duck potato (*Sagittaria graminea*).

832 Electrical Transmission Lines

There are two sets of electrical transmission lines that are present within the project site; one aligned south-to-north within the eastern portion of the property and one aligned southeast-to-northwest located in the central and northwest portions of the project site. The land cover underneath the powerlines (and therefore within the easements of the powerlines) include Improved Pasture (211), woodland pasture (213), and Freshwater Marsh (641) as described above.

V. LISTED SPECIES DISCUSSION –

Because of the various types of land cover found on the property, the project site provides potential foraging and nesting habitat for a variety of state and federally listed wildlife species. In particular, the on-site water resources (wetlands and reservoir) could provide habitat for several listed species, including a myriad of wading birds such as wood stork, roseate spoonbill, sandhill cranes, as well as various ibis and herons. Protected avian species observed foraging on-site at the time of the site visits included the state threatened sandhill crane.

Listed species which may nest or forage within upland habitats on-site include the federally and state endangered red-cockaded woodpecker and the federally and state threatened crested caracara. The likely presence of the woodpecker is minimal due to its habitat preference for old longleaf pine trees with soft cores, which is lacking on-site. Caracara prefer open pasture with scattered and isolated cabbage palms, which does exist on the project site. However, recent caracara surveys performed on adjacent sites along Midway Road just west of I-95 revealed no nesting pairs in the area.

Upland areas, in particular the pine flatwoods and woodland pastures, serve as potential burrowing and foraging habitat for the state threatened gopher tortoise. During the recent site visits, several potentially occupied burrows of this species were observed within the project site's upland areas. A systematic gopher tortoise survey will be required within the entire development footprint's upland area of the site prior to new construction activities, and tortoises will have to be relocated to a state-approved receiver site per Florida Fish & Wildlife Conservation Commission (FFWCC) guidelines.

A search of the FFWCC water bird colonies database is shown on Figure 5 in Appendix A. The data reveal that numerous colonies within 20 miles of the project site have been documented, mainly along major waterways and wetland systems in the region. Since the foraging range of a wood stork is generally recognized as 18.6 miles from its colony, the project site is located within a wood stork foraging area. Therefore, aquatic features within the boundaries of the project site may be used as foraging areas by the wood stork as well as other wading birds.

Although the bald eagle has been removed from the Endangered Species Act list, it remains protected under the Bald and Golden Eagle Protection Act. The subject property contains mature slash pines that could provide potential nesting opportunities for bald eagles and is located within a few miles of major foraging areas, such as the St. Lucie River and Indian River Lagoon, and numerous regional and local waterways and lakes. Bald eagles have recently been observed in-flight in the immediate area. However, no bald eagle nests were observed on-site during the 2020 site visits. The closest recorded nests are located to the southwest (SL009) along S.R. 609 and northeast (SL006) along just east of I-95 at 10-Mile Creek. A map showing Florida Fish and Wildlife Conservation Commission documented bald eagle nests is attached as Figure 6 in Appendix A.

Non-listed species observed on-site during the recent site visits include: red-shouldered hawk, mourning dove, blue jay, mocking bird, gray cat-bird, pileated woodpecker, raccoon, wild turkey, feral hogs (tracks and scat), white-tailed deer (tracks), coyote (scat), among others.

APPENDIX A

Figure 1 – Location Map

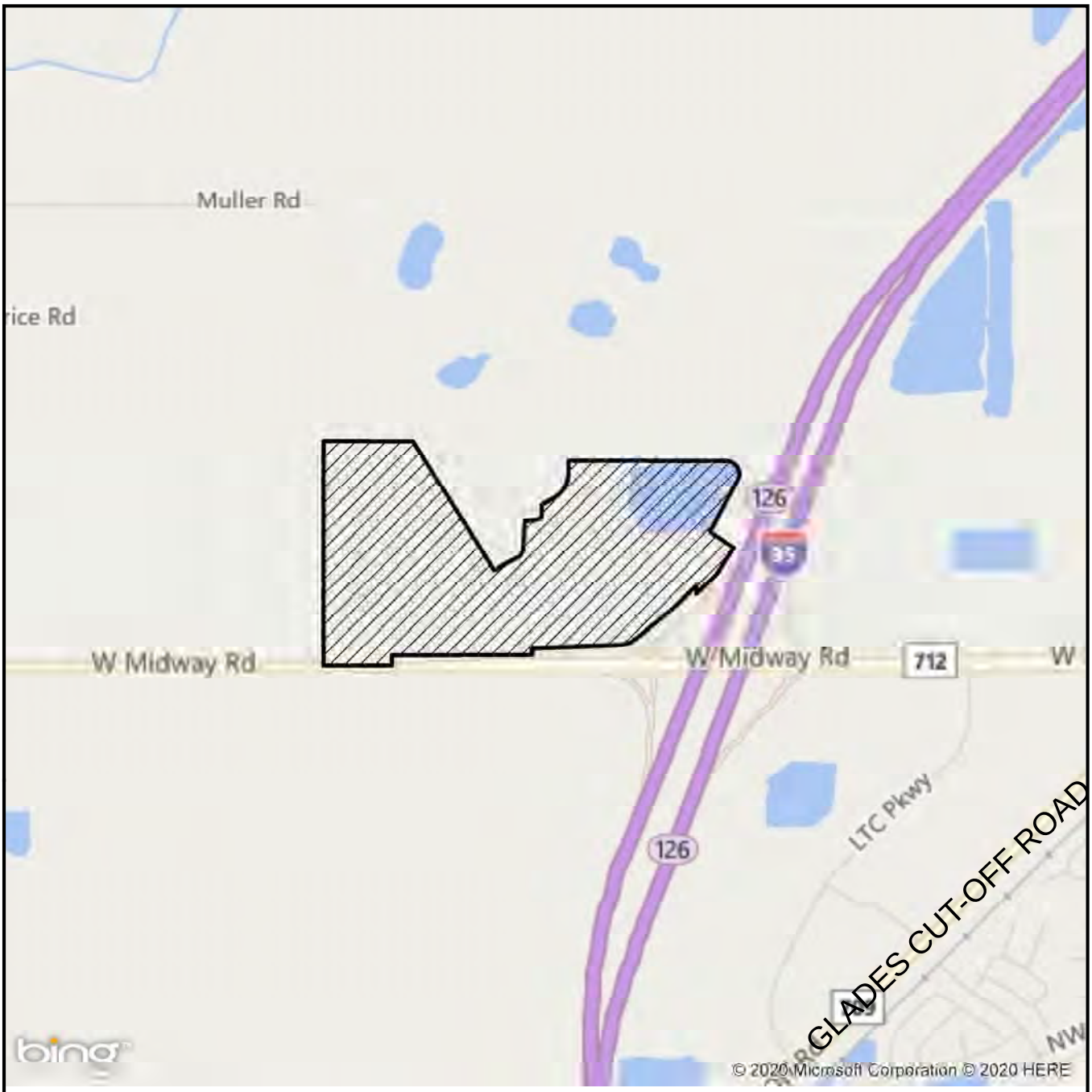
Figure 2 – USGS Quadrangle Map

Figure 3 – 2018 Aerial Photograph

Figure 4 – FLUCFCS/Land Cover Map

Figures 5 – FFWCC Wading Bird Colonies

Figure 6 – FFWCC Eagle Nest Locations



LEGEND

▨ - SITE (200.2+/- AC)

0 2,000 Feet

N

WILLOW LAKES
LOCATION MAP

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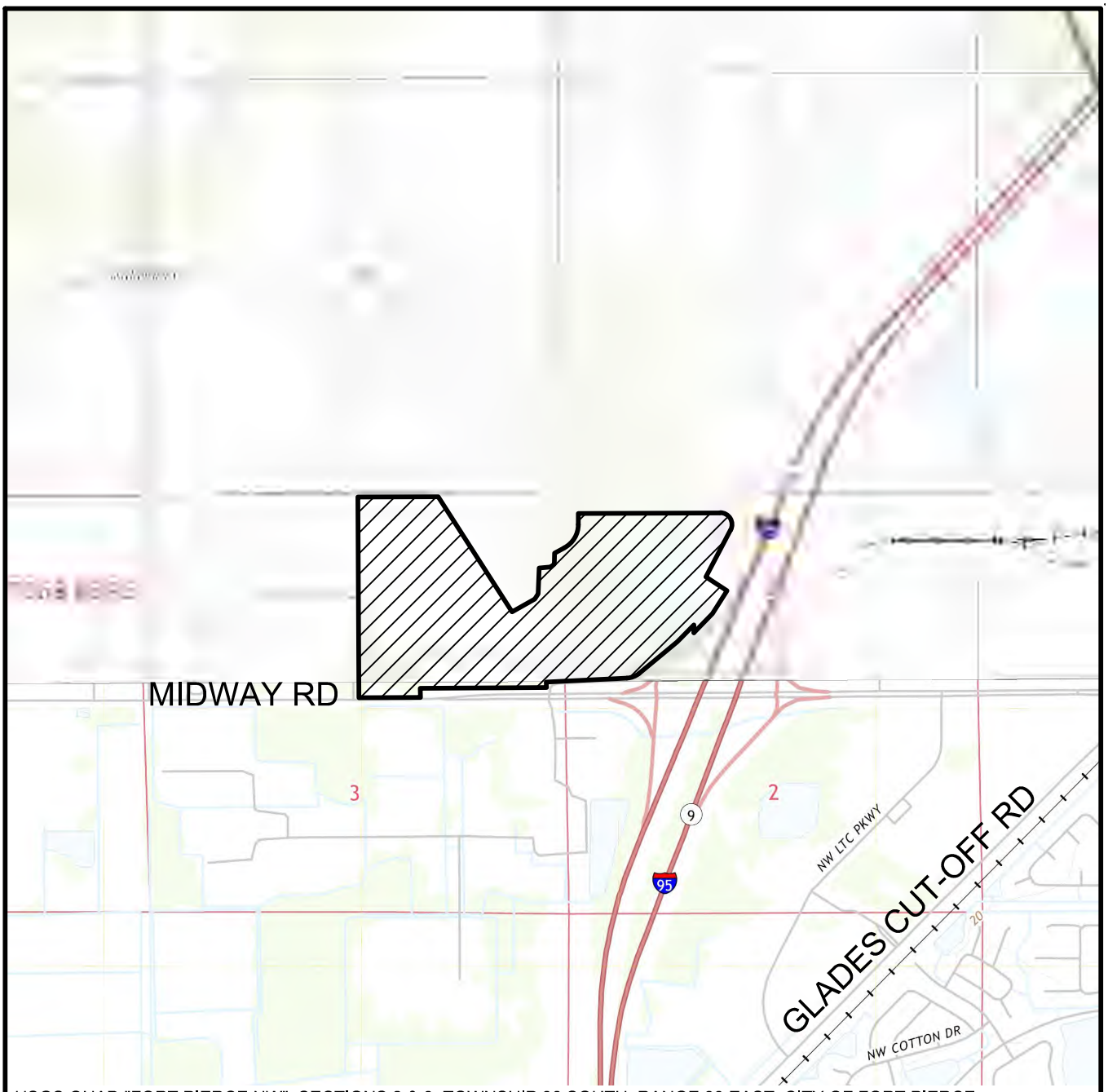
EW Consultants, Inc.

1000 SE Monterey Commons Blvd., Suite 208
Stuart, FL 34996
772-287-8771 Fax 772-287-2988
www.ewconsultants.com

MAR 2020

FIGURE

1



USGS QUAD "FORT PIERCE NW", SECTIONS 2 & 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST, CITY OF FORT PIERCE, ST LUCIE COUNTY, FLORIDA, LATITUDE 27°22'35" LONGITUDE -80°25'04"

LEGEND

- SITE (200.2± AC)

0 2000

SCALE IN FEET

WILLOW LAKES

QUAD

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STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

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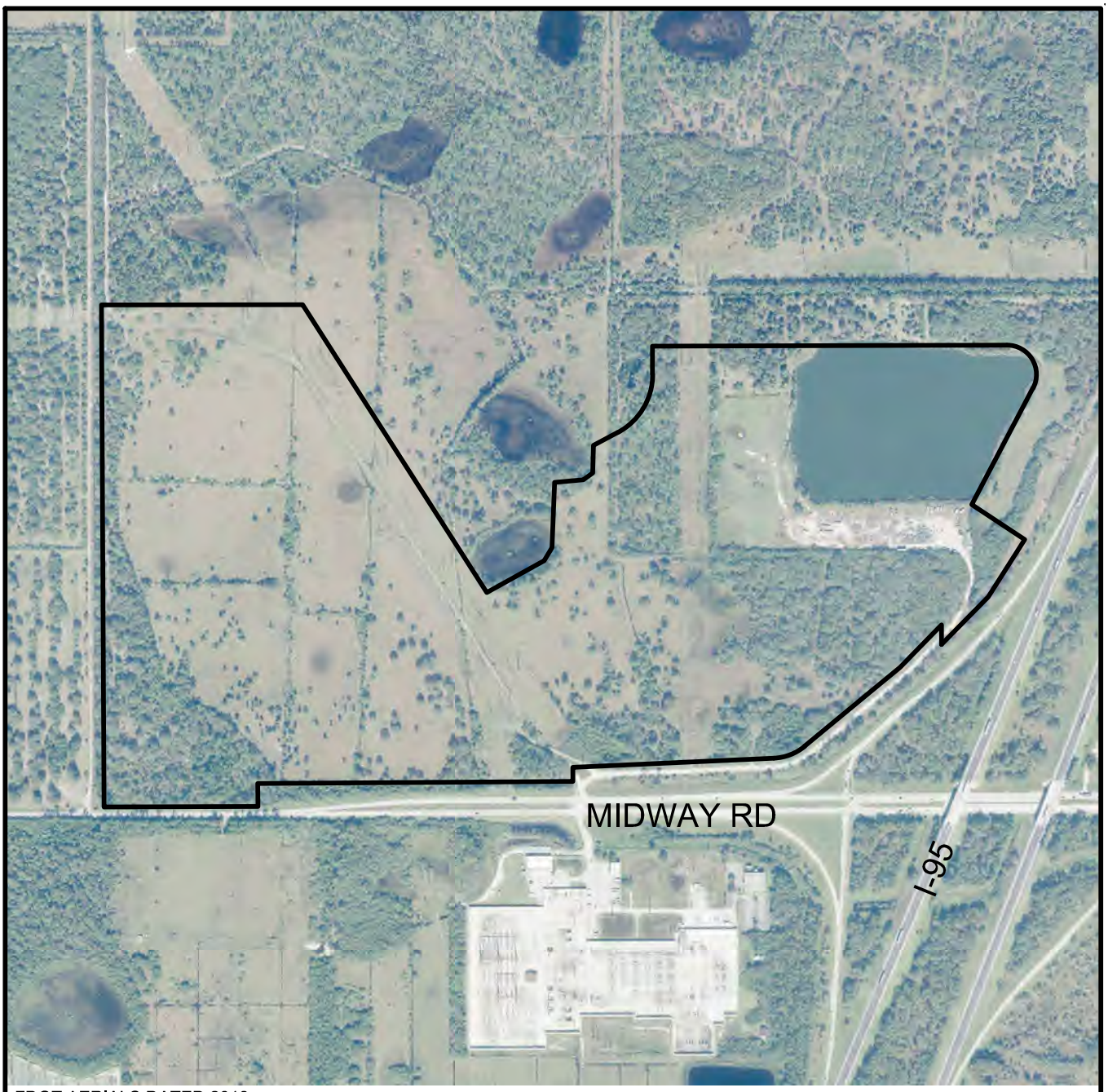
FIGURE

2

Willow Lakes.dwg QUAD



FDOT AERIALS DATED 2018

0 800
SCALE IN FEET

WILLOW LAKES
AERIAL

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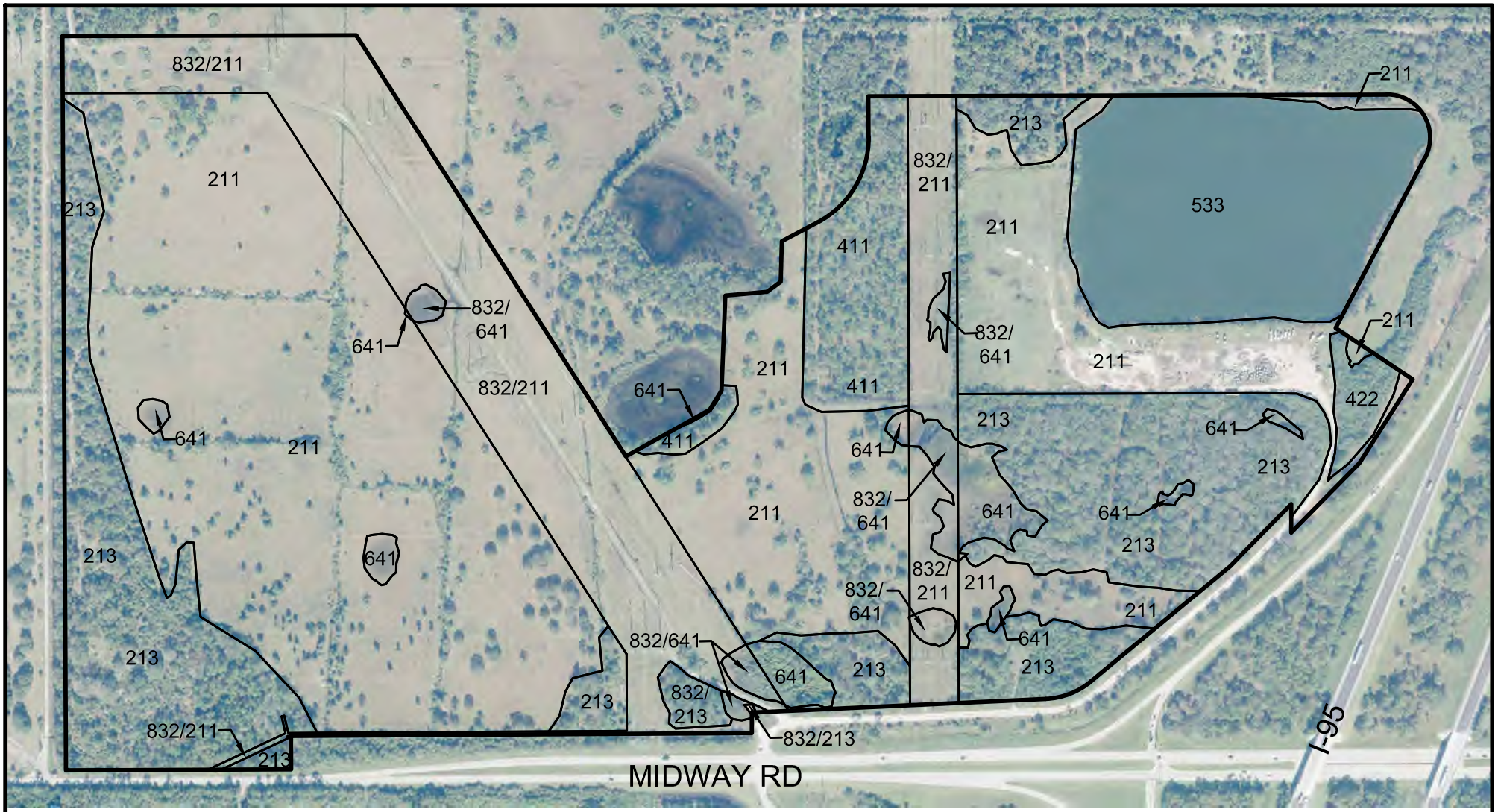
MAR 2020

FIGURE
3

Willow Lakes.dwg AERIAL



FDOT AERIALS DATED 2018

LEGEND

211 - IMPROVED PASTURE (91.4± AC)
213 - WOODLAND PASTURES (39.6± AC)
411 - PINE FLATWOODS (7.9± AC)
422 - BRAZILIAN PEPPER (1.5± AC)
533 - RESERVOIRS MORE THAN 10ACS (19.6± AC)
641 - FRESHWATER MARSHES (3.7± AC)
832/211 - ELECTRICAL POWER TRANSMISSION LINE/IMPROVED PASTURE (33.1± AC)
832/213 - ELECTRICAL POWER TRANSMISSION LINE/WOODLAND PASTURES (0.8± AC)
832/641 - ELECTRICAL POWER TRANSMISSION LINE/FRESHWATER MARSHES (2.6± AC)
TOTAL SITE (200.2± AC)

0 500
SCALE IN FEET

WILLOW LAKES FLUCCS

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STUART, FL 34996
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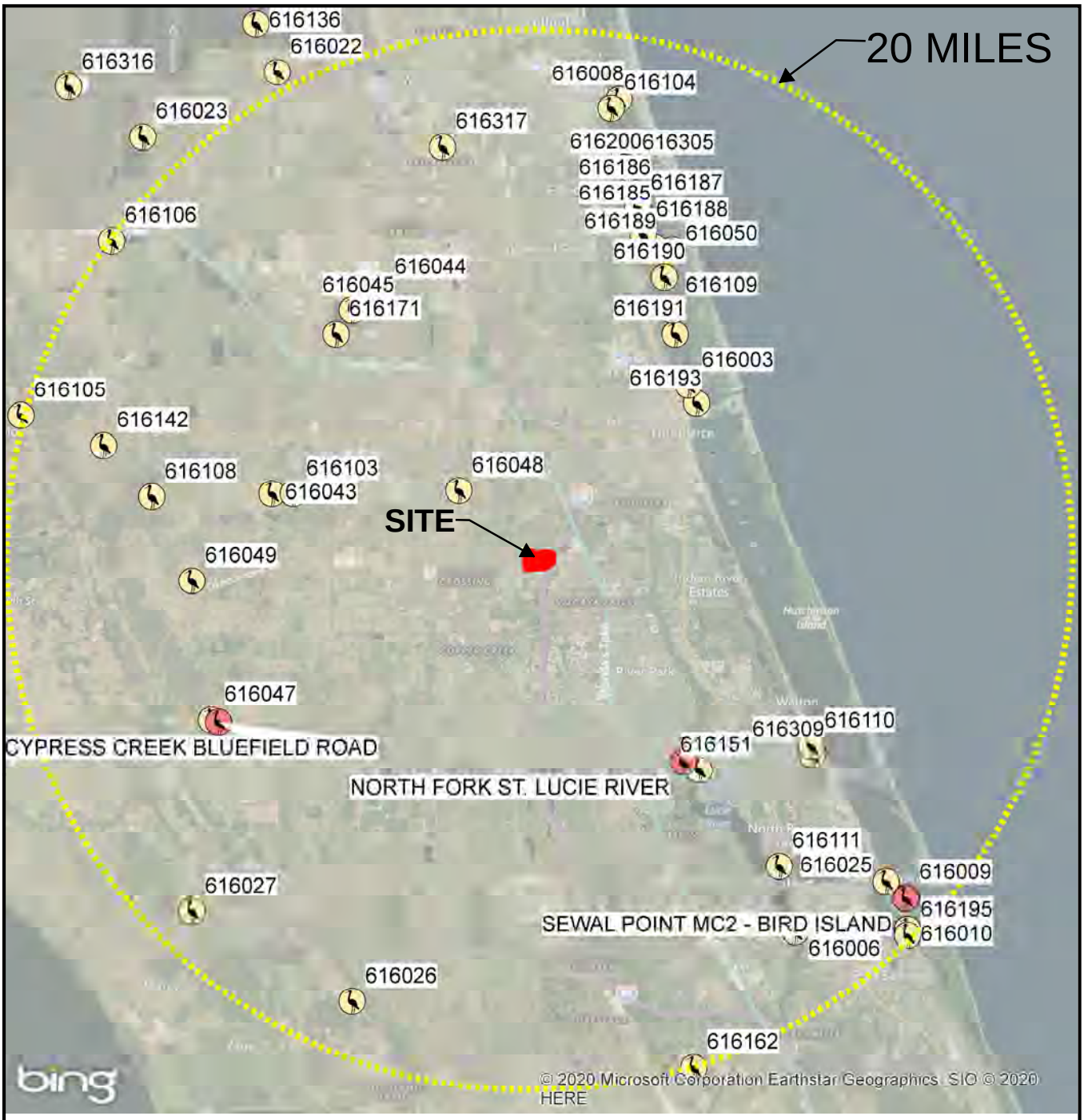
FIGURE 4

Willow Lakes.dwg FLUCCS



LEGEND

0 7 Miles

USFWS WOST ACTIVE COLONIES 2009-2018

FWC WADING BIRD ROOKERIES 1999

N

WILLOW LAKES

FFWCC WADING BIRD COLONIES DATABASE

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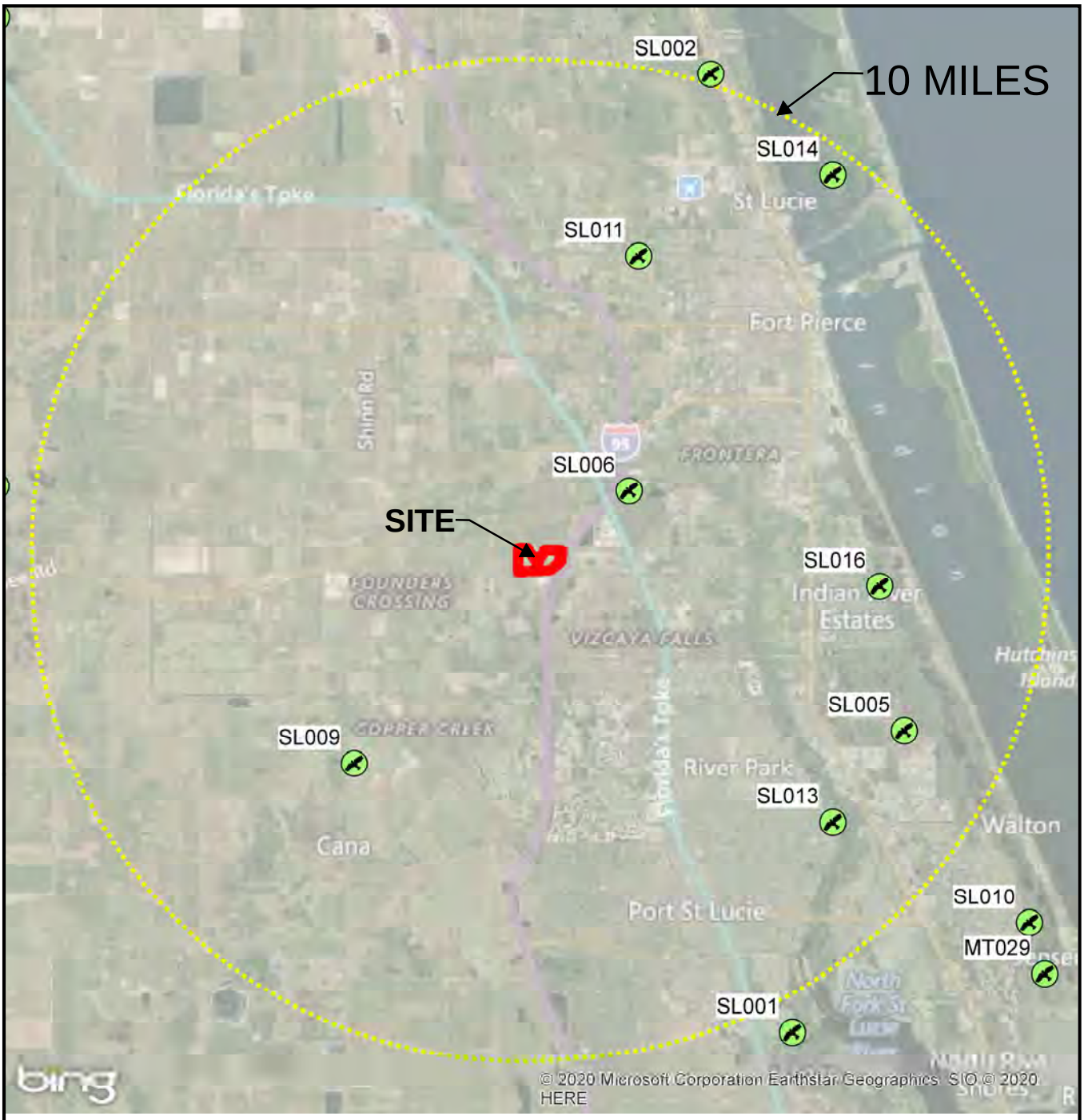
FIGURE

5



0 3 Miles

LEGEND

FWC EAGLE NESTING 2016 DATA

WILLOW LAKES
FFWCC EAGLE NESTS

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MAR 2020

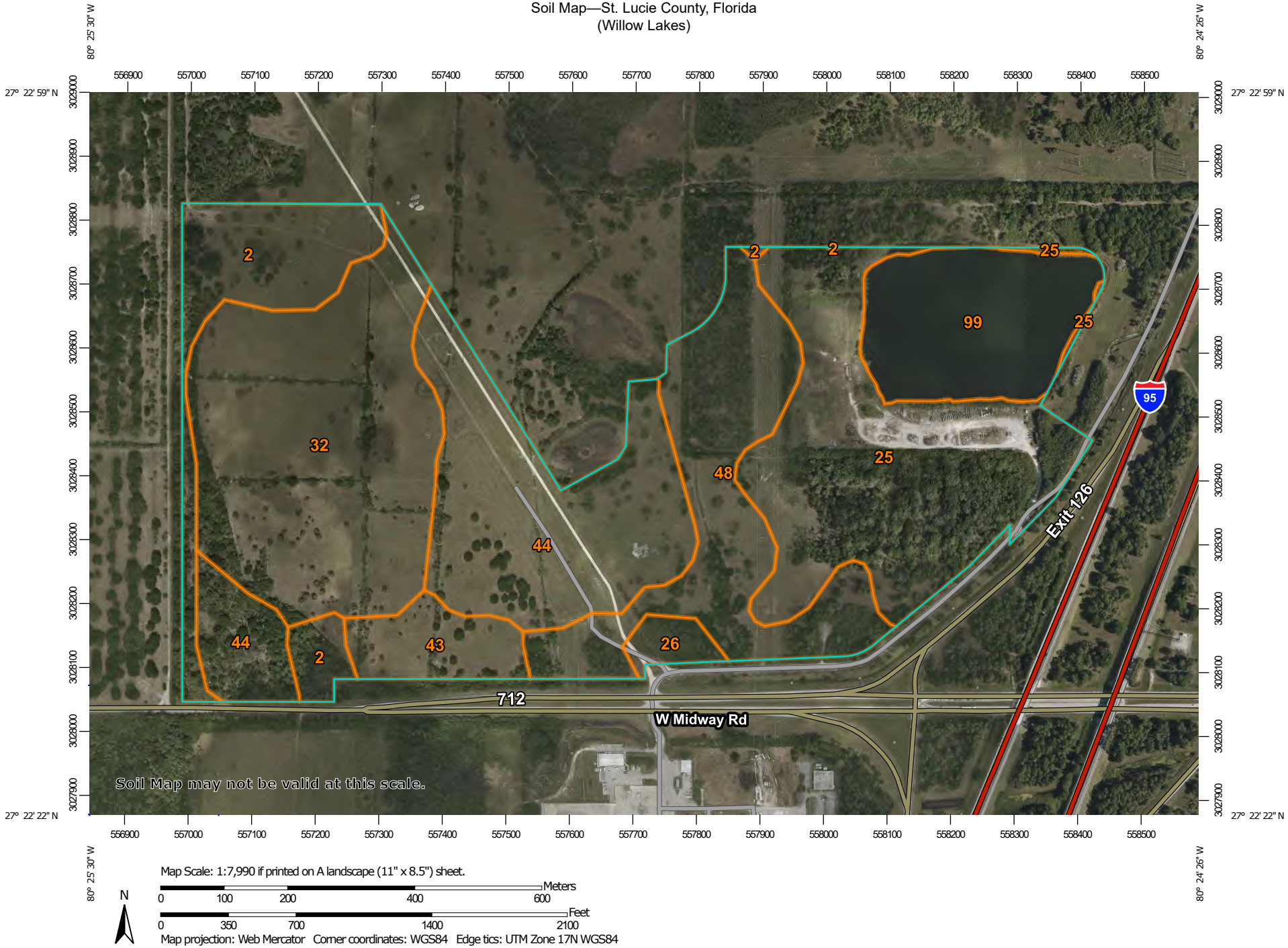
FIGURE

6

APPENDIX B

USDA/NRCS Soils Report

Soil Map—St. Lucie County, Florida
(Willow Lakes)



Map Scale: 1:7,990 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: St. Lucie County, Florida
Survey Area Data: Version 13, Feb 3, 2020

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

Date(s) aerial images were photographed: Mar 6, 2019—Mar 23, 2019

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farmton sands	17.6	8.8%
25	Nettles and Oldsmar sands	41.7	20.8%
26	Oldsmar sand, depressional	2.4	1.2%
32	Pineda sand, 0 to 2 percent slopes	45.6	22.8%
43	Susanna and Wauchula sands	7.2	3.6%
44	Tantile and Pomona sands	37.6	18.8%
48	Wabasso sand, 0 to 2 percent slopes	29.0	14.5%
99	Water	19.2	9.6%
Totals for Area of Interest		**200.2**	**100.0%**

BEACH/DUNE SYSTEM PROTECTION PLAN - N/A

LIGHTING PLAN - N/A

DESIGN REVIEW SUBMITTALS - N/A

TRAFFIC IMPACT REPORT - PENDING

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CONCURRENCY
CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant/Walton	MXD	PD
South	Vacant/LTC Ranch, FPL	CG/CH/ROI/CS (City of PSL) MXD and T/U (SL County)	TBD (City of PSL approved DRI) & PUD
East	Tropicana Mfg.	INST/IND	IL
West	Vacant/Walton	MXD	PD

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	MXD	Agriculture - 2.5 (AG2.5)	80 du's/1,306,800 s.f. (4,356,000 s.f. aquaculture)	200.3	X
****Proposed**	MXD	Planned Development (PD)	1,000 du's / 675,000 s.f. / 700 hotel rooms	200.3	N/A

II. Public Facilities Information:

A. Potable Water: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

B. Wastewater: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	888.7 ac.	936.54	+47.84
Urban District	5 acres per 1,000 people	222.18 ac.	234.14	+11.96
Community	2.5 acres per 1,000 people	111.09 ac.	117.07	+5.98
Neighborhood	1.36 acres per 1,000 people	60.43 ac.	63.68	+3.25

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

CURRENT
Single Family (SF) = 80du
Multi-family (MF) = N/A

PROPOSED
Single Family (SF) = 300du
Multi-family (MF) = 700du

	K-8	High
School Name	Samuel Gaines Academy	Fort Pierce Central
City	Fort Pierce	Fort Pierce
Distance	5 miles	5 miles
Current Zoning/FLU Enrollment Demand	80du x 0.405 = students x 0.7 = 23	80du x 0.405 = students x 0.3 = 10
****Proposed Zoning/FLU Enrollment Demand**	SF = 300du x 0.405 = students x 0.7 = 85 MF = 700du x 0.207 = students x 0.7 = 101	SF = 300du x 0.405 = students x 0.3 = 36 MF = 700du x 0.207 = students x 0.3 = 44
****Change in Demand**	+163	+70

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	80 units = 11 yards (8 yards/60 units = 0.133 yards x 80 units = 11 yards)
****Proposed Zoning/FLU**	1000 units = 133 yards (8 yards/60 units = 0.133 yards x 1000 units = 133 yards)
***Change in Demand**	+122 yards

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	**See Exhibit 1 to Conceptual Stormwater Master Plan addressing allowable discharge**

III. Transportation Analysis: *Complete ITE Trip Generation Form (Attached)*

G. Transportation Analysis: Complete ITE Trip Generation Data Form Most recent ITE Code for use; HCM Roadway Capacity		**PENDING TRANSPORTATION IMPACT REPORT**
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning/FLU		
****Proposed Zoning/FLU**		
***Change in Demand**	Trips	Trips
Impact to Capacity		

IV. Project Description

PHASING
Is this project (phase) part of a larger project? ☐ Yes ☒ No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: Single Family: Multifamily:
Non-residential (square footage):
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total)

RESIDENTIAL DATA					
Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached	8	150			
Single-family, attached	8	150			
Multi-family	7	700			
Other (specify)					

NON-RESIDENTIAL DATA See Table 1.1 in the Planned Development Guidelines					
Type(s) specify	**Phase**	**Square footage**	**Acres**	**Expecting beginning date**	**Expected completion date**

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. ☐ Yes ☒ No

B. 1. Does this application involve demolition or re-use of any structure(s)? ☐ Yes ☒ No
If yes, what is the size of the structure(s) to be demolished or re-used? _____

2. What is the current use of the structure to be demolished or re-used? _____

3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? ☐ Yes ☒ No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

A. POTABLE WATER

Current Zoning:

80 du x 2.6 x 100 gpd	= 20,800	gpd
4,356,000 x 0.125	= 544,500	gpd
	565,300	gpd

Proposed Zoning:

1000 du x 2.6 x 100 gpd	= 260,000	gpd
675,000* s.f. x 0.125	= 84,375	gpd
700 hotel rooms x 100** gpd	= 70,000	gpd
	414,375	gpd

Change in Demand: -150,925 gpd

*650,000 s.f. + 25,000 s.f. for Surf Pool and Outdoor Entertainment ancillary facilities

** Florida Administrative Code Section 64E-6.008 Table #1

B. WASTEWATER

Current Zoning:

80 du x 2.6 x 100 gpd	=	20,800 gpd
4,356,000 x 0.1	=	435,600 gpd
		456,400 gpd

Proposed Zoning:

1000 du x 2.6 x 100 gpd	=	260,000 gpd
675,000* s.f. x 0.1	=	67,500 gpd
700 hotel rooms x 100** gpd	=	70,000 gpd
		397,500 gpd

Change in Demand: -58,900 gpd

*650,000 s.f. + 25,000 s.f. for Surf Pool and Outdoor Entertainment ancillary facilities

** Florida Administrative Code Section 64E-6.008 Table #1

RECEIVED
CARTER & BURGESS

FLORIDA DEPARTMENT OF STATE
Sue M. Cobb
Secretary of State
DIVISION OF HISTORICAL RESOURCES

April 19, 2006

Mr. Rob Robbins
South Florida Water Management District
P.O. Box 24680
West Palm Beach, Florida 33416-4680

Re: DHR No. 2006-2552B / Received by DHR: March 31, 2006
Application No.: 060323-13
Applicant: Midway Properties, LLC, Willow Lakes, LLC, & Res River, LLC
Project: Provences
St. Lucie County

Dear Mr. Robbins:

Our office received and reviewed the referenced project in accordance with Chapters 267 and 373, *Florida Statutes*, Florida's Coastal Management Program, and implementing state regulations, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places* (NRHP), or otherwise of historical, architectural or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Our review of the Florida Master Site File indicates that no significant archaeological or historical resources are recorded within the project area. This office is rescinding its previous letter dated April 11, 2006 and is no longer requesting a survey be conducted. It was brought to our attention, by Kim Mayer of Carter & Burgess, Inc., that the area has been subjected to a professional cultural resource assessment survey Furthermore, due to the location and/or nature of the project it is unlikely that any such site will be affected.

If there are any questions concerning our comments or recommendations, please contact Scott Sorset, Historic Preservationist, by phone at (850)245-6333, or by electronic mail at srsorset@dos.state.fl.us. We appreciate your continued interest in protecting Florida's historic properties.

Sincerely,

Frederick P. Gaske

Frederick P. Gaske, Director, and
State Historic Preservation Officer

Xc: Pamela Miller, Carter and Burgess, Inc.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6452
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Zoning Atlas Map Amendment

Application submission shall include the following:

●**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

●**Planning Board**: One (1) original and (16) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

●**City Commission**: One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

In addition to a complete application, packets shall include:

- ☐ Warranty Deed & Legal Description
- ☐ St. Lucie County Property Record Card
- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ N/A 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: TBD - General Location: Lying northwesterly of the interchange of W. Midway Road and I-95 (Section 02 and 03, Township 36S, Range 39E)
2. Property Tax ID(s): 3302-212-0001-000-4
3. Total Acreage: 200.3 acres
4. Existing Future Land Use Designation: MXD
5. Existing Zoning Classification: AG 2.5
6. Proposed Zoning Classification: PD
7. Other applications being submitted concurrent with this application, if any: Development Review Application and Concurrency Capacity Analysis

8. Describe the existing uses, improvements and structures on the amendment lands: Vacant land under cattle lease

9. Are there any identified or possible historical structures on the amendment lands? No

10. The reason for making this request: Applicant intends to develop the property as a mixed-use project, as more specifically set forth in the Planned Development Guidelines submitted herewith.

11. CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant/Walton	MXD	PD
South	Vacant/LTC Ranch, FPL	CG/CH/ROI/CS (City of PSL) MXD and T/U (SL County)	TBD (City of PSL approved DRI) & PUD
East	Tropicana Mfg.	INST/IND	IL
West	Vacant/Walton	MXD	PD

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	MXD	Agriculture - 2.5 (AG2.5)	80 du's/1,306,800 s.f. (4,356,000 s.f. aquaculture)	200.3	X
Proposed	MXD	Planned Development (PD)	1,000 du's / 675,000 s.f. / 700 hotel rooms	200.3	N/A

II. Public Facilities Information:

A. Potable Water: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6 = persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day
Proposed Zoning	Total gallons per day
Change in Demand	**Total gallons per day**

B. Wastewater: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day
Proposed Zoning	Total gallons per day
Change in Demand	**Total gallons per day**

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	888.7 ac.	936.54	+47.84
Urban District	5 acres per 1,000 people	222.18 ac.	234.14	+11.96
Community	2.5 acres per 1,000 people	111.09 ac.	117.07	+5.98
Neighborhood	1.36 acres per 1,000 people	60.43 ac.	63.68	+3.25

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

CURRENT
Single Family (SF) = 80du
Multi-family (MF) = N/A

PROPOSED
Single Family (SF) = 300du
Multi-Family (MF) = 700du

	K-8	High
School Name	Samuel Gaines Academy	Fort Pierce Central
City	Fort Pierce	Fort Pierce
Distance	5 miles	5 miles
Current Zoning Enrollment Demand	80du x 0.405 = students x 0.7 = 23	80du x 0.405 = students x 0.3 = 10
Proposed Zoning Enrollment Demand	SF = 300du x 0.405 = students x 0.7 = 85 MF = 700du x 0.207 = students x 0.7 = 101	SF = 300du x 0.405 = students x 0.3 = 36 MF = 700 du x 0.207 = students x 0.3 = 44
Change in Demand	+163	+70

E. Solid Waste:
2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units

Demand Analysis	Maximum
Current Zoning	80 units = 11 yards (8 yards/60 units = 0.133 yards x 80 units = 11 yards)
Proposed Zoning	1000 units = 133 yards (8 yards/60units = 0.133 yards x 1000 units = 133 yards)
Change in Demand	+122 yards

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See Exhibit 1 to Conceptual Stormwater Master Plan addressing allowable discharge

III. Transportation Analysis PENDING TRANSPORTATION IMPACT REPORT

G. Traffic Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning		
Proposed Zoning		
Change in Demand	Trips	Trips
Impact to Capacity		

12. Name of Owner(s): Willow Lakes, LLC
Mailing Address: 433 S. Main St. Ste 300
City West Hartford State CT Zip 06110
Phone # 561-827-5742
E-mail: clabonte@eaglebridgecapital.com

13. Name of Applicant: Willow Lakes, LLC
Mailing Address: 433 S. Main St. Ste 300
City West Hartford State CT Zip 06110
Phone # 561-827-5742 Fax #
E-mail: clabonte@eaglebridgecapital.com

14. Name of Representative: Dean, Mead, Minton & Zwemer, Attorney W. Lee Dobbins
Mailing Address: 1903 S. 25th Street, Ste 200
City Ft. Pierce State FL Zip 34947
Phone # 772-464-7700 Fax # 772-464-7877
E-mail: ldobbins@deanmead.com

15. Applicant Acknowledgements (Owner's signature must be notarized)

I certify that: (Check One)

☑ I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

☐ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

Applicant's Signature 4/3/20 Date

Address State Zip

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Willow Lakes, LLC — 561-827-5742

Property Owner's Name (Please Print) Phone

433 S. Main St. Ste 300 — West Hartford, CT — 06110

Address State Zip

Property Owner's Signature — 4/3/20 Date

AS State of Connecticut

~~STATE OF FLORIDA)~~

~~ST LUCIE COUNTY)~~

AS Fairfield county

The foregoing instrument was acknowledged before me this 3 day of APRIL, 2020, by Chad Patric LaBonte who is personally known to me or has produced Driver license as ident

Signature of Notary (seal)

OFFICE USE:		
DATE RECEIVED:	Signed:	
File Number:	Check No:	Receipt No:
TRC Review:	Planning Board Review:	City Commission:
Ordinance No:	Date Approved:	

ALAN M. SILVERIO NOTARY PUBLIC My Commission Expires 07-31-2023 CONNECTICUT

STATEMENT OF NEED AND COMPATIBILITY

The applicant proposes to develop a mixed-use urban village, including residential, retail, restaurants, and other commercial uses, with a beach community theme, anchored by a world-class surf park. There is a need for the requested zoning atlas map amendment, changing the zoning of the property from the County Agricultural 2.5 (AG 2.5) zoning to the City Planned Development (PD) zoning, in order to execute this vision. The property has retained the County's AG 2.5 zoning designation from prior to the property's 2010 annexation into the City, and this zoning is both incompatible with the City Code and with any future development of the property. The PD zoning is the appropriate zoning category for the development of a mixed use project, because the PD zoning category is "intended to promote flexibility of design and permit planned diversification and integration of uses and structures, while at the same time granting the city commission the absolute authority to establish such limitations and regulations as it deems necessary . . ." (Section 22-40 of the City Code).

The proposed zoning amendment will result in an orderly and logical development pattern by insuring a well-designed and master-planned community, with uses that are compatible with each other and with the surrounding area. Furthermore, the project located adjacent to the subject property to both the north and west, and which will utilize shared access to Midway Road, is also zoned PD (The Village at Midway Planned Development). The subject property is bounded by Midway Road on the south, and on the south side of Midway Road is the west side of the LTC Ranch DRI, which is also approved for a mix of residential and commercial development. The subject property is bounded by I-95 on the east, and on the east side of I-95 is the Tropicana plant, which includes a large undeveloped parcel adjacent to I-95. The proposed Planned Development on the subject property has been designed to be compatible with these neighboring properties, and the applicant has had several meetings and conversations with the owners and developers of both The Village at Midway PD and the LTC Ranch DRI.

The proposed zoning amendment is consistent with the Goals, Objectives and Policies of the City's Comprehensive Plan. Objective 1.1 of the Future Land Use Element of the City's Comprehensive Plan states, "*The City shall adopt and implement the Future Land Use Map to designate future land uses that regulate uses, densities and intensities that enhance its neighborhoods and districts, stimulate tourism and the local economy, and are compatible with its small-town character.*" The proposed zoning change will achieve this goal by providing for the development of a master-planned residential and commercial development, with a walkable beach-town theme, anchored by a surf park, which will be a major tourist draw to the area, with the goal of providing a mix of complementary uses that feed off of that tourism.

The proposed zoning amendment is also consistent with Policy 1.1.4 of the Future Land Use Element of the City's Comprehensive Plan, which describes the purpose of the Mixed Use Development (MXD) future land use designation, as follows (in part): "*The MXD designation is intended to promote intensification, redevelopment, and revitalization of the areas targeted for live/work environments. This area is characterized by development that promotes the creation of well-planned centers designed to integrate a variety of complementary uses."* The proposed zoning amendment and related Planned Development Guidelines and Master Plan will achieve the goals of the MXD future land use. The proposed Planned Development is also in compliance will all of the use, density and intensity requirements for MXD as set forth in the Comprehensive Plan.

DEAN MEAD
ATTORNEYS AT LAW

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W. LEE DOBBINS
LDobbins@deanmead.com

July 15, 2020

VIA EMAIL
Jennifer Hofmeister
Planning Director
City of Fort Pierce
100 N U.S. Highway 1
Fort Pierce, FL 34950

Re: Willow Lakes, LLC / Planned Development Rezoning

Dear Ms. Hofmeister:

On behalf of Willow Lakes, LLC, I am submitting the following items, which are attached hereto:

1. Revised Planned Development Guidelines; and
2. Supporting Documentation.

The attached Planned Development Guidelines and Supporting Documentation have been revised in order to address comments provided in the letter dated June 30, 2020, from Vennis Gilmore. Please see the following responses to the comments from Mr. Gilmore's letter in bold below:

1. Staff recommends dividing the subject document into a PD development regulations and other as supporting documentation to supplement the application.

   Done. Documents have been divided into PD Regulations and Supporting Documentation as requested.

2. Page 11 states the surf park is 8 acres and the traffic study states the size as 9.5 acres. Please clarify.

   The language in the PD Guidelines has been revised to reflect that the wave pool will be 9.5 acres, consistent with the traffic report. We anticipate that

the 9.5 acres will include the wave lagoon, perimeter deck and associated pools.

3. Please consider adding Vacation Rentals to the list of uses to avoid the need to go through the Conditional Use process.

   Vacation rentals have been added to the list of permitted uses under Medium Density Residential and Residential-High Density/Mixed Use.

4. Please specify what agricultural uses are proposed before each tract of land is developed.

   Description of permitted agricultural uses has been added.

5. If not proposing design review guidelines that exceed current City Code requirements, than City Code Section 22-59 shall apply.

   Noted. References to City Code Section 22-59 have been deleted. Language has been added on page 11 providing for the submission of proposed design standards to the City with a later phase of the project.

6. Please consider removing the dates of construction phases and just have projected length of anticipated time necessary for each phase.

   Done.

7. When is the anticipated time for Phase 1 submittal?

   We anticipate filing the application for Phase 1 approximately six months after obtaining final approval of the Planned Development zoning.

Thank you again for the assistance from you and your staff in moving this project forward.

Best regards,

W. Lee Dobbins

WLD:sh
Enclosures
cc: Vennis Gilmore (via email)
Chad LaBonte (via email)
Roland LaBonte (via email)
Geoff Fitzgerald (via email)
Susan O'Rourke (via email)

Planned Development Guidelines

For

Willow Lakes

A PROPOSED

Resort Village and Community

W. Midway Road
Fort Pierce, Florida
St. Lucie County

Master Developer:
WILLOW LAKES, LLC

Prepared by:

BOHLER
16 Old Forge Road, Suite A
Rocky Hill, CT 06067
(860) 333-8900 TEL.

2255 Glades Road Suite 305E
Boca Raton, FL 33431
561-571-0280

July 14, 2020
#CT191015

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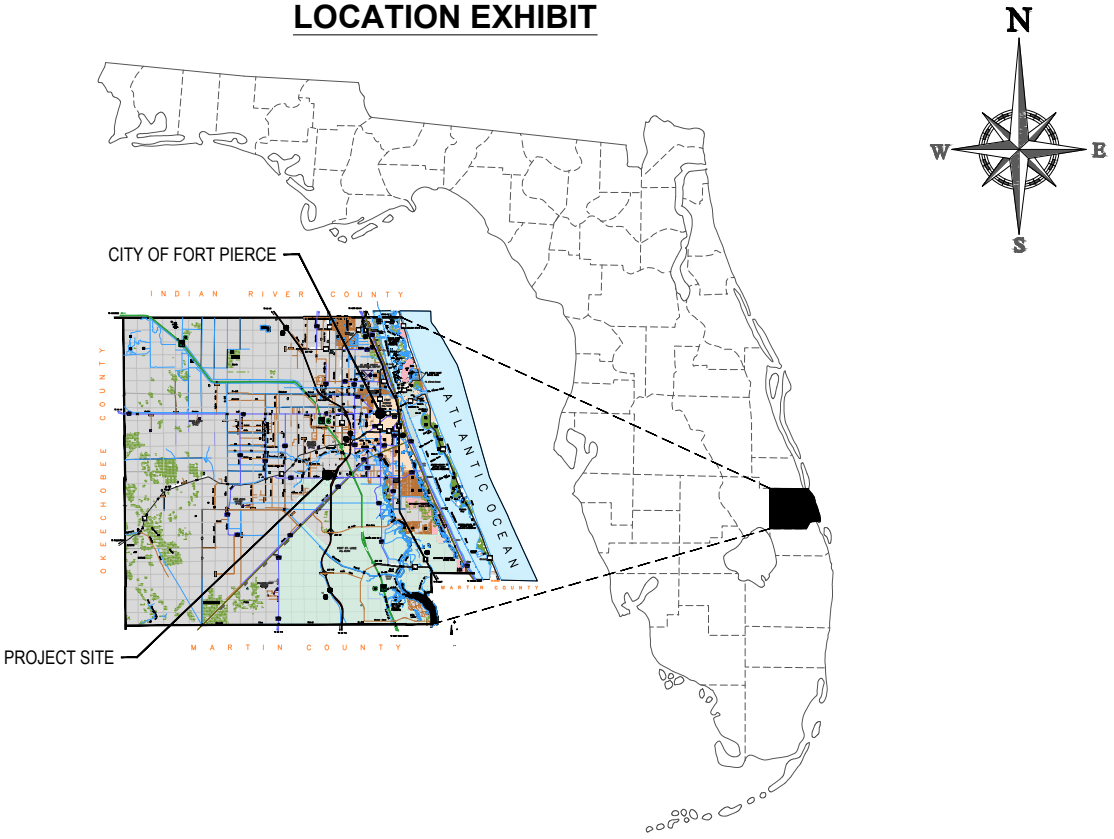
APPENDIX B: PLANNED DEVELOPMENT SITE PLAN OVERLAY
APPENDIX C: ZONING EXHIBIT

I. LOCATION EXHIBIT

LOCATION EXHIBIT





WILLOW LAKES, LLC

LOCATION EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE:1"=80,000' & 1,000' DATE: 01/20/2020

BOHLER™

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
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PERMITTING SERVICES
TRANSPORTATION SERVICES

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II. LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF -WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF- WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A

DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO I A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY) ; THENCE N89°52'26"W ALONG THE NORTH RIGHT -OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF- WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

TOGETHER WITH;

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR 1-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.

III. GENERAL SITE DATA

Parcel ID Numbers: 3302-212-0001-000-4

General Location: Northwesterly of the interchange of W. Midway Rd. and I-95 lying in Section 02 and 03, Town 36S, Range 39E.

Overall Site Area: 200.3 acres

Existing Zoning: Agriculture – 2.5 (AG2.5)

Proposed Zoning: Planned Development (PD)

Future Land Use: Mixed Use (MXD)

Maximum Allowable Residential Density: 15 Dwelling Units per Acre Gross PD Area

Maximum Allowable Floor Area Ratio: 1.5 FAR

Surrounding Zoning, Future Land Use and Existing Use:

	Zoning	Future Land Use	Existing Use
North	PD	MXD	Vacant/Walton
South	TBD(City of PSL approved DRI) & PUD	CG/CH/ROI/CS (City of PSL) MXD & T/U (SL County)	Vacant/LTC Ranch/FPL
East	IL	INST/IND	Tropicana Mfg.
West	PD	MXD	Vacant/Walton

Table 1.0 – Surrounding Zoning, Future Land Use and Existing Use

IV. QUANTITATIVE DEVELOPMENT DATA

Development Data:

See attached Planned Development Conceptual Master Plan for development data relating to site area calculations.

Proposed Uses and Intensity Allocations:

Please refer to *Table 1.1 – Use and Intensity Allocation* for a list of general uses along with applicable intensities.

Table 1.1 – Use and Intensity Allocation

General Use	Applicable Lot Type(s)	Intensity Allocation
Shopping Center	Commercial	250,000 SF
Entertainment (Indoor)	Commercial	100,000 SF
Neighborhood Bistro/Café/Restaurant/Bar	Commercial	100,000 SF
Fast Food/Coffee Shop	Commercial	25,000 SF
Convenience Store/Pharmacy	Commercial	25,000 SF
Office	Commercial	150,000 SF
Residential - Detached House	Single-Family Residential	150 Units
Residential - Townhouse	High-Density Residential	150 Units
Residential – Multifamily	High-Density Residential	700 Units
Hotel	Commercial	600 Rooms
Surf Park	Commercial	N/A (by total trips/use)
Entertainment (Outdoor)	Commercial	N/A (by total trips/use)

Uses and Intensities listed above in Table 1-1 are derived from the ITE Trip Generation Manual, which provide a baseline intensity by which traffic impacts are analyzed and mitigated for, if applicable. The uses listed in the General Uses column above are general in nature and account for similar uses contained within each general use category. Please refer to Table 1-2 for Lot Types accommodated by the Planned Development along with associated Lot and Dimensional Requirements and Permitted Uses allowed within each Lot Type.

The Traffic Impact Study for the project assumes that the Surf Park will include a 9.5-acre wave pool with ancillary facilities. The Surf Park and its ancillary facilities shall be allocated a Commercial Intensity Allocation of vehicle trips, as set forth in Table 1-1 above and as approved in the Master Traffic Impact Study. If the applicant applies for site plan approval for a Surf Park with a larger pool and facilities than that described in the Master Traffic Impact Report, then the City Planning Director may require an updated Traffic Impact Report and revised conditions of approval, if needed.

To provide flexibility in the build-out of the proposed development, Intensity Allocations provided above in Table 1.1 may be increased or decreased based on the Land Use Conversion Matrix on the following page.

Table 1.1a: Willow Lakes Land Use Conversion Matrix

	Land Use	Peak Hr Rates	Land Use to Decrease									
			Single Family (1 Unit)	Apartment Low-Rise (1 unit)	Apartment Mid-Rise (1 unit)	Shopping Center (1,000 SF)	Pharmacy/ Drugstore (1,000 SF)	Convience Store (1,000 SF)	Fast Food Restaurant (1,000 SF)	High Turnover Restaurant (1,000 SF)	Hotel (1 room)	General Office (1,000 SF)
		Per Unit	0.427	0.28	0.187	0.956	1.8	13.2	9.32	3.21	0.278	0.79
Land Use to Increase	Single Family (1 Unit)	0.427	1.000	1.525	2.283	0.447	0.237	0.032	0.046	0.133	1.536	0.541
	Apartment Low-Rise (1 unit)	0.28	0.656	1.000	1.497	0.293	0.156	0.021	0.030	0.087	1.007	0.354
	Apartment Mid-Rise (1 unit)	0.187	0.438	0.668	1.000	0.196	0.104	0.014	0.020	0.058	0.673	0.237
	Shopping Center (1,000 SF)	0.956	2.239	3.414	5.112	1.000	0.531	0.072	0.103	0.298	3.439	1.210
	Pharmacy/Drugstore (1,000 SF)	1.8	4.215	6.429	9.626	1.883	1.000	0.136	0.193	0.561	6.475	2.278
	Convience Store (1,000 SF)	13.2	30.913	47.143	70.588	13.808	7.333	1.000	1.416	4.112	47.482	16.709
	Fast Food Restaurant (1,000 SF)	9.32	21.827	33.286	49.840	9.749	5.178	0.706	1.000	2.903	33.525	11.797
	High Turnover Restaurant (1,000 SF)	3.21	7.518	11.464	17.166	3.358	1.783	0.243	0.344	1.000	11.547	4.063
	Hotel (1 room)	0.278	0.651	0.993	1.487	0.291	0.154	0.021	0.030	0.087	1.000	0.352
	General Office (1,000 SF)	0.79	1.850	2.821	4.225	0.826	0.439	0.060	0.085	0.246	2.842	1.000
	Medical Office (1,000 SF)	1.8	4.215	6.429	9.626	1.883	1.000	0.136	0.193	0.561	6.475	2.278
	Golf Simulator(1 Tee/Hole)	1.553	3.637	5.546	8.305	1.624	0.863	0.118	0.167	0.484	5.586	1.966
	Water Slide Park (1 Acre)	13.263	31.061	47.368	70.925	13.873	7.368	1.005	1.423	4.132	47.709	16.789
	Recreational Facility (1,000 SF)	1.531	3.585	5.468	8.187	1.601	0.851	0.116	0.164	0.477	5.507	1.938

*Rate is based on the highest resultant trip rates of either the AM or PM directional rate calculated as the highest directional trip divided by the units.

Example:

1. If you want to build an 3,000 SF Fast Food Restaurant by decreasing the number of Low-Rise Apartments, how many apartments would need to be cut?

Instruction= Multiply 3 by the number that connects the Fast Food Restaurant row with the Apartment Low-Rise column (33.286).

Result; 3*33.286

You will need to cut 100 Low-Rise Apartments

2. If you want to remove 100 MFDU and figure out how many square feet of shopping center to add you go to Shopping Center along the top of the columns and MFDU on the rows to the left and get the cell with .293.

Multiply 100 x .293 - 29.3. Uou can do 29,300 square feet of shopping center.

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V. DESIGN AND DEVELOPMENT GUIDELINES

The following section will govern overall design and development guidelines for development occurring within the Planned Development. *Table 1.2 – Dimensional Requirements* provides dimensional requirements by lot type followed by applicable development standards relating to permitted and restricted uses.

Table 1.2 – Dimensional Requirements

Lot Type	Maximum Gross Density (DU/Ac.)	Min. Lot Size	Min. Lot Width	Min. Road Frontage	Minimum Yard				Max. Bldg. Height	Max. Lot Coverage by Bldg.
					Front	Rear	Side	Side Corner		
Commercial - General	N/A	10,000 sf	50	50’	0’	0’	0’	0’	65’ (1)	none
Single-Family Attached Medium Density Residential	N/A (2)	2,500 sf	30’	30’	10’	5’	5’	10’	35’	none
Single-Family Detached Medium Density Residential	N/A (2)	2,500 sf	30’	30’	10’	5’	5’	10’	35’	none
Residential – High-Density/ Mixed Use	N/A (2)	1,500 sf	50	50	0’	10’	0’	0’	65’ (1)	none

*

1. *Maximum height for hotel/lodging buildings shall be a maximum of one hundred (100) feet if adjacent to I-95. If not adjacent to I-95, the sixty-five (65) foot maximum height limit shall apply.*
2. *Maximum Residential Density shall be determined by the Future Land Use in accordance with the City Comprehensive Plan, 15 units/acre gross Planned Development Area, not restricted. Development may be clustered, so that individual parcels may exceed 15 units/acre, provided that the Planned Development Area in total shall not exceed 15 units /acre and shall not exceed the maximum number of units set forth in Table 1.1.*

Where more than one lot, or parts of more than one lot, are owned by a single owner and subjected to a unity of title, the setbacks between such lots and any platted easements along the lot lines dividing such lots, shall be disregarded, and such lots or parts of lots may be developed pursuant to single unified site plan. In such event, the setbacks and platted lot line easements shall only apply to the outside boundaries of the property subjected to the unity of title, as if it were a single platted lot.

Commercial – General: The purpose of the Commercial General Lot Type is to provide and protect an environment suitable for a wide variety of commercial uses intended to serve a population over a large market area. The following uses shall be permitted within the Commercial – General Lot Type:

Permitted Uses:

a. Commercial – General and/or Neighborhood
b. Commercial – Town Center
c. Hotel (minimum 100 units)
d. Office Uses – Professional and/or Medical
e. Institutional

Residential – Medium Density Residential (10): The purpose of this district is to provide and protect an environment suitable for single-family, two-family, three-family, and multiple-family dwellings at a maximum density of ten (10) dwelling units per acre, together with such other uses as may be necessary for and compatible with moderate density residential surroundings. The following uses shall be permitted within the Residential – Medium Density Residential Lot Type:

Permitted Uses:

a. Community residential homes
b. Family day care homes
c. Multiple-family dwellings (Four (4) or more units)
d. Single-family detached dwellings
e. Two-family (duplex) dwellings
f. Three-family (triplex) dwellings
g. Townhome attached dwellings
h. Vacation Rentals

Residential – High-Density/Mixed Use: The purpose of this district is to provide and protect an environment suitable for a mix of compatible uses, including single-family, two-family, three-family, and multiple-family dwellings along with complementary commercial uses in a walkable, high-density residential and mixed-use village context, with specific building and neighborhood density limited only by building height and form, and by the maximum gross density permitted under the underlying land use in the Fort Pierce comprehensive plan of fifteen (15) dwelling units per acre of the gross Planned Development Area, together with such other uses as may be necessary for and compatible with high-density residential surroundings. The following uses shall be permitted within the Residential – High-Density/Mixed Use Lot Type:

Permitted Uses:

a. Multiple-family dwellings (four (4) or more units)
b. Single-family detached dwellings
c. Two-family (duplex) dwellings
d. Three-family (triplex) dwellings
e. Townhome attached dwellings
f. Multi-Family Apartments/Flats, with or without Commercial first-floor components.
g. Commercial – General and/or Neighborhood
h. Commercial – Town Center
i. Hotel
j. Vacation Rentals

Agricultural Use: For the purpose of this document, agricultural uses shall be limited to cultivated cropland and/or livestock. Agricultural uses of the property shall be allowed within any phase or phases of this planned development project at any time prior to the commencement of construction of such project phase. Upon commencement of construction of any project phase, agricultural use of such phase shall no longer be permitted.

Open Space: Pursuant of Section 22-40(b)(3) of the City of Fort Pierce Code of Ordinances, a minimum of 20% of the site area of this development is required to be set aside as Open Space (200.3 ac. x 0.2 = 40.06 ac.). Open Space shall be land devoid of any above-ground structures or buildings, except pergolas, gazebos, pavilions or other open-air structures; or landscape structures such as terraces, planters, walls or retaining walls. Open space may include natural areas, buffer areas, upland habitats, including those areas of on-site preservation required by the other provisions of the City of Fort Pierce Code of Ordinances; recreation areas, but not including swimming pools, tennis courts or other impervious activity areas; but may include parks, golf courses, sports fields; bicycle, pedestrian or equestrian paths and facilities; common open space, common landscaping or planting areas; stormwater detention and retention facilities providing that no more than thirty (30) per cent of the overall open space requirement shall be satisfied in this manner; water features, conservation areas or other areas intended for public purposes other than street or road rights-of-way, but shall exclude aquatic areas for conservation and development. This equates to 12.02 acres of the Open Space requirement to be satisfied by stormwater detention and retention facilities. As part of the development for Willow Lakes Resort Village and Community the Open Space requirement will be satisfied by a combination of open green space, streetscape/hardscape tree-lined pedestrian sidewalks, channelized waterways, and stormwater detention and retention. The calculations below delineate the areas associated with each category:

Open Space Provided:

Total SWM: 1,276,750 sf ~ 29.31 ac

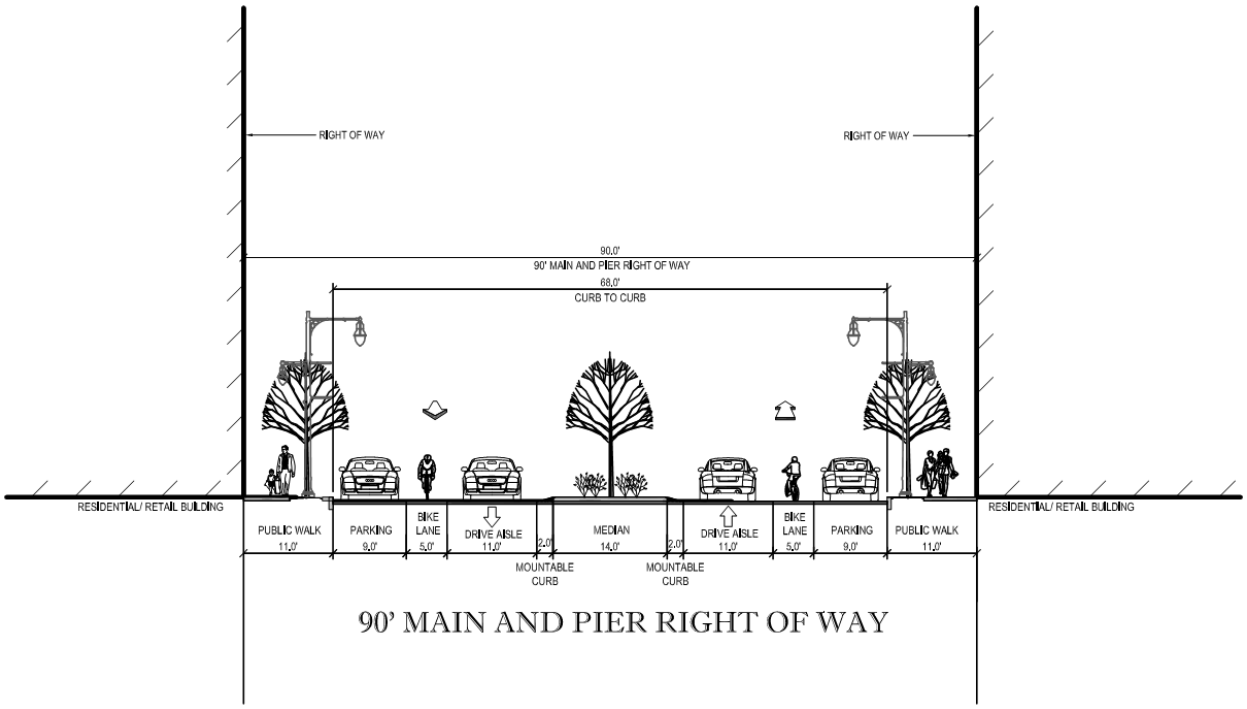
Open Green Space:		1,215,032 sf ~ 27.89 ac	
Channelized Waterways:		+150,139 sf ~ 3.45 ac	
Pedestrian-oriented Open Space/Facilities:			
Pier Avenue Pedestrian Walks:	119,189 sf ~ 2.73 ac		
Main Street Pedestrian Walks:	31,966 sf ~ 0.73 ac		
Strand Boulevard Pedestrian Walks:	53,934 sf ~ 1.24 ac		
Walton Pedestrian Walks:	78,666 sf ~ 1.80 ac		
Total Pedestrian-oriented Open Space/Facilities:		+283,755 sf	6.51 ac
30% SWM Facilities:			+12.02 ac
Open Space Provided:			**=49.87 ac**
> 40.06 ac Required			

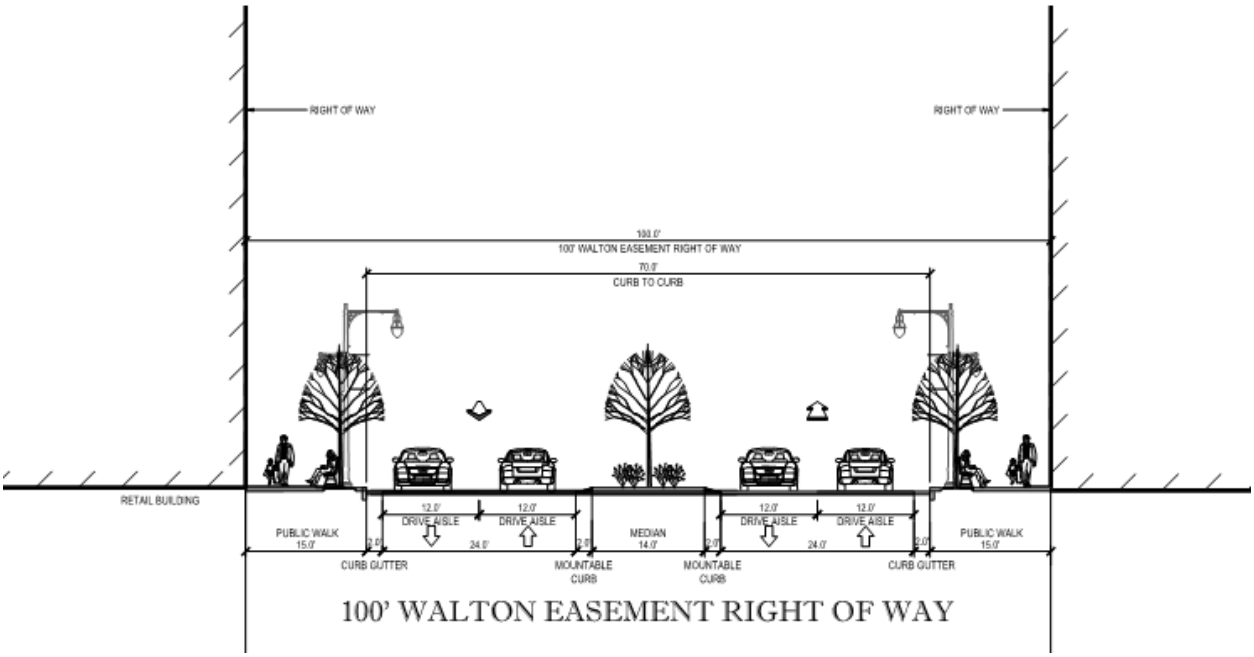
Site Plan Review: Development proposed on any one (1) or more lots within the Planned Development shall be reviewed in accordance with Section 22-58 – Site Plan Review.

Additional Documentation: Prior to the development of each phase, the applicant shall submit for review and approval all documentation then required by City Code to obtain City site plan approval for such phase, including the site plan, landscaping plan, tree mitigation plan, lighting plan, and master sign plan for such phase.

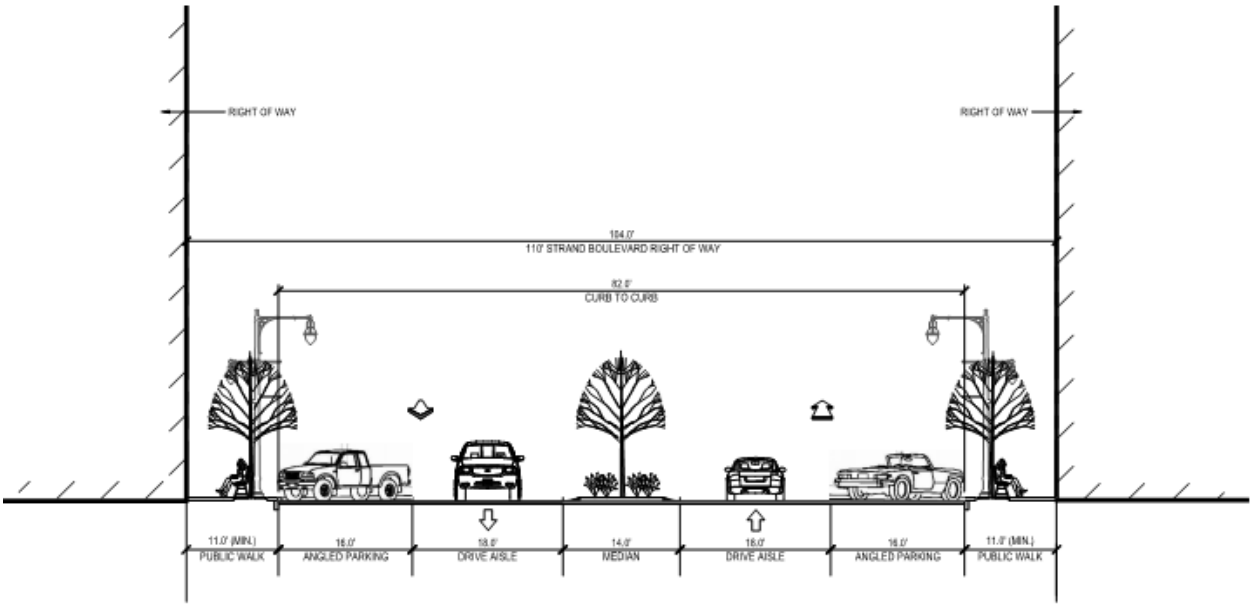
Design Review: The applicant may submit with a future phase of this project, proposed design standards to govern development within the Willow Lakes Resort Village and Community Planned Development. Such proposed design standards shall be subject to review and approval by the City in accordance with applicable City Code provisions at the time of submittal.

Private Access Tract Street Sections:





100' WALTON EASEMENT RIGHT OF WAY



104' STRAND BOULEVARD R.O.W. WITH
45° ANGLED PARKING

VI. HEALTH AND SAFETY REGULATION FOR SURF PARK

The applicant intends to develop a Surf Pool within Phase 1 of the Project. A "Surf Pool" means a pool that is designed to generate waves dedicated to the activity of surfing on a surfboard or an analogous surfing device commonly used in the ocean and intended for sport, as opposed to the general play intent of wave pools, other large-scale public swimming pools or other public bathing places. Pursuant to Florida Statute 514.0115, until such time as the Florida Department of Health adopts rules for the supervision and regulation of Surf Pools, the Surf Pool will be exempt from supervision or regulation under Florida Statutes Chapter 514, provided that the Surf Pool is larger than 4 acres, and is permitted by the City pursuant to a special use permit process in which the City asserts regulatory authority over the construction of the Surf Pool and, in consultation with the Florida Department of Health, establishes through the City's special use permitting process the conditions for the Surf Pool's operation, water quality and necessary lifesaving equipment. Therefore, if the Florida Department of Health has not yet adopted rules for the supervision or regulation of Surf Pools, then prior to the issuance of final site plan approval for any Surf Pool larger than 4 acres within the Project, special conditions regulating the construction and operation of the Surf Pool, including its water quality and lifesaving equipment, shall be reviewed and approved by the City, asserting its regulatory authority over the Surf Pool, and such conditions shall be deemed a part of, and incorporated into, these Planned Development Guidelines. The City shall consult with the Florida Department of Health, as required by Florida Statute 514.0115, in reviewing and approving such special conditions relating to the Surf Pool's operation, water quality and necessary lifesaving equipment.

VII. ZONING ORDINANCE EXCEPTIONS

The following deviations from the current City of Fort Pierce Code of Ordinances are proposed within the Willow Lakes Resort Village and Community Planned Development.

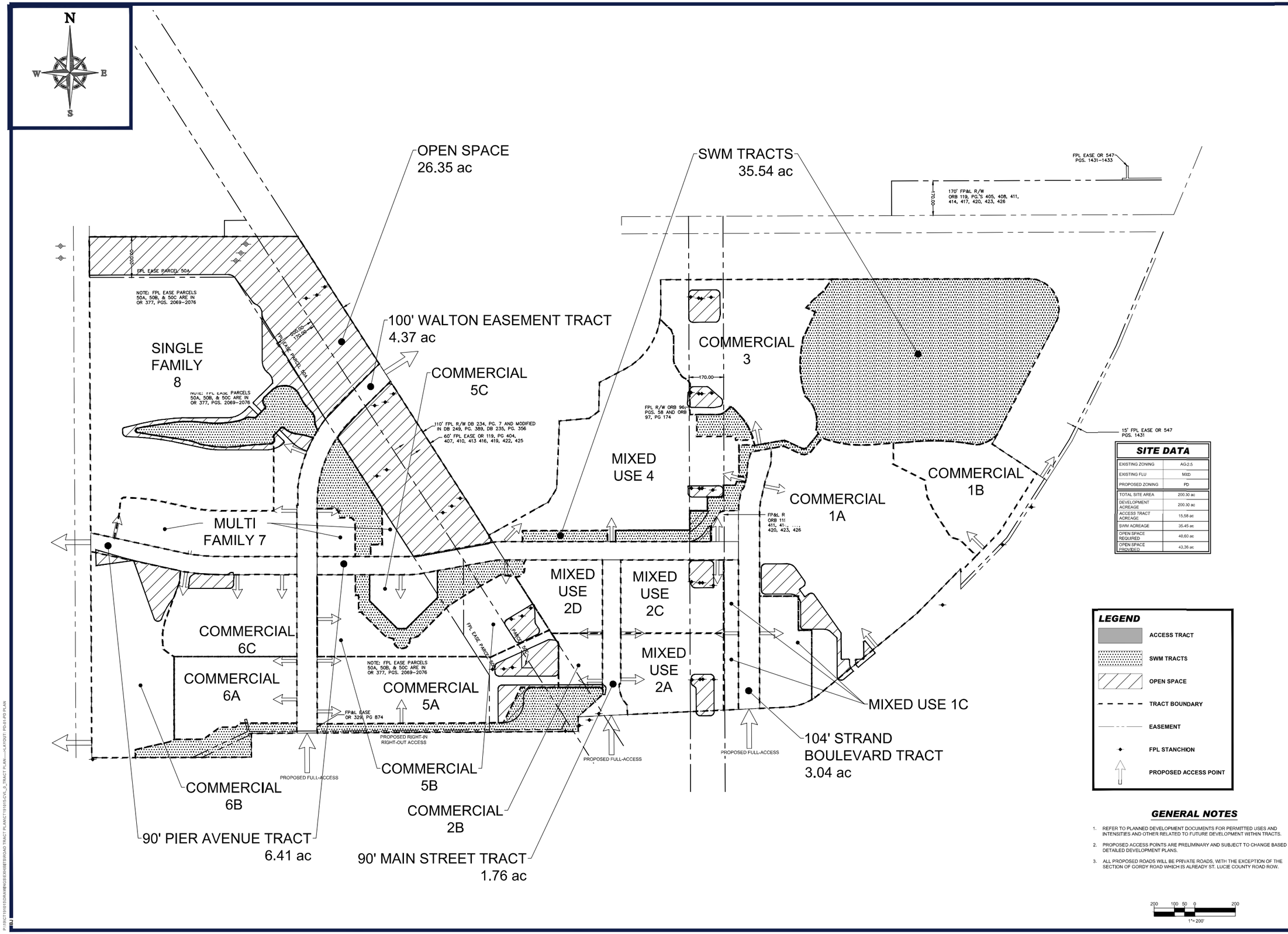
Chapter 22- Zoning

- Hotels shall be permitted to be constructed to a height not to exceed one hundred (100) feet if constructed generally proximate or adjacent to the frontage of I-95, or situated on the lake adjacent to I-95. This 100' height allowance exceeds the sixty-five (65) foot height limit for Hotel uses found in Chapter 22 -Zoning, of the City of Fort Pierce Code of Ordinances.

- A list of permitted and conditional uses has been included herein, which shall govern use allowances within the Planned Development; such permitted and conditional uses included herein may or may not be found within Chapter 22 -Zoning.

- Sec. 22-194. - Tree protection and mitigation: Mitigation shall be provided pursuant to future site plan submittals in the form of excellence in urban village, pedestrian-oriented tree-lined streetscapes, in lieu of the mitigation requirements set forth in the City Code.

APPENDIX A: PLANNED DEVELOPMENT SITE PLAN



SITE DATA

EXISTING ZONING	AG-2.5
EXISTING FLU	MXD
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWM ACREAGE	35.45 ac
OPEN SPACE REQUIRED	40.60 ac
OPEN SPACE PROVIDED	43.36 ac

LEGEND

- ACCESS TRACT
- SWM TRACTS
- OPEN SPACE
- TRACT BOUNDARY
- EASEMENT
- FPL STANCHION
- PROPOSED ACCESS POINT

GENERAL NOTES

1. REFER TO PLANNED DEVELOPMENT DOCUMENTS FOR PERMITTED USES AND INTENSITIES AND OTHER RELATED TO FUTURE DEVELOPMENT WITHIN TRACTS.
2. PROPOSED ACCESS POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE BASED ON DETAILED DEVELOPMENT PLANS.
3. ALL PROPOSED ROADS WILL BE PRIVATE ROADS, WITH THE EXCEPTION OF THE SECTION OF GORDY ROAD WHICH IS ALREADY ST. LUCIE COUNTY ROAD ROW.

BOHLER

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LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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DRAWN BY:	BTJ
CHECKED BY:	GPF
DATE:	06/18/20
CAD I.D.:	CT191015-CVL_0

PROJECT:

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR

WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA
MAP ID: 33/02N

BOHLER
16 OLD FORGE ROAD, SUITE A
ROCKY HILL, CT 06067
Phone: (860) 333-8900
Fax: (508) 480-9080
2255 GLADES ROAD, SUITE 305E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0280
Fax: (561) 571-0281
www.BohlerEngineering.com

G.P. FITZGERALD
PROFESSIONAL ENGINEER

SHEET TITLE:

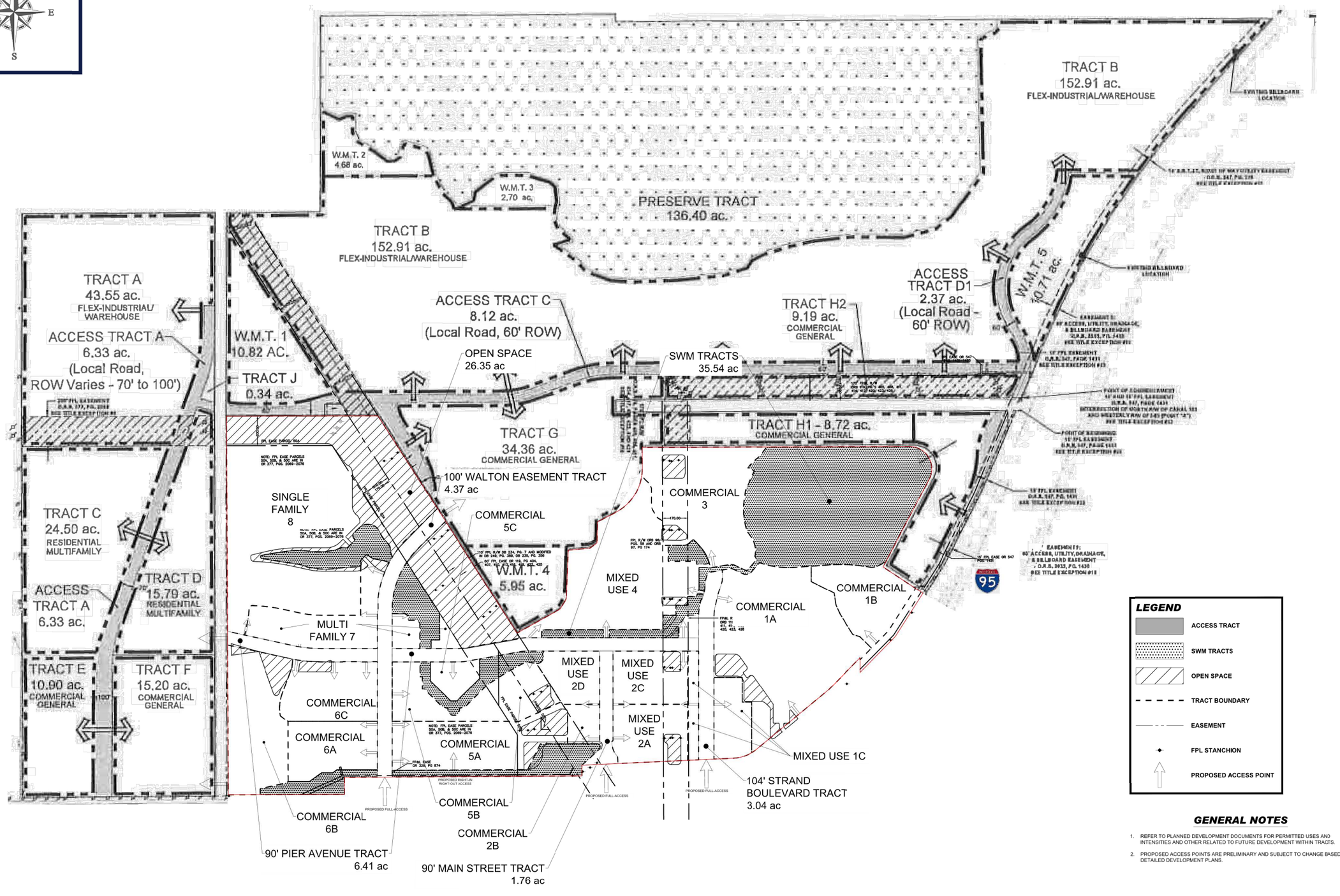
PLANNED DEVELOPMENT SITE PLAN

SHEET NUMBER:

PD-01

ORG. DATE - 06/18/20

APPENDIX B: PLANNED DEVELOPMENT SITE PLAN OVERLAY



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DRAWN BY:	BTJ
CHECKED BY:	GPF
DATE:	06/18/20
CAD I.D.:	CT191015-CVL_0

PROJECT:

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR

WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA
MAP ID: 32/02N

BOHLER
16 OLD FORGE RCAD, SUITE A
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Fax: (561) 571-0281
www.BohlerEngineering.com

G.P. FITZGERALD
PROFESSIONAL ENGINEER

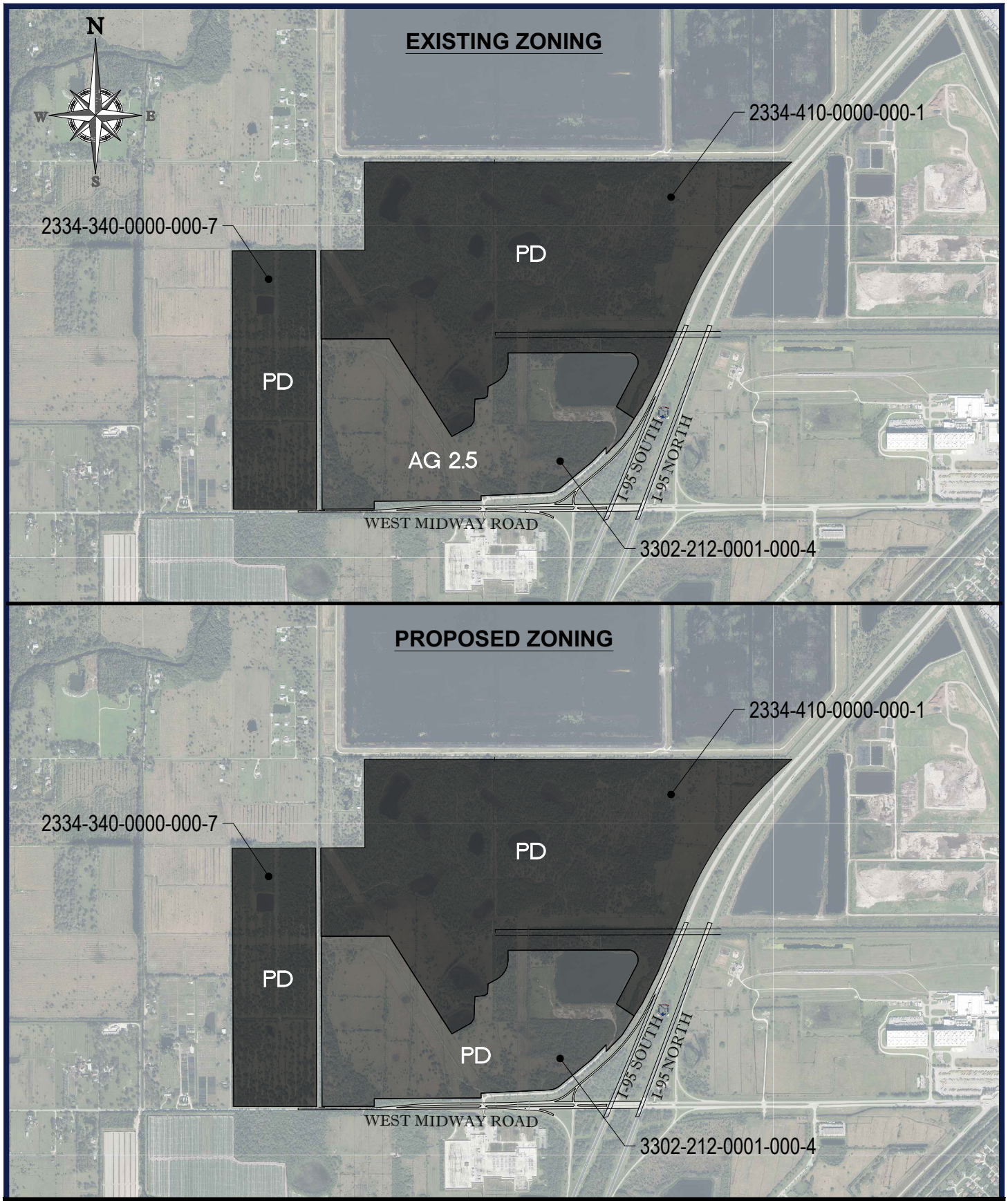
SHEET TITLE:
PLANNED DEVELOPMENT SITE PLAN OVERLAY

SHEET NUMBER:
PD-02

ORG. DATE - 06/18/20

P:\BTJCT\191015\DRAWINGS\EXHIBITS\ROAD TRACT PLANCT191015-CVL_S_TRACT PLAN------LAYOUT PD-02 PD PLAN OVERLAY

APPENDIX C: ZONING EXHIBIT



WILLOW LAKES, LLC

ZONING EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE:1"=2,000' DATE: 01/20/2020

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Planned Development Guidelines
SUPPORTING DOCUMENTATION

For

Willow Lakes

A PROPOSED

Resort Village and Community

W. Midway Road
Fort Pierce, Florida
St. Lucie County

Master Developer:
WILLOW LAKES, LLC

Prepared by:

BOHLER
16 Old Forge Road, Suite A
Rocky Hill, CT 06067
(860) 333-8900 TEL.

2255 Glades Road Suite 305E
Boca Raton, FL 33431
561-571-0280

July 14, 2020
#CT191015

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I. PROJECT NARRATIVE

Jennifer Hofmeister, AICP, LCAM
Planning Director
City of Fort Pierce
W. Midway Road
Fort Pierce, FL 34950

Re: Proposed Resort Village and Community

Dear Mrs. Hofmeister,

Willow Lakes Resort Village and Community is envisioned as a vibrant, mixed-use urban village at the crossroads of Florida's Turnpike, Interstate 95, and the City of Fort Pierce. Situated on 200.23 acres of land lying immediately north of Midway Road and west of I-95 within the City of Fort Pierce, Willow Lakes will be an east coast destination that will bring together local residents and regional, national and international visitors in a lively, pedestrian-oriented, and healthy environment of inviting public spaces, walkable streets, and authentic neighborhoods in which to live, work, play and learn.

The vision is that of a typical beach community that celebrates outdoor activity and a healthy lifestyle. A place where residential, retail, and commercial uses will be combined to provide a critical mass of activity that will bring year-round life to the Village. Yet, this community will be one of a kind in Florida, situated not on a lone beach, but around the newest and largest world-class surf park in the country. A joy to simply relax and watch, and a thrill to experience, the Wavegarden at Willow Lakes will deliver high quality waves and authentic surfing experiences year-round for new and existing surfers of all ages, experience and ability. Beyond the Wavegarden. the Village will be comprised of several distinct neighborhoods, knit together by a network of walkable, pedestrian-oriented streets, and navigable floways designed for maximum environmental and recreational purposes. The result will be a natural, honest and inclusive environment where memorable experiences are created daily, and where visitors, residents, and professionals have fun, keep fit and feel part of a community that shares their passion and respect for surfing, the ocean, others and our planet.

Neighborhoods are the traditional building blocks of villages, towns and cities. They provide an organic, localized sense of place, identity and community within the larger fabric of a town. Willow Lakes Resort Village and Community is conceived as a series of small, local places organized in a framework of larger neighborhood types or areas. The primary neighborhoods that make up Willow Lakes will include the Wavegarden surf resort village and hotels, the mixed-use main and village streets immediately surrounding it, a town center plaza, an entertainment retail zone, and two residential areas, accompanied by adjacent undeveloped open space/conservation area. Within the larger, primary areas will be the smaller commercial and residential places that create variety, scale, local identity, and texture. The concentration of this series of neighborhoods will facilitate shared pedestrian accessibility to the many activities and residential options, the creation of vibrant commercial areas, and the simultaneous introduction of a system of recreational floways linking the natural spring-fed lake in the heart of the project to the neighborhoods and open space conservation areas throughout.

The street system proposed in this plan emphasizes connectivity and the importance of the streetscape as a place of value to the community. Where vehicle traffic is envisioned, parking is planned as an essential part of the project and will be encouraged on the streets, contributing to the availability of convenient parking spaces and to a sense of traffic-calming in pedestrian-oriented areas that have concentrated street-front commercial activity. Streets and parking facilities will be designed to support single-trip

visits to Willow Lakes for multiple activities. While the basic accommodation of cars is essential to the life of the project, and any similar project in Florida, Willow Lakes is fundamentally a place for people. The design of all streets and the associated public realm reflects a focus on pedestrians, accommodations for bicycles, and the enduring qualities of livable, active public spaces for human interaction.

The intent of this guideline is to provide flexible development options for the variety of uses proposed by utilizing the Planned Development Zoning District as outlined in Section 22-40 of the City of Fort Pierce Code of Ordinances. As proposed, approval of an overall Planned Development site plan and preliminary plat, along with Planned Development guidelines, will provide the foundation for future tenants to submit detailed development plan proposals for review and approval by the City. This affords all involved, including the City, the master developer and potential tenants a clear, approved plan to provide for the most efficient and flexible development of the overall project.

Design and development parameters by lot type, including, but not limited to: permitted and prohibited uses, applicable setbacks; allowable building area; street cross sections; landscaping, irrigation and signage standards have been provided for. A master Property Owners Association (POA) will be created to provide for continued and long-term maintenance of common areas, such as plazas, floways, open spaces and preserve areas, as well as the master stormwater system, master irrigation system, common area signage, street lighting, and other common improvements and services. If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

BOHLER

Geoffrey P. Fitzgerald, PE, AICP, Branch Manager

II. PROJECT PHASING

As proposed, initial infrastructure improvements will be constructed by the developer, which include excavation of the storm water management floways and ponds within the Storm Water Management Tracts; clearing and rough grading development tracts; construction of certain roads or segments thereof, and placement of structural fill where deemed necessary or desirable. Installation of common utilities such as water and wastewater lines, fiber optics and telecom among other general infrastructure improvements is yet to be determined. To provide for as much flexibility as possible in accommodating potential end-users, the developer reserves the right to implement construction on any one (1) or more phases at any such time it is deemed appropriate; i.e. based on market demand or other metrics utilized by the developer.

The Phase Schedule below provides for a general outline of the Phases of infrastructure construction. Please note that the timelines provided are estimates only and are subject to market conditions and approval timelines. It is anticipated that a Phase 1 submittal will be made within a year.

PHASE SCHEDULE	
Estimated Duration of Construction of Phase	General Description of Improvements
Phase 1A (18 months)*	• Roadwork consisting of a full access signalized intersection at Midway Road and Gordy Road, Gordy Road Improvements, including roundabout at new Main Street. • Construction of pavement and landscaped median for Strand Boulevard Tract, and Main Street Tract from Gordy Road north to the intersection of Pier Avenue Tract. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of Pier Avenue subgrade for use as on-site construction haul road. • Rough site grading and excavation of Storm Water Management floways and ponds. • Placement of fill and preparation of subgrade on Wavegarden Surf Park parcel 1A. • Construction of Wavegarden Surf Park and associated commercial buildings, parking, drives, facilities, walks, landscaping and amenities. • Sidewalks and Street lighting along upper Strand Boulevard.
Phase 1B (8 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1B commercial development.

	• Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
Phase 1C (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1C commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Strand Boulevard. • Street Trees and Lighting along Strand Boulevard
Phase 2A (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2A commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2A
Phase 2B (18 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2B commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2B
Phase 2C (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2C mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2C

Phase 2D (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 2D mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2D
Phase 3 (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 3 commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Improvements along lakefront and shoreline, and completion of eastern floway system. • Completion of Phase 3 and Phase 4 private roads and drives.
Phase 4 (12 months)*	• Construction of Multifamily Residential development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
Future Phases TBD*	• Roadwork consisting of a full access signalized intersection at Midway Road and Walton Easement Road, and remaining Pier Avenue Improvements to western limits of Willow Lakes property. • Construction of pavement and landscaped median for Walton Easement Tract, and Pier Avenue Tract. • Completion of western side floway system. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of commercial tracts in Phase 5 and 6, and residential tracts in Phases 7 and 8. See PD Conceptual Site Plan.

* Subject to market conditions

III. TRAFFIC CONCURRENCY (O'Rourke Engineering and Planning)

Trip Generation – The project will generate an estimated 37,297 daily trips, 2,381 AM peak hour trips and 2,486 PM peak hour trips.

Analysis/Needs – A detailed analysis of the intersections and link generally within a 5-mile radius that were significantly impacted by the project was conducted. As a result of the analysis, a series of prop share payments were estimated. The total prop share estimate is $7,358,178. These payments, which are creditable against impact fees, as well as additional impact fees collected, would be used to make improvements in the Midway corridor. The impact fees are estimated as $8,696,883, exclusive of the golf and Wave Garden facilities.

Those improvements include widening Midway Road to six lanes from Arterial A through to the northbound on ramps at I-95. Extensive turn lanes would also be required at the driveways along Midway Road. The construction along Midway Road will be coordinated with the developers of LTC Ranch and the Village at Midway, where appropriate.

Test Mix of Land Uses

WILLOW LAKES IMPACT FEES

Land Use	ITE Code	Intensity	St. Lucie County Road Impact fees	Total Fee
Residential Single-Family	210	150 DU	5015	752,250
Multifamily (Low-Rise)	220	150 DU	3875	581,250
Multifamily (High-Rise)	221	700 DU	2874	2,011,800
General Office	710	100,000 SF	3634	363,400
Medical Office	720	50,000 SF	3634	181,700
Commercial/ Retail	820	395,000 SF	7553	2,983,435
Gas Station with Convenience Market 3k+	820	16 Pumps	9852	157,632
Movie Theater	760	1,000 Seats	338	338,000
Rec. Facility	710	19,600 SF	1233	24,167
Hotel	310	600 Rooms	2172	1,303,200
TOTAL				**$8,696,834**

Note: This total does not include the Wave Garden or Top Golf facilities

O'ROURKE
ENGINEERING & PLANNING

TRAFFIC ANALYSIS

FOR

Willow Lakes

Prepared for:

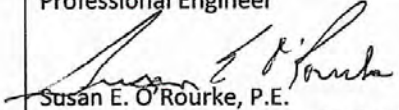
Willow Lakes, LLC

Prepared by

O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
772-781-7918

May 4, 2020
Revised July 22, 2020

SR19101.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer  Susan E. O'Rourke, P.E. Date signed and sealed: 7/22/2020 License #: 42684

O'ROURKE
ENGINEERING & PLANNING

May 4, 2020

Mr. Chad LaBonte
Willow Lakes, LLC
433 S. Main Street
Suite 218
West Hartford, CT 06110

Re: Willow Lakes

Dear Mr. LaBonte:

O'Rourke Engineering & Planning has completed the analysis of the proposed mixed-use development with Wave Park project located generally north of Midway Road and west of the Interstate 95 freeway in St. Lucie County, Florida. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
O'Rourke Engineering & Planning

Susan E. O'Rourke, P.E.
Registered Civil Engineer – Traffic

C6 – WillowLakes.text.5.4.2020

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INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for a mixed-use urban village, including residential, retail, restaurants, and other commercial uses, with a beach community theme, anchored by a world-class surf park. The development allows for uses to develop within a program identified in the planned development agreement. For trip generation, we have defined land uses to calculate trips based on the following specific uses: 150 single family dwelling units; 850 multifamily dwelling units; 100,000 square feet of office; 50,000 square feet of medical office; 250,000 square feet of retail; a 5,000 square foot convenience store with 16 pumps; a 5,000 square foot convenience market; 15,000 square feet of pharmacy without drive-thru; 25,000 square feet of fast food restaurant with drive-thru; 100,000 square feet of high turnover sit down restaurant; a 9.5 acre water park; 19,600 square feet of recreational facilities; a 42,500 square foot movie theater; a Top Golf golfing simulator facility; and a 600 room hotel.

The purpose of this report is to determine the impact of the proposed project on the surrounding roadway system in accordance with the City of Ft. Pierce Transportation Element comprehensive plan policies and F.S. 163.3180(5)(b)4. To that end, the following analytical steps were taken:

- summary of the project,
- summary of existing lane geometrics-links,
- summary of network and service volumes,
- assessment of project traffic,
- determination of study area,
- summary of cumulative traffic volumes-links,
- comparison of volumes to allowable levels of service,
- development of future intersection volume,
- development of project related improvements
- analysis of intersections

Each of these steps is outlined herein.

PROJECT DESCRIPTION

The proposed development involves a parcel of land located generally north of Midway Road and west of I-95 in Ft. Pierce, Florida. **Figure 1** shows the project location.

As noted above, the proposal is to develop a mix of uses. **Figure 2** illustrates a concept of how the site could develop.



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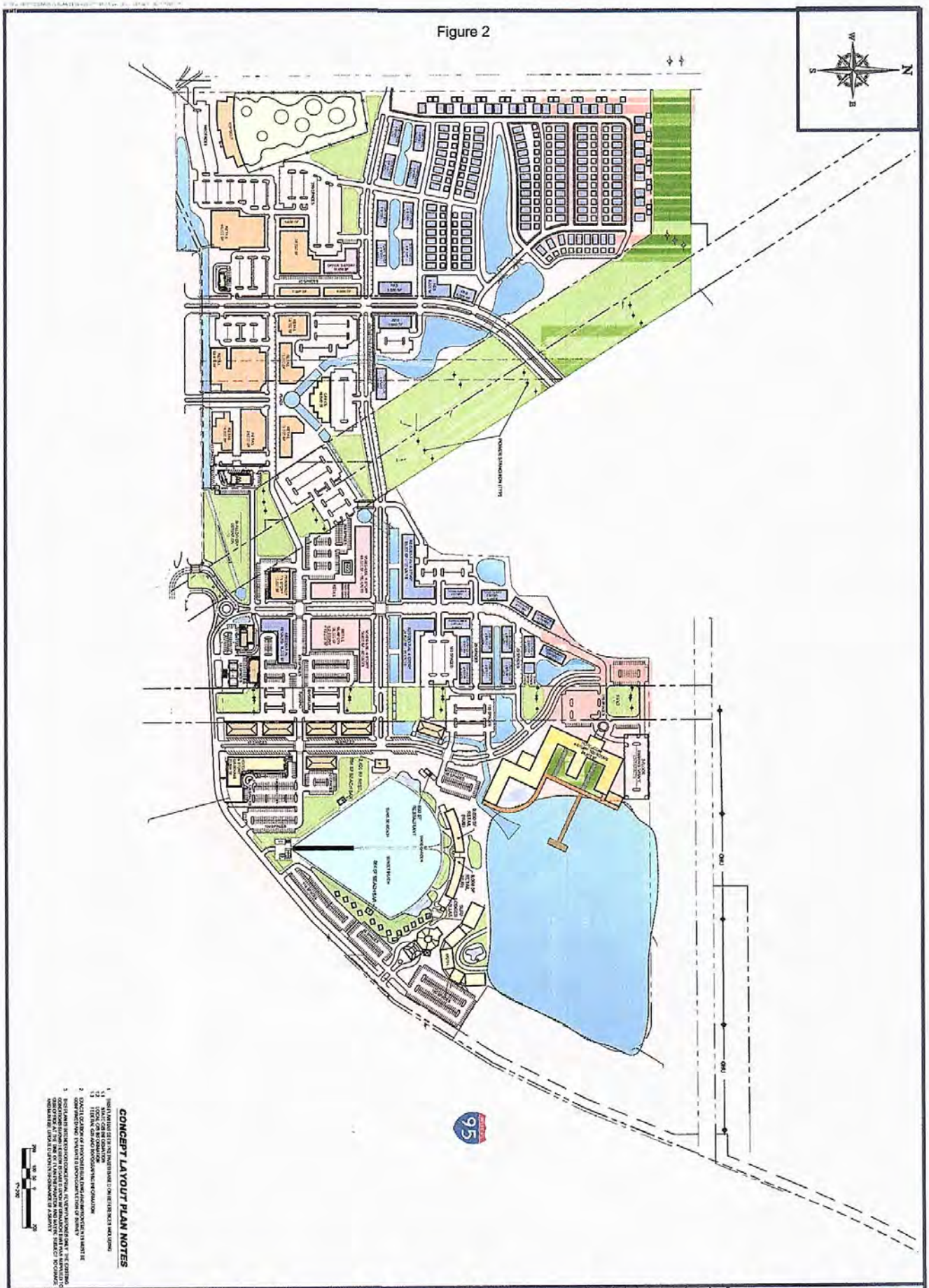
FIGURE 1

PROJECT LOCATION

Willow Lakes

Figure 2



CONCEPT LAYOUT PLAN NOTES
BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES
REVISIONS
FOR CONCEPT PURPOSES ONLY
PLANNED DEVELOPMENT PLAN DOCUMENTS
WILLOW LAKES, LLC
PROPOSED DEVELOPMENT
BOHLER
CONCEPTUAL LAYOUT PLAN
CA-01

EXISTING ROADWAY CONDITIONS

The study area is defined as the roadways upon which the project has an impact of 1% of the level of service capacity of the adjacent roadway link, 3% on the balance of the arterial and collector roadways within two miles, and 5% on arterials and collectors beyond two miles and on all freeway links. Once the project traffic was assigned, the study area was refined based on the impact percentages.

The study area roadways were defined in terms of existing plus committed lane geometrics and existing traffic volumes.

Lane Geometrics

The study area was reviewed to determine the existing number and type of lanes along the roadway. In addition, improvements outlined in City, County or FDOT Five Year Programs were included. Roadway Improvements included in the 5-year Road Program are:

- Midway Road from Selvitz Road to 25th Street, 2L to 4LD, Under Construction
- Midway Road from 25th Street to US 1, 2L to 4LD, under construction
- Kings Highway from south of Okeechobee Road to north of Picos Road, 2L to 4LD, FY 2024
- Kings Highway from north of Picos Road to north of I-95 overpass, 2L to 4LD, FY 2024
- St Lucie West Boulevard from I-95 southbound exit to I-95 northbound exit, 2L to 4LD, FY 2022

Key roadways are described below.

Midway Road is a two-lane arterial with an east/west alignment west of the project. It is a four - lane roadway from just west of I-95 to East Torino Parkway. The portion from 25th Street to US-1 is currently under construction with a completion date year of 2024. Both LTC Ranch and Village at Midway have commitments to widen Midway Road or contribute to its widening.

Glades Cut-Off Road is two lane arterial with a general northeast to southwest alignment.

I-95 is included in the St. Lucie County Needs Plan to widen with auxiliary lanes. A PDE is funded beginning year 2024.

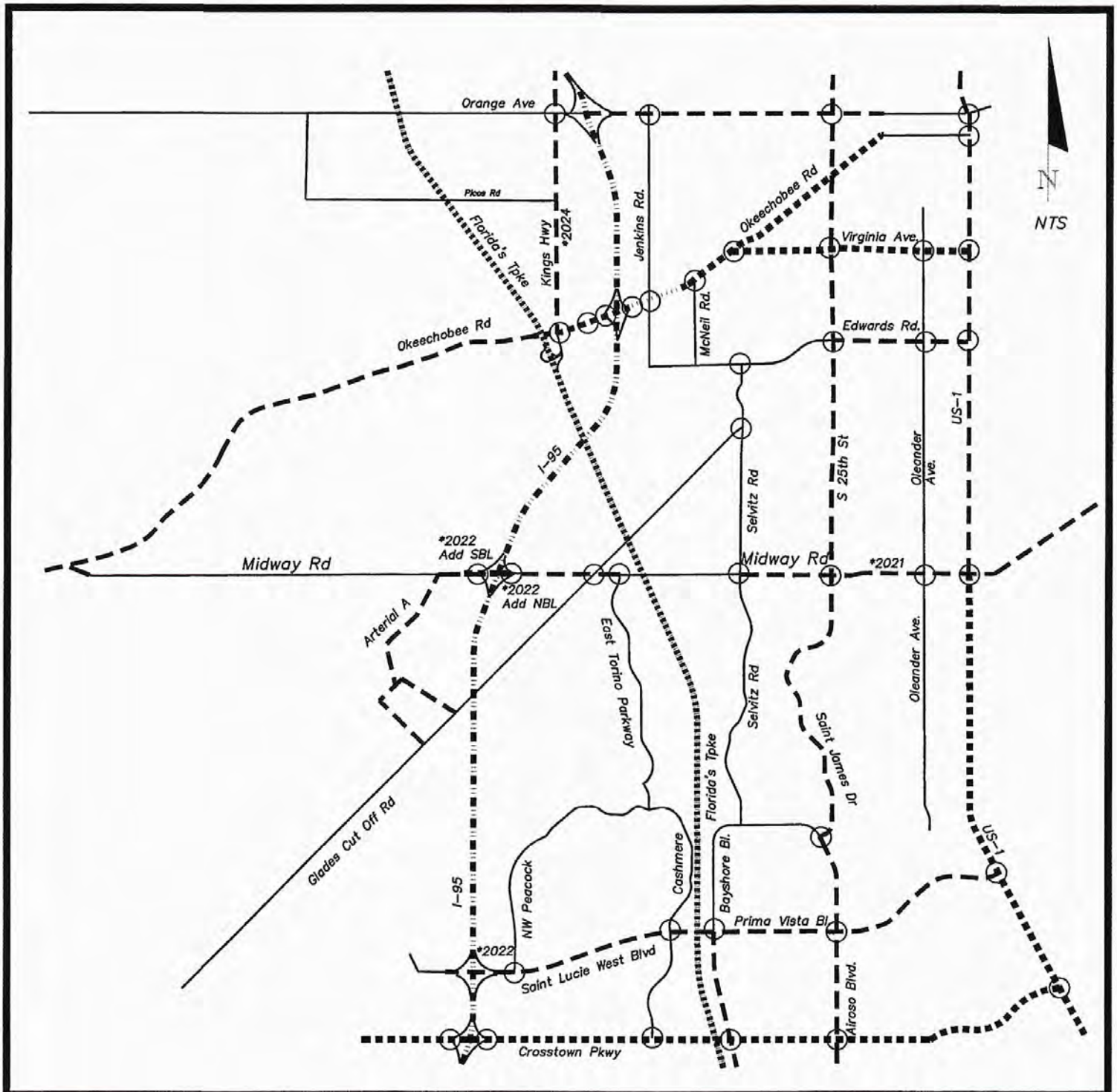
Figure 3 illustrates the existing lanes plus committed roadway network and signalized intersections within the general study area.

Existing Traffic Counts/Service Volumes

Existing traffic counts/service volumes were taken from the St. Lucie County Transportation Planning Organization (TPO) and from counts made in 2020. The peak direction and the D-factor were calculated from existing turning movement counts for significant links. This information was used to calculate the off-peak volumes.

Table 1 Summarizes the existing lanes and the relationship to the standardized capacity for each roadway link in the initial study area.

Existing count data, network, and D-factor data are provided in **Appendix A.**



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LEGEND

*Committed Lanes – Year

= 2 LANE ARTERIAL
= 4 LANE ARTERIAL
= 6 LANE ARTERIAL
= 8 LANE ARTERIAL
= 4 LANE EXPRESSWAY
= 6 LANE EXPRESSWAY
= SIGNALIZED INTERSECTION

FIGURE 3

EXISTING + COMMITTED ROADWAY NETWORK

WILLOW LAKES

February 2020

Table 1: Existing Traffic Counts and Service Volume

Segment	From	To	Direction	Federal Functional Classification (1)	Existing / Committed Capacity	2019 AM Peak Hour Volume	2019 PM Peak Hour Volume
Midway Rd	Okeechobee Rd	Shinn Rd	EB	Rural Principal Arterial-uf	760	272	376
	Okeechobee Rd	Shinn Rd	WB	Rural Principal Arterial-uf	760	295	347
	Shinn Rd	McCarty Rd	EB	Rural Principal Arterial-uf	630	272	376
	Shinn Rd	McCarty Rd	WB	Rural Principal Arterial-uf	630	295	347
	McCarty Rd	11 Mile Rd	EB	Urban Principal Arterial-uf	700	295	347
	McCarty Rd	11 Mile Rd	WB	Urban Principal Arterial-uf	700	272	376
	11 Mile Rd	Arterial A	EB	Urban Principal Arterial-uf	700	295	347
	11 Mile Rd	Arterial A	WB	Urban Principal Arterial-uf	700	272	376
	Arterial A	I95	EB	Urban Principal Arterial-uf	2100	295	347
	Arterial A	I95	WB	Urban Principal Arterial-uf	2100	272	376
	I95	Glades Cut off Rd	EB	Urban Principal Arterial-CI	2100	758	911
	I95	Glades Cut off Rd	WB	Urban Principal Arterial-CI	2100	926	1,027
	Glades Cut off Rd	NW East Torino Pkwy	EB	Urban Principal Arterial-CI	2100	1,178	1,281
	Glades Cut off Rd	NW East Torino Pkwy	WB	Urban Principal Arterial-CI	2100	1,226	890
	NW East Torino Pkwy	Florida's Turnpike	EB	Urban Principal Arterial-CI	920	1,216	1,253
	NW East Torino Pkwy	Florida's Turnpike	WB	Urban Principal Arterial-CI	920	995	1,304
	Florida's Turnpike	NW Corporate Way	EB	Urban Principal Arterial-CI	920	1,216	1,253
	Florida's Turnpike	NW Corporate Way	WB	Urban Principal Arterial-CI	920	995	1,304
	NW Corporate Way	S Jenkins Rd	EB	Urban Principal Arterial-CI	920	1,216	1,204
	NW Corporate Way	S Jenkins Rd	WB	Urban Principal Arterial-CI	920	1,036	1,304
	S Jenkins Rd	Selvitz Rd	EB	Urban Principal Arterial-CI	920	1,216	1,204
	S Jenkins Rd	Selvitz Rd	WB	Urban Principal Arterial-CI	920	1,078	1,304
	Selvitz Rd (3)	S 25th St	EB	Urban Principal Arterial-CI	2100	973	940
	Selvitz Rd	S 25th St	WB	Urban Principal Arterial-CI	2100	973	801
	S 25th St (4)	Oleander	EB	Urban Principal Arterial-CI	2100	1,025	942
	S 25th St	Oleander	WB	Urban Principal Arterial-CI	2100	805	802
	Oleander	US-1	EB	Urban Principal Arterial-CI	2100	635	654
	Oleander	US-1	WB	Urban Principal Arterial-CI	2100	808	800
Okeechobee Rd	McCarty Rd	Florida's Turnpike	EB	Urban Principal Arterial-CI	1810	378	391
	McCarty Rd	Florida's Turnpike	WB	Urban Principal Arterial-CI	1810	378	391
	Florida's Turnpike	S King's Hwy	EB	Urban Principal Arterial-CI	2010	378	391
	Florida's Turnpike	S King's Hwy	WB	Urban Principal Arterial-CI	2010	378	391
	S King's Hwy	Crossroads Pkwy	EB	Urban Principal Arterial-CI	4170	960	1,013
	S King's Hwy	Crossroads Pkwy	WB	Urban Principal Arterial-CI	4170	960	1,013
	Crossroads Pkwy	I95	EB	Urban Principal Arterial-CI	4170	1,063	1,086
	Crossroads Pkwy	I95	WB	Urban Principal Arterial-CI	4170	1,063	1,086
	I95	Jenkins Rd	EB	Urban Principal Arterial-CI	4240	1,976	1,578
	I95	Jenkins Rd	WB	Urban Principal Arterial-CI	4240	1,112	1,709
	Jenkins Rd	McNeil Rd	EB	Urban Principal Arterial-CI	4040	1,976	1,516
	Jenkins Rd	McNeil Rd	WB	Urban Principal Arterial-CI	4040	1,018	1,709
	McNeil Rd	Virginia Ave	EB	Urban Principal Arterial-CI	3170	1,580	1,522
	McNeil Rd	Virginia Ave	WB	Urban Principal Arterial-CI	3170	851	1,649
	Virginia Ave	35th St	EB	Urban Principal Arterial-CI	2100	687	727
	Virginia Ave	35th St	WB	Urban Principal Arterial-CI	2100	687	727
I-95	Orange Ave	Okeechobee Rd	NB	Interstate	7320	1,822	1,894
	Orange Ave	Okeechobee Rd	SB	Interstate	7320	1,822	1,894
	Okeechobee Rd	Midway Rd	NB	Interstate	4580	4,578	3,717
	Okeechobee Rd	Midway Rd	SB	Interstate	4580	3,181	3,717
	W Midway Rd	St Lucie West Blvd	NB	Interstate	4580	3,571	3,079
	W Midway Rd	St Lucie West Blvd	SB	Interstate	4580	3,571	3,079
	St Lucie West Blvd	Crosstown Pkwy	NB	Interstate	4580	4,048	3,657
	St Lucie West Blvd	Crosstown Pkwy	SB	Interstate	4580	4,048	3,657
Glades Cut off Rd	Range Line Rd	Reserve Blvd	NB	Urban Minor Arterial-UF	1070	200	252
	Range Line Rd	Reserve Blvd	SB	Urban Minor Arterial-UF	1070	164	233
	Reserve Blvd	Commerce Centre Dr	NB	Urban Minor Arterial-UF	1070	332	332
	Reserve Blvd	Commerce Centre Dr	SB	Urban Minor Arterial-UF	1070	272	308
	Commerce Centre Dr	W Midway Rd	NB	Urban Minor Arterial-CI	920	210	192
	Commerce Centre Dr	W Midway Rd	SB	Urban Minor Arterial-CI	920	202	151
	W Midway Rd	S. Jenkins Road	NB	Urban Minor Arterial-CII	790	669	421
	W Midway Rd	S. Jenkins Road	SB	Urban Minor Arterial-CII	790	526	687
	S Jenkins Rd	Selvitz Rd	NB	Urban Minor Arterial-CII	830	370	236
	S Jenkins Rd	Selvitz Rd	SB	Urban Minor Arterial-CII	830	291	385
SW Saint Lucie West Blvd	I95	California Blvd	EB	Other Principal Arterial	2100	1,722	1,670
	I95	California Blvd	WB	Other Principal Arterial	2100	1,722	1,670
	California Blvd	Country Club Dr	EB	Other Principal Arterial	2100	1,722	1,670
	California Blvd	Country Club Dr	WB	Other Principal Arterial	2100	1,722	1,670
	Country Club Dr	Cashmere Blvd	EB	Other Principal Arterial	2100	1,722	1,670
	Country Club Dr	Cashmere Blvd	WB	Other Principal Arterial	2100	1,722	1,670
	Cashmere Blvd	Florida's Turnpike	EB	Other Principal Arterial	3170	2,446	2,308
	Cashmere Blvd	Florida's Turnpike	WB	Other Principal Arterial	3170	2,446	2,308
	Florida's Turnpike	Bayshore Blvd	EB	Other Principal Arterial	3170	2,446	2,308
	Florida's Turnpike	Bayshore Blvd	WB	Other Principal Arterial	3170	2,446	2,308
Jenkins Rd	Edwards Rd	Okeechobee Rd	NB	Urban Minor Arterial	880	468	471
	Edwards Rd	Okeechobee Rd	SB	Urban Minor Arterial	880	549	553
	Okeechobee Rd	Orange Ave	NB	Urban Minor Arterial	920	485	525
	Okeechobee Rd	Orange Ave	SB	Urban Minor Arterial	920	593	569
25th St	Midway Rd	Edwards Rd	NB	Urban Principal Arterial-CI	2100	1,310	749
	Midway Rd	Edwards Rd	SB	Urban Principal Arterial-CI	2100	838	1,222
St James	Bayshore Blvd	Midway Rd	NB	Urban Principal Arterial	2100	1,188	689
	Bayshore Blvd	Midway Rd	SB	Urban Principal Arterial	2100	559	1,173
Virginia Ave	Okeechobee Rd	25th St	EB	Urban Principal Arterial	3020	1,199	1,126
	Okeechobee Rd	25th St	WB	Urban Principal Arterial	3020	1,169	1,126
Prima Vista Blvd	Bayshore Blvd	Alroso Blvd	EB	Urban Principal Arterial	2100	944	1,005
	Bayshore Blvd	Alroso Blvd	WB	Urban Principal Arterial	2100	944	1,005
	Alroso Blvd	US 1	EB	Urban Principal Arterial	2100	1,171	1,097
	Alroso Blvd	US 1	WB	Urban Principal Arterial	2100	1,171	1,097
Selvitz Rd	Bayshore Blvd	Midway Rd	NB	Minor Arterial	750	426	240
	Bayshore Blvd	Midway Rd	SB	Minor Arterial	750	200	426
	Midway Rd	Glades Cut Off Rd	NB	Minor Arterial	700	696	527
	Midway Rd	Glades Cut off Rd	SB	Minor Arterial	700	359	644
East Torino Pkwy	Midway Rd	Turtle Dove Ln	NB	Urban Minor Arterial	830	1,030	625
	Midway Rd	Turtle Dove Ln	SB	Urban Minor Arterial	880	555	978

Source: St. Lucie TPO Traffic Counts and Level of Service Report Fall/Winter 2019/2020
Note: Peak Direction Volumes from ST. Lucie County Traffic Counts and LOS Report Fall/Winter 2019/2020
Links analyzed in tables 4a and 4b include the off peak volumes calculated using D factors in Appendix E.
« TPO Value

(1) St. Lucie County Comprehensive Plan
(2) 2 lane portion fails with background traffic, and conditioned for improvement
(3) Selvitz to Christensen Rd/ Christensen to 25th St all one capacity
(4) 25th to Sunrise and Sunrise to Oleander same volume and capacity

TRIP GENERATION

To estimate the project traffic for this project various ITE Trip Generation, 10th edition rates were applied. The total trip generation will act as a "bank" of trips. As site plans are submitted, the trips will be calculated and draw down from the bank. The project has two unique uses; Topgolf and the Wave Garden. For Topgolf, 10,000 square feet of restaurant, 20 tees of golf, and 18 holes of golf were used to estimate trips. For the Wave Garden, 9.5 acres of a water slide park and 7,500 square feet of retail and restaurant, plus a 19,600 square foot recreation area were included to estimate trips. When the Wave Garden comes in for site plan, the quantity of uses will result in the trip calculation to be drawn from the overall pool of trips. No similar prototypes are operating currently in the US. Similar uses were used to estimate those uses as specific ITE and use codes for these uses do not exist. **Tables 2a, 2b, and 2c** provide the daily, AM, and PM trip generation for the proposed development. The project yields a high internal capture rate based on ITE internal capture pairings. The pairings were reduced in some cases to achieve an overall internal capture rate in line for projects of this size and with a complete mix of uses. **Appendix B** includes the details of the trip generation and internal capture for the Daily, AM and PM peak hours.

As shown, the project will generate 37,828 daily trips, 2,420 AM peak hour trips with 1,355 entering and 1,065 exiting, and 2,486 PM peak hour trips with 1,450 entering and 1,036 exiting.

PROJECT ASSIGNMENT

The project traffic was distributed using a select zone run from the 2040 Greater Treasure Coast Model. The assignment was run with and without the link to Arterial A in place. The resultant assignment from the 2040 Model is shown in **Appendix C**. The project percent assignment derived from that model assignment is shown in **Figure 4**.

STUDY AREA/ PROJECT IMPACT

Based on the project assignment and the impact to the network, the study area was refined.

Tables 3a and 3b summarize the project impact on the area network for the AM and PM Peak hour; respectively. As shown several links are significantly impacted by the project and required analysis.

FUTURE TRAFFIC LINKS

The project is expected to build out in 2035. To estimate future 2035 volumes the existing (2019/2020) traffic volumes were increased by a 0.5% growth rate. Traffic from 12 approved developments, including Village at Midway and LTC Ranch, was also added to create 2035 volumes without project. In no case was the resultant background growth less than 1%. In other words, if the background plus 0.5% per year plus committed traffic resulted in a volume that was less than existing plus 1% per year, the background traffic was adjusted up to the minimum 1%. The project traffic was then added to estimate the 2035 Total Traffic volumes with project. The Total Traffic volumes were then compared to the acceptable threshold on each link.

Tables 4a and 4b show the volumes and the relationship to adopted thresholds for the AM and PM Peak hours, respectively.

Appendix D includes the details regarding other approved projects.

Table 2 - Trip Generation

Table 2a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Single Family Detached	210	150	DU	Ln(T) = 0.92Ln(X) + 2.71	50%	50%	755	755	1,510	53	169	222	14.7%	702	586	1,288	-	-	-	0.0%	702	586	1,288
Multifamily Housing (Low-Rise)	220	150	DU	T = 7.56(X) - 40.86	50%	50%	547	546	1,093	38	122	160	14.6%	509	424	933	-	-	-	0.0%	509	424	933
Multifamily Housing (Mid-Rise)	221	700	DU	T = 5.45(X) - 1.75	50%	50%	1,907	1,906	3,813	133	426	559	14.7%	1,774	1,480	3,254	-	-	-	0.0%	1,774	1,480	3,254
General Office	710	100,000	Sft	Ln(T) = 0.97Ln(X) + 2.50	50%	50%	531	530	1,061	127	482	609	57.4%	404	48	452	-	-	-	0.0%	404	48	452
Medical Office	720	50,000	Sft	T = 38.42(X) - 87.62	50%	50%	917	916	1,833	220	834	1,054	57.5%	697	82	779	-	-	-	0.0%	697	82	779
Shopping Center	820	250,000	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	5,605	5,605	11,210	921	798	1,719	15.3%	4,684	4,807	9,491	1,614	1,613	3,227	34.0%	3,070	3,194	6,264
Super Convenience Market/Gas Station	FDOT	16 / 5,000	Pumps/Sft	T=256.7(FP) - 144.5(Sft)[1]	50%	50%	1,693	1,692	3,385	278	241	519	15.3%	1,415	1,451	2,866	889	888	1,777	62.0%	526	563	1,089
Convenience Market	851	5,000	Sft	T = 762.28(X)	50%	50%	1,906	1,905	3,811	313	271	584	15.3%	1,593	1,634	3,227	823	823	1,646	51.0%	770	811	1,581
Pharmacy/Drugstore without Drive-Thru	880	15,000	Sft	Ln(T) = 0.99Ln(X) + 4.51	50%	50%	664	663	1,327	109	94	203	15.3%	555	569	1,124	298	298	596	53.0%	257	271	528
Fast-Food Restaurant with Drive-Thru	934	25,000	Sft	T = 470.95(X)	50%	50%	5,887	5,887	11,774	1,598	655	2,253	19.1%	4,289	5,232	9,521	2,333	2,332	4,665	49.0%	1,956	2,900	4,856
High-Turnover (Sit-Down) Restaurant	932	100,000	Sft	T = 112.18(X)	50%	50%	5,609	5,609	11,218	1,522	624	2,146	19.1%	4,087	4,985	9,072	1,951	1,950	3,901	43.0%	2,136	3,035	5,171
Water Slide Park	482	9.5	Acres	T = 150.33(X)	50%	50%	714	714	1,428	-	-	-	0.0%	714	714	1,428	-	-	-	0.0%	714	714	1,428
Multipurpose Recreational Facility	435	19,600	Sft	T = 29.10(X)[1]	50%	50%	285	285	570	-	-	-	0.0%	285	285	570	-	-	-	0.0%	285	285	570
Movie Theater	444	42,500	Sft	T = 78.09(X)	50%	50%	1,660	1,659	3,319	-	-	-	0.0%	1,660	1,659	3,319	-	-	-	0.0%	1,660	1,659	3,319
Golf Course	430	18	Holes	T = 30.38(X)	50%	50%	274	273	547	-	-	-	0.0%	274	273	547	-	-	-	0.0%	274	273	547
Golf Driving Range	432	20	Tees	T = 13.65(X)	50%	50%	137	136	273	-	-	-	0.0%	137	136	273	-	-	-	0.0%	137	136	273
Hotel	310	600	Rooms	T = 11.29(X) - 426.97	50%	50%	3,174	3,173	6,347	127	724	851	13.4%	3,047	2,449	5,496	-	-	-	0.0%	3,047	2,449	5,496
TOTALS							**32,265**	**32,254**	**64,519**	**5,439**	**5,440**	**10,879**	**16.9%**	**26,826**	**26,814**	**53,640**	**7,908**	**7,904**	**15,812**	**29.5%**	**18,918**	**18,910**	**37,828**

Table 2b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Single Family Detached	210	150	DU	T = 0.71(X) + 4.80	25%	75%	28	83	111	2	19	21	18.9%	26	64	90	-	-	-	0.0%	26	64	90
Multifamily Housing (Low-Rise)	220	150	DU	Ln(T) = 0.95Ln(X) - 0.51	23%	77%	16	54	70	1	12	13	18.6%	15	42	57	-	-	-	0.0%	15	42	57
Multifamily Housing (Mid-Rise)	221	700	DU	Ln(T) = 0.98Ln(X) - 0.98	26%	74%	60	170	230	4	39	43	18.7%	56	131	187	-	-	-	0.0%	56	131	187
General Office	710	100,000	Sft	T = 0.94(X) + 26.49	86%	14%	103	17	120	24	17	41	34.2%	79	-	79	-	-	-	0.0%	79	-	79
Medical Office	720	50,000	Sft	Ln(T) = 0.89Ln(X) + 1.31	78%	22%	94	27	121	24	17	41	33.9%	70	10	80	-	-	-	0.0%	70	10	80
Shopping Center	820	250,000	Sft	T = 0.50(X) + 151.78	62%	38%	172	105	277	21	19	40	14.4%	151	86	237	41	40	81	34.0%	110	46	156
Super Convenience Market/Gas Station	FDOT	16 / 5,000	Pumps/Sft	T= 12.3(FP) + 15.5(Sft)[1]	50%	50%	137	137	274	21	19	40	14.6%	116	118	234	73	72	145	62.0%	43	46	89
Convenience Market	851	5,000	Sft	T = 62.54(X)	50%	50%	157	156	313	24	22	46	14.7%	133	134	267	68	68	136	51.0%	65	66	131
Pharmacy/Drugstore without Drive-Thru	880	15,000	Sft	T = 10.22(X) - 75.70	65%	35%	51	27	78	6	5	11	14.1%	45	22	67	18	18	36	53.0%	27	4	31
Fast-Food Restaurant with Drive-Thru	934	25,000	Sft	T = 40.19(X)	51%	49%	513	492	1,005	75	41	116	11.5%	438	451	889	218	218	436	49.0%	220	233	453
High-Turnover (Sit-Down) Restaurant	932	100,000	Sft	T = 9.94(X)	55%	45%	547	447	994	74	40	114	11.5%	473	407	880	189	189	378	43.0%	284	218	502
Water Slide Park	482	9.5	Acres	T = 22.92(X)[3]	58%	42%	126	92	218	-	-	-	0.0%	126	92	218	-	-	-	0.0%	126	92	218
Multipurpose Recreational Facility	435	19,600	Sft	T = 2.24(X) [2]	71%	29%	31	13	44	-	-	-	0.0%	31	13	44	-	-	-	0.0%	31	13	44
Movie Theater	444	42,500	Sft	T = 0.22(X)	71%	29%	6	3	9	-	-	-	0.0%	6	3	9	-	-	-	0.0%	6	3	9
Golf Course	430	18	Holes	T = 1.76(X)	79%	21%	25	7	32	-	-	-	0.0%	25	7	32	-	-	-	0.0%	25	7	32
Golf Driving Range	432	20	Tees	T = 0.40(X)	61%	39%	5	3	8	-	-	-	0.0%	5	3	8	-	-	-	0.0%	5	3	8
Hotel	310	600	Rooms	T = 0.50(X) - 5.34	59%	41%	174	121	295	7	34	41	13.9%	167	87	254	-	-	-	0.0%	167	87	254
TOTALS							**2,245**	**1,954**	**4,199**	**283**	**284**	**567**	**13.5%**	**1,962**	**1,670**	**3,632**	**607**	**605**	**1,212**	**33.4%**	**1,355**	**1,065**	**2,420**

Table 2c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Single Family Detached	210	150	DU	Ln(T) = 0.96Ln(X) + 0.20	63%	37%	95	55	150	42	36	78	52.0%	53	19	72	-	-	-	0.0%	53	19	72
Multifamily Housing (Low-Rise)	220	150	DU	Ln(T) = 0.89Ln(X) - 0.02	63%	37%	54	31	85	24	20	44	51.8%	30	11	41	-	-	-	0.0%	30	11	41
Multifamily Housing (Mid-Rise)	221	700	DU	Ln(T) = 0.96Ln(X) - 0.63	61%	39%	175	112	287	80	69	149	51.9%	95	43	138	-	-	-	0.0%	95	43	138
General Office	710	100,000	Sft	Ln(T) = 0.95Ln(X) + 0.36	16%	84%	18	96	114	17	23	40	35.1%	1	73	74	-	-	-	0.0%	1	73	74
Medical Office	720	50,000	Sft	T = 3.39(X) + 2.02	28%	72%	48	124	172	26	34	60	34.9%	22	90	112	-	-	-	0.0%	22	90	112
Shopping Center	820	250,000	Sft	Ln(T) = 0.74Ln(X) + 2.89	48%	52%	514	556	1,070	196	202	398	37.2%	318	354	672	113	115	228	34.0%	205	239	444
Super Convenience Market/Gas Station	FDOT	16 / 5,000	Pumps/Sft	T= 12.3(FP) + 15.5(Sft)[1]	50%	50%	137	137	274	50	52	102	37.2%	87	85	172	48	48	96	56.0%	39	37	76
Convenience Market	851	5,000	Sft	T = 49.11(X)	51%	49%	125	121	246	45	46	91	37.0%	80	75	155	40	39	79	51.0%	40	36	76
Pharmacy/Drugstore without Drive-Thru	880	15,000	Sft	T = 8.51(X)	49%	51%	63	65	128	23	24	47	36.7%	40	41	81	21	22	43	53.0%	19	19	38
Fast-Food Restaurant with Drive-Thru	934	25,000	Sft	T = 32.67(X)	52%	48%	425	392	817	121	151	272	33.3%	304	241	545	134	133	267	49.0%	170	108	278
High-Turnover (Sit-Down) Restaurant	932	100,000	Sft	T = 9.77(X)	62%	38%	606	371	977	145	181	326	33.4%	461	190	651	140	140	280	43.0%	321	50	371
Water Slide Park	482	9.5	Acres	T = 22.92(X)[3]	42%	58%	92	126	218	27	14	41	18.8%	65	112	177	-	-	-	0.0%	65	112	177
Multipurpose Recreational Facility	435	19,600	Sft	T = 3.58(X)	55%	45%	39	31	70	9	4	13	18.6%	30	27	57	-	-	-	0.0%	30	27	57
Movie Theater	444	42,500	Sft	T = 6.17(X)	94%	6%	246	16	262	33	16	49	18.7%	213	-	213	-	-	-	0.0%	213	-	213
Golf Course	430	18	Holes	T = 2.91(X)	53%	47%	28	24	52	7	3	10	19.2%	21	21	42	-	-	-	0.0%	21	21	42
Golf Driving Range	432	20	Tees	T = 1.25(X)	45%	55%	11	14	25	3	2	5	20.0%	8	12	20	-	-	-	0.0%	8	12	20
Hotel	310	600	Rooms	T = 0.75(X) - 26.02	51%	49%	216	208	424	98	69	167	39.4%	118	139	257	-	-	-	0.0%	118	139	257
TOTALS							**2,892**	**2,479**	**5,371**	**946**	**946**	**1,892**	**35.2%**	**1,946**	**1,533**	**3,479**	**496**	**497**	**993**	**28.5%**	**1,450**	**1,036**	**2,486**

Source: ITE 10th Edition Trip Generation Rates



O'Rourke Engineering & Planning

FIGURE 4

PROJECT % ASSIGNMENT
Main Table

WILLOW LAKES

April 2020

O'ROURKE ENGINEERING & PLANNING

772-781-7918
969 SE Federal Highway Suite 402
Stuart, Florida 34994

Table 3a: AM Project Significance

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	Existing / Committed Capacity (2012 Directional FDOT LOS D)	In/Out	Project Volume Peak Direction	%Project of Capacity Peak Direction	Project Percent Assignment	3% or Greater < 2 Miles 5% or Greater 2-5 Miles
Midway Rd	Okeechobee Rd	Shinn Rd	2	EB	Rural Principal Arterial-uf	760	In	27	3.57%	2%	NO
	Okeechobee Rd	Shinn Rd	2	WB	Rural Principal Arterial-uf	760	Out	21	2.80%	2%	NO
	Shinn Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	630	In	27	4.30%	2%	YES
	Shinn Rd	McCarty Rd	2	WB	Rural Principal Arterial-uf	630	Out	21	3.38%	2%	YES
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	700	In	27	3.87%	2%	YES
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-uf	700	Out	21	3.04%	2%	YES
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	700	In	27	3.87%	2%	YES
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-uf	700	Out	21	3.04%	2%	YES
	Arterial A	I95	4D(C)	EB	Urban Principal Arterial-uf	2100	Out	1022	48.69%	96%	YES
	Arterial A	I95	4D(C)	WB	Urban Principal Arterial-uf	2100	In	1301	61.94%	96%	YES
	I95	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	2100	Out	330	15.72%	31%	YES
	I95	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	2100	In	420	20.00%	31%	YES
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	2100	Out	266	12.68%	25%	YES
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	2100	In	339	16.13%	25%	YES
	NW East Torino Pkwy	Florida's Turnpike	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES
	NW East Torino Pkwy	Florida's Turnpike	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES
	Florida's Turnpike	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES
	Florida's Turnpike	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES
	S Jenkins Rd	Selvitz Rd	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES
	S Jenkins Rd	Selvitz Rd	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES
	Selvitz Rd	S 25th St	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	202	9.64%	19%	YES
	Selvitz Rd	S 25th St	4D(C)	WB	Urban Principal Arterial-CI	2100	In	257	12.26%	19%	YES
	S 25th St	Oleander	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	170	8.11%	16%	YES
	S 25th St	Oleander	4D(C)	WB	Urban Principal Arterial-CI	2100	In	217	10.32%	16%	YES
	Oleander	US-1	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	170	8.11%	16%	YES
	Oleander	US-1	4D(C)	WB	Urban Principal Arterial-CI	2100	In	217	10.32%	16%	YES
Okeechobee Rd	Florida's Turnpike	S King's Hwy	4LD	EB	Urban Principal Arterial-CI	2010	In	14	0.67%	1%	NO
	Florida's Turnpike	S King's Hwy	4LD	WB	Urban Principal Arterial-CI	2010	Out	11	0.53%	1%	NO
	S King's Hwy	Crossroads Pkwy	6LD	EB	Urban Principal Arterial-CI	4170	In	14	0.32%	1%	NO
	S King's Hwy	Crossroads Pkwy	6LD	WB	Urban Principal Arterial-CI	4170	Out	11	0.26%	1%	NO
	Crossroads Pkwy	I95	6LD	EB	Urban Principal Arterial-CI	4170	In	14	0.32%	1%	NO
	Crossroads Pkwy	I95	6LD	WB	Urban Principal Arterial-CI	4170	Out	11	0.26%	1%	NO
	I95	Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	4240	Out	298	7.03%	28%	YES
	I95	Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	4240	In	379	8.95%	28%	YES
	Jenkins Rd	McNeil Rd	8LD	EB	Urban Principal Arterial-CI	4040	Out	277	6.85%	26%	YES
	Jenkins Rd	McNeil Rd	8LD	WB	Urban Principal Arterial-CI	4040	In	352	8.72%	26%	YES
	McNeil Rd	Virginia Ave	6LD	EB	Urban Principal Arterial-CI	3170	Out	277	8.74%	26%	YES
	McNeil Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	3170	In	352	11.11%	26%	YES
	Virginia Ave	35th St	6LD	EB	Urban Principal Arterial-CI	2100	Out	75	3.55%	7%	NO
	Virginia Ave	35th St	6LD	WB	Urban Principal Arterial-CI	2100	In	95	4.52%	7%	NO
I-95	Orange Ave	Okeechobee Rd	8LD	NB	Interstate	7320	Out	149	2.04%	14%	NO
	Orange Ave	Okeechobee Rd	8LD	SB	Interstate	7320	In	190	2.59%	14%	NO
	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	4580	Out	490	10.70%	46%	YES
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	4580	In	623	13.61%	46%	YES
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	4580	In	257	5.62%	19%	YES
	W Midway Rd	St Lucie West Blvd	6LD	SB	Interstate	4580	Out	202	4.42%	19%	NO
	St Lucie West Blvd	Crosstown Pkwy	6LD	NB	Interstate	4580	In	244	5.33%	18%	YES
	St Lucie West Blvd	Crosstown Pkwy	6LD	SB	Interstate	4580	Out	192	4.19%	18%	NO
Glades Cut off Rd	Range Line Rd	Reserve Blvd	2	NB	Urban Minor Arterial-UF	1070	In	27	2.53%	2%	NO
	Range Line Rd	Reserve Blvd	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.99%	2%	NO
	Reserve Blvd	Commerce Centre Dr	2	NB	Urban Minor Arterial-UF	1070	In	27	2.53%	2%	NO
	Reserve Blvd	Commerce Centre Dr	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.99%	2%	NO
	W Midway Rd	Florida's Turnpike	2	NB	Urban Minor Arterial-CI	790	Out	64	8.09%	6%	YES
	W Midway Rd	Florida's Turnpike	2	SB	Urban Minor Arterial-CI	790	In	81	10.29%	6%	YES
	Florida's Turnpike	S Jenkins Rd	2	NB	Urban Minor Arterial-CI	790	Out	64	8.09%	6%	YES
	Florida's Turnpike	S Jenkins Rd	2	SB	Urban Minor Arterial-CI	790	In	81	10.29%	6%	YES
	S Jenkins Rd	Selvitz Rd	2	NB	Urban Minor Arterial-CI	830	Out	64	7.70%	6%	YES
	S Jenkins Rd	Selvitz Rd	2	SB	Urban Minor Arterial-CI	830	In	81	9.80%	6%	YES
SW Saint Lucie West Blvd	I95	California Blvd	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO
	I95	California Blvd	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO
	California Blvd	Country Club Dr	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO
	California Blvd	Country Club Dr	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO
	Country Club Dr	Cashmere Blvd	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO
	Country Club Dr	Cashmere Blvd	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO
	Cashmere Blvd	Florida's Turnpike	6LD	EB	Other Principal Arterial	3170	Out	11	0.34%	1%	NO
	Cashmere Blvd	Florida's Turnpike	6LD	WB	Other Principal Arterial	3170	In	14	0.43%	1%	NO
	Florida's Turnpike	Bayshore Blvd	6LD	EB	Other Principal Arterial	3170	Out	11	0.34%	1%	NO
	Florida's Turnpike	Bayshore Blvd	6LD	WB	Other Principal Arterial	3170	In	14	0.43%	1%	NO
Jenkins Rd	Edwards Rd	Okeechobee Rd	2L	NB	Urban Minor Arterial- CI	880	In	14	1.54%	1%	NO
	Edwards Rd	Okeechobee Rd	2L	SB	Urban Minor Arterial-CI	880	Out	11	1.21%	1%	NO
	Okeechobee Rd	Orange Ave	2L	NB	Urban Minor Arterial-CI	920	Out	11	1.16%	1%	NO
	Okeechobee Rd	Orange Ave	2L	SB	Urban Minor Arterial- CI	920	In	14	1.47%	1%	NO
25th St	Midway Rd	Edwards Rd	4LD	NB	Urban Principal Arterial-CI	2100	Out	21	1.01%	2%	NO
	Midway Rd	Edwards Rd	4LD	SB	Urban Principal Arterial-CI	2100	In	27	1.29%	2%	NO
St James	Bayshore Blvd	Midway Rd	4LD	NB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO
	Bayshore Blvd	Midway Rd	4LD	SB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO
Virginia Ave	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	3020	Out	170	5.64%	16%	YES
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	3020	In	217	7.18%	16%	YES
Prima Vista Blvd	Bayshore Blvd	Alroso Blvd	4LD	EB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO
	Bayshore Blvd	Alroso Blvd	4LD	WB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO
	Alroso Blvd	US 1	4LD	EB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO
	Alroso Blvd	US 1	4LD	WB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO
Selvitz Rd	Bayshore Blvd	Midway Rd	2	NB	Minor Arterial	750	In	41	5.42%	3%	YES
	Bayshore Blvd	Midway Rd	2	SB	Minor Arterial	750	Out	32	4.26%	3%	NO
	Midway Rd	Glades Cut Off Rd	2	NB	Minor Arterial	700	Out	11	1.52%	1%	NO
	Midway Rd	Glades Cut off Rd	2	SB	Minor Arterial	700	In	14	1.94%	1%	NO
East Torino Pkwy	Midway Rd	Turtle Dove Ln	2	NB	Urban Minor Arterial-CI	880	In	27	3.08%	2%	YES
	Midway Rd	Turtle Dove Ln	2	SB	Urban Minor Arterial-CI	880	Out	21	2.42%	2%	NO
Arterial A	Midway Rd	EW 5	6LD	NB	Urban Major Arterial - CI	3020	In	27	0.90%	2%	NO
	Midway Rd	EW 5	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.71%	2%	NO
	EW 5	Glades Cut off Rd	6LD	NB	Urban Major Arterial - CI	3020	In	27	0.90%	2%	NO
	EW 5	Glades Cut off Rd	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.71%	2%	NO

Source of Functional Classification: St. Lucie County Comprehensive Plan

= 5%

(2) 2 lane portion fails with background traffic, and conditioned for improvement

Trips In	1355
Trips Out	1065
Total	2420

Table 3b: PM Project Significance

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	Existing/ Committed Capacity (2012 Directional FDOT LOS D)	In/Out	Project Volume Peak Direction	% Project of Capacity Peak Direction	Project Percent Assignment	3% or Greater < 2 Miles 5% or Greater 2-5 Miles
Midway Rd	Okeechobee Rd	Shinn Rd	2	EB	Rural Principal Arterial-uf	760	In	29	3.82%	2%	NO
	Okeechobee Rd	Shinn Rd	2	WB	Rural Principal Arterial-uf	760	Out	21	2.73%	2%	NO
	Shinn Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	630	In	29	4.60%	2%	YES
	Shinn Rd	McCarty Rd	2	WB	Rural Principal Arterial-uf	630	Out	21	3.29%	2%	YES
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	700	In	29	4.14%	2%	YES
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-uf	700	Out	21	2.96%	2%	NO
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	700	In	29	4.14%	2%	YES
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-uf	700	Out	21	2.96%	2%	NO
	Arterial A	I95	4D(C)	EB	Urban Principal Arterial-uf	2100	Out	995	47.36%	96%	YES
	Arterial A	I95	4D(C)	WB	Urban Principal Arterial-uf	2100	In	1392	66.29%	96%	YES
	I95	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	2100	Out	321	15.29%	31%	YES
	I95	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	2100	In	450	21.40%	31%	YES
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	2100	Out	259	12.33%	25%	YES
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	2100	In	363	17.26%	25%	YES
	NW East Torino Pkwy	Florida's Turnpike	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES
	NW East Torino Pkwy	Florida's Turnpike	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES
	Florida's Turnpike	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES
	Florida's Turnpike	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES
	S Jenkins Rd	Selvitz Rd	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES
	S Jenkins Rd	Selvitz Rd	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES
	Selvitz Rd	S 25th St	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	197	9.37%	19%	YES
	Selvitz Rd	S 25th St	4D(C)	WB	Urban Principal Arterial-CI	2100	In	276	13.12%	19%	YES
	S 25th St	Oleander	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	166	7.89%	16%	YES
	S 25th St	Oleander	4D(C)	WB	Urban Principal Arterial-CI	2100	In	232	11.05%	16%	YES
	Oleander	US-1	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	166	7.89%	16%	YES
	Oleander	US-1	4D(C)	WB	Urban Principal Arterial-CI	2100	In	232	11.05%	16%	YES
Okeechobee Rd	McCarty Rd	Florida's Turnpike	4LD	EB	Urban Principal Arterial-CI	1810	In	0	0.00%	0%	NO
	McCarty Rd	Florida's Turnpike	4LD	WB	Urban Principal Arterial-CI	1810	Out	0	0.00%	0%	NO
	Florida's Turnpike	S King's Hwy	4LD	EB	Urban Principal Arterial-CI	2010	In	15	0.72%	1%	NO
	Florida's Turnpike	S King's Hwy	4LD	WB	Urban Principal Arterial-CI	2010	Out	10	0.52%	1%	NO
	S King's Hwy	Crossroads Pkwy	6LD	EB	Urban Principal Arterial-CI	4170	In	15	0.35%	1%	NO
	S King's Hwy	Crossroads Pkwy	6LD	WB	Urban Principal Arterial-CI	4170	Out	10	0.25%	1%	NO
	Crossroads Pkwy	I95	6LD	EB	Urban Principal Arterial-CI	4170	In	15	0.35%	1%	NO
	Crossroads Pkwy	I95	6LD	WB	Urban Principal Arterial-CI	4170	Out	10	0.25%	1%	NO
	I95	Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	4240	Out	290	6.84%	28%	YES
	I95	Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	4240	In	406	9.58%	28%	YES
	Jenkins Rd	McNeil Rd	8LD	EB	Urban Principal Arterial-CI	4040	Out	269	6.67%	26%	YES
	Jenkins Rd	McNeil Rd	8LD	WB	Urban Principal Arterial-CI	4040	In	377	9.33%	26%	YES
	McNeil Rd	Virginia Ave	6LD	EB	Urban Principal Arterial-CI	3170	Out	269	8.50%	26%	YES
	McNeil Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	3170	In	377	11.89%	26%	YES
	Virginia Ave	35th St	6LD	EB	Urban Principal Arterial-CI	2100	Out	73	3.45%	7%	NO
	Virginia Ave	35th St	6LD	WB	Urban Principal Arterial-CI	2100	In	102	4.83%	7%	NO
I-95	Orange Ave	Okeechobee Rd	8LD	NB	Interstate	7320	Out	145	1.98%	14%	NO
	Orange Ave	Okeechobee Rd	8LD	SB	Interstate	7320	In	203	2.77%	14%	NO
	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	4580	Out	477	10.41%	46%	YES
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	4580	In	667	14.56%	46%	YES
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	4580	In	276	6.02%	19%	YES
	W Midway Rd	St Lucie West Blvd	6LD	SB	Interstate	4580	Out	197	4.30%	19%	NO
	St Lucie West Blvd	Crosstown Pkwy	6LD	NB	Interstate	4580	In	261	5.70%	18%	YES
	St Lucie West Blvd	Crosstown Pkwy	6LD	SB	Interstate	4580	Out	186	4.07%	18%	NO
Glades Cut off Rd	Range Line Rd	Reserve Blvd	2	NB	Urban Minor Arterial-UF	1070	In	29	2.71%	2%	NO
	Range Line Rd	Reserve Blvd	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.94%	2%	NO
	Reserve Blvd	Commerce Centre Dr	2	NB	Urban Minor Arterial-UF	1070	In	29	2.71%	2%	NO
	Reserve Blvd	Commerce Centre Dr	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.94%	2%	NO
	W Midway Rd	Florida's Turnpike	2	NB	Urban Minor Arterial-CII	790	Out	62	7.87%	6%	YES
	W Midway Rd	Florida's Turnpike	2	SB	Urban Minor Arterial-CII	790	In	87	11.01%	6%	YES
	Florida's Turnpike	S Jenkins Rd	2	NB	Urban Minor Arterial-CII	790	Out	62	7.87%	6%	YES
	Florida's Turnpike	S Jenkins Rd	2	SB	Urban Minor Arterial-CII	790	In	87	11.01%	6%	YES
	S Jenkins Rd	Selvitz Rd	2	NB	Urban Minor Arterial-CII	830	Out	62	7.49%	6%	YES
	S Jenkins Rd	Selvitz Rd	2	SB	Urban Minor Arterial-CII	830	In	87	10.48%	6%	YES
SW Saint Lucie West Blvd	I95	California Blvd	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO
	I95	California Blvd	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO
	California Blvd	Country Club Dr	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO
	California Blvd	Country Club Dr	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO
	Country Club Dr	Cashmere Blvd	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO
	Country Club Dr	Cashmere Blvd	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO
	Cashmere Blvd	Florida's Turnpike	6LD	EB	Other Principal Arterial	3170	Out	10	0.33%	1%	NO
	Cashmere Blvd	Florida's Turnpike	6LD	WB	Other Principal Arterial	3170	In	15	0.46%	1%	NO
	Florida's Turnpike	Bayshore Blvd	6LD	EB	Other Principal Arterial	3170	Out	10	0.33%	1%	NO
	Florida's Turnpike	Bayshore Blvd	6LD	WB	Other Principal Arterial	3170	In	15	0.46%	1%	NO
Jenkins Rd	Edwards Rd	Okeechobee Rd	2L	NB	Urban Minor Arterial- CI	880	In	15	1.65%	1%	NO
	Edwards Rd	Okeechobee Rd	2L	SB	Urban Minor Arterial-CI	880	Out	10	1.18%	1%	NO
	Okeechobee Rd	Orange Ave	2L	NB	Urban Minor Arterial-CI	920	Out	10	1.13%	1%	NO
	Okeechobee Rd	Orange Ave	2L	SB	Urban Minor Arterial- CI	920	In	15	1.58%	1%	NO
25th St	Midway Rd	Edwards Rd	4LD	NB	Urban Principal Arterial-CI	2100	Out	21	0.99%	2%	NO
	Midway Rd	Edwards Rd	4LD	SB	Urban Principal Arterial-CI	2100	In	29	1.38%	2%	NO
St James	Bayshore Blvd	Midway Rd	4LD	NB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO
	Bayshore Blvd	Midway Rd	4LD	SB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO
Virginia Ave	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	3020	Out	166	5.49%	16%	YES
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	3020	In	232	7.68%	16%	YES
Prima Vista Blvd	Bayshore Blvd	Alroso Blvd	4LD	EB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO
	Bayshore Blvd	Alroso Blvd	4LD	WB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO
	Alroso Blvd	US 1	4LD	EB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO
	Alroso Blvd	US 1	4LD	WB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO
Selvitz Rd	Bayshore Blvd	Midway Rd	2	NB	Minor Arterial	750	In	44	5.80%	3%	YES
	Bayshore Blvd	Midway Rd	2	SB	Minor Arterial	750	Out	31	4.14%	3%	NO
	Midway Rd	Glades Cut Off Rd	2	NB	Minor Arterial	700	Out	10	1.48%	1%	NO
	Midway Rd	Glades Cut off Rd	2	SB	Minor Arterial	700	In	15	2.07%	1%	NO
Arterial A	Midway Rd	EW 5	6LD	NB	Urban Major Arterial - CI	3020	In	29	0.96%	2%	NO
	Midway Rd	EW 5	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.69%	2%	NO
	EW 5	Glades Cut off Rd	6LD	NB	Urban Major Arterial - CI	3020	In	29	0.96%	2%	NO
	EW 5	Glades Cut off Rd	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.69%	2%	NO

Source of Functional Classification: St. Lucie County Comprehensive Plan

= 5%

(2) 2 lane portion fails with background traffic, and conditioned for improvement

Trips In	1450
Trips Out	1036
Total	2486

Table 4a: 2035 Link Analysis - AM Peak Hour

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	2019 Volume	Existing/ Committed Capacity (2012 Directional FDOT LOS D)	.5% Growth	AM Approved Projects	2035 AM Total Traffic w/o Project	Calculated Growth	Minimum Existing + 1% Growth per year	2035 AM Total Traffic w/ Project	In/Out	Project Volume Peak Direction	%Project of Capacity Peak Direction	Project Percent Assignment	3% (5%) or Greater	Satisfies Criteria w/o Project	Satisfies Criteria w/ Project	Improvement	Proposed Capacity	Satisfies Criteria with Expanded Capacity
Midway Rd	Shiva Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	272	630	23	249	535	4.31%		562	In	27	4.30%	2%	YES	Yes	Yes	N/A		Yes
	Shiva Rd	McCarty Rd	2	WB	Rural Principal Arterial-uf	295	630	25	382	502	3.38%		523	Out	21	3.38%	2%	YES	Yes	Yes	N/A		Yes
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	295	700	25	108	538	3.58%		545	In	27	3.87%	2%	YES	Yes	Yes	N/A		Yes
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-uf	272	700	23	139	434	2.96%		455	Out	21	3.04%	2%	YES	Yes	Yes	N/A		Yes
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	295	700	25	267	587	4.39%		614	In	27	3.87%	2%	YES	Yes	Yes	N/A		Yes
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-uf	272	700	23	204	499	3.80%		520	Out	21	3.04%	2%	YES	Yes	Yes	N/A		Yes
	Arterial A	I95	2L/4LD(2)	EB	Urban Principal Arterial-uf	295	2100	25	866	1186	5.09%		2208	Out	1022	48.69%	96%	YES	Yes	No	6LD	3020	Yes
	Arterial A	I95	2L/4LD(2)	WB	Urban Principal Arterial-uf	272	2100	23	1,754	2049	13.44%		3350	In	1301	61.94%	95%	YES	Yes	No	6LD+	4040	Yes
	I95	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	758	2100	63	403	1224	3.04%		1554	Out	330	15.72%	31%	YES	Yes	Yes	N/A		Yes
	I95	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	926	2100	77	573	1576	3.38%		1996	In	420	20.00%	31%	YES	Yes	Yes	N/A		Yes
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	1,178	2100	98	703	1979	3.30%		2245	Out	266	12.68%	25%	YES	Yes	No	6LD	3020	Yes
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	1,226	2100	102	734	2062	3.30%		2401	In	339	16.13%	25%	YES	Yes	No	6LD	3020	Yes
	NW East Torino Pkwy	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	1,216	920	101	787	2104	3.49%		2349	Out	245	26.63%	23%	YES	No	No	6LD	3020	Yes
	NW East Torino Pkwy	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	995	920	83	922	2000	4.48%		2312	In	312	33.88%	29%	YES	No	No	6LD	3020	Yes
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	1,216	920	101	522	1839	2.62%		2084	Out	245	26.63%	23%	YES	No	No	4LD	2100	Yes
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	1,036	920	86	602	1724	3.24%		2036	In	312	33.88%	29%	YES	No	No	4LD	2100	Yes
	S Jenkins Rd	Selvitz Rd	2L	EB	Urban Principal Arterial-CI	1,216	920	101	467	1784	2.42%		2029	Out	245	26.63%	23%	YES	No	No	4LD	2100	Yes
	S Jenkins Rd	Selvitz Rd	2L	WB	Urban Principal Arterial-CI	1,078	920	90	540	1708	2.92%		2020	In	312	33.88%	29%	YES	No	No	4LD	2100	Yes
	Selvitz Rd	S 25th St	4D(C)	EB	Urban Principal Arterial-CI	973	2100	81	401	1455	2.55%		1657	Out	202	9.64%	19%	YES	Yes	Yes	N/A		Yes
	Selvitz Rd	S 25th St	4D(C)	WB	Urban Principal Arterial-CI	973	2100	81	448	1502	2.75%		1759	In	257	12.26%	19%	YES	Yes	Yes	N/A		Yes
	S 25th St	Oleander	4D(C)	EB	Urban Principal Arterial-CI	1,085	2100	85	401	1511	2.46%		1681	Out	170	8.12%	16%	YES	Yes	Yes	N/A		Yes
	S 25th St	Oleander	4D(C)	WB	Urban Principal Arterial-CI	805	2100	67	448	1320	3.14%		1537	In	217	10.32%	16%	YES	Yes	Yes	N/A		Yes
	Oleander	US-1	4D(C)	EB	Urban Principal Arterial-CI	635	2100	53	401	1089	3.43%		1259	Out	170	8.12%	16%	YES	Yes	Yes	N/A		Yes
	Oleander	US-1	4D(C)	WB	Urban Principal Arterial-CI	808	2100	67	448	1323	3.13%		1540	In	217	10.32%	16%	YES	Yes	Yes	N/A		Yes
Okeechobee Rd	I95	Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	1,976	4240	164	199	2339	1.06%		2637	Out	298	7.03%	28%	YES	Yes	Yes	N/A		Yes
	I95	Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	1,112	4240	92	127	1331	1.13%		1710	In	379	8.95%	28%	YES	Yes	Yes	N/A		Yes
	Jenkins Rd	McNeil Rd	8LD	EB	Urban Principal Arterial-CI	1,976	4040	164	138	2278	0.89%	2317	2555	Out	277	6.85%	26%	YES	Yes	Yes	N/A		Yes
	Jenkins Rd	McNeil Rd	8LD	WB	Urban Principal Arterial-CI	1,018	4040	85	70	1173	0.69%	1194	1525	In	352	8.72%	26%	YES	Yes	Yes	N/A		Yes
	McNeil Rd	Virginia Ave	6LD	EB	Urban Principal Arterial-CI	1,580	3170	131	6	1717	0.52%	1853	1954	Out	277	8.74%	26%	YES	Yes	Yes	N/A		Yes
	McNeil Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	851	3170	71	8	930	0.56%	998	1282	In	352	11.11%	26%	YES	Yes	Yes	N/A		Yes
I-95	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	4578	4580	380	759	5717	1.40%		6207	Out	490	10.70%	40%	YES	No	No	8LD	7320	Yes
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	3181	4580	264	1,136	4581	2.33%		5204	In	623	13.61%	46%	YES	No	No	8LD	7320	Yes
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	3571	4580	297	1,127	4995	2.12%		5252	In	257	5.62%	19%	YES	No	No	8LD	7320	Yes
	St Lucie West Blvd	Crosstown Pkwy	6LD	NB	Interstate	4048	4580	336	1,297	5681	2.14%		5925	In	244	5.33%	18%	YES	No	No	8LD	7320	Yes
Glades Cut Off Rd	W Midway Rd	S. Jenkins Rd.	2	NB	Urban Minor Arterial-CII	669	790	56	133	858	1.57%		922	Out	64	8.09%	6%	YES	No	No	4LD	2000	Yes
	W Midway Rd	S. Jenkins Rd.	2	SB	Urban Minor Arterial-CII	526	790	44	137	707	1.87%		788	In	81	10.29%	6%	YES	Yes	Yes	N/A		Yes
	S Jenkins Rd	Selvitz Rd	2	NB	Urban Minor Arterial-CII	370	810	31	135	536	2.34%		600	Out	64	7.70%	6%	YES	Yes	Yes	N/A		Yes
	S Jenkins Rd	Selvitz Rd	2	SB	Urban Minor Arterial-CII	291	830	24	140	455	2.84%		535	In	81	9.80%	6%	YES	Yes	Yes	N/A		Yes
Virginia Ave	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	1169	3020	97	60	1326	0.79%	1371	1496	Out	170	5.64%	16%	YES	Yes	Yes	N/A		Yes
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	1169	3020	97	54	1320	0.76%	1371	1537	In	217	7.18%	16%	YES	Yes	Yes	N/A		Yes
Selvitz Rd	Bayshore Blvd	Midway Rd	2	NB	Minor Arterial	416	750	35	50	511	1.14%		552	In	41	5.47%	3%	YES	Yes	Yes	N/A		Yes
East Torino Pkwy	Midway Rd	Turtle Dove Ln	2	NB	Urban Minor Arterial-CI	1,030	880	86	29	1145	0.66%	1208	1172	In	27	3.08%	2%	YES	No	No	4LD	2000	Yes

Source of Functional Classification: St. Lucie County Comprehensive Plan
TPO= 2019 Traffic Volumes
(1) Shaded Areas indicate project traffic triggered, not needed for background
(2) Midway from Arterial A to I-95 requires 4D for Background Traffic, Developer funded

Trips In	1355
Trips Out	1065
Total	2420
Years Grown	16

Table 4b: 2035 Link Analysis - PM Peak Hour

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	2019 Volume	Existing/ Committed Capacity (2012 Directional FDOT LOS D)	.5% Growth	PM Approved Projects	2035 PM Total Traffic w/o Project	Calculated Growth	Minimum Existing + 1% Growth per year	2035 PM Total Traffic w/ Project	In/Out	Project Volume Peak Direction	%Project of Capacity Peak Direction	Project Percent Assignment	3% (5%) or Greater	Satisfies Criteria w/o Project	Satisfies Criteria w/ Project	Improvement	Proposed Capacity	Satisfies Criteria with Expanded Capacity
Midway Rd	Shinn Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	376	630	31	291	698	3.94%		727	In	29	4.60%	2%	YES	No	No	4LD	2000	Yes
	Shinn Rd	McCarty Rd	2	WB	Rural Prinipal Arterial-uf	347	630	29	395	772	5.12%		793	Out	21	3.28%	2%	YES	No	No	4LD	2000	Yes
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	347	700	29	235	611	3.60%		640	In	39	4.14%	2%	YES	Yes	Yes	N/A		Yes
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	347	700	29	274	650	4.00%		679	In	39	4.14%	2%	YES	Yes	Yes	N/A		Yes
	Arterial A	I95	2L/4LD(2)	EB	Urban Principal Arterial-uf	347	2100	29	2,147	2523	13.20%		3518	Out	995	47.36%	96%	YES	No 4L, Yes 6L	No 4L, No 6L	6LD+	4040	Yes
	Arterial A	I95	2L/4LD(2)	WB	Urban Principal Arterial-uf	376	2100	31	1,234	1641	9.65%		3033	In	1392	66.29%	96%	YES	Yes	No	6LD+	4040	Yes
	I95	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	911	2100	76	829	1816	4.41%		2137	Out	321	15.29%	31%	YES	Yes	No	6LD	3020	Yes
	I95	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	1,027	2100	85	538	1650	3.01%		2100	In	450	21.40%	31%	YES	Yes	Yes	N/A		Yes
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	1,281	2100	106	1,115	2502	4.27%		2761	Out	259	12.33%	25%	YES	No	No	6LD	3020	Yes
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	890	2100	74	915	1879	4.78%		2242	In	363	17.26%	25%	YES	Yes	No	6LD	3020	Yes
	NW East Torino Pkwy	Florida's Turnpike	2L	EB	Urban Principal Arterial-CI	1,253	920	104	1,434	2791	5.13%		3029	Out	238	25.90%	23%	YES	No	No	6LD	3020	No
	NW East Torino Pkwy	Florida's Turnpike	2L	WB	Urban Principal Arterial-CI	1,304	920	108	1,084	2496	4.14%		2830	In	334	36.25%	23%	YES	No	No	6LD	3020	Yes
	Florida's Turnpike	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	1,253	920	104	1,416	2773	5.09%		3011	Out	238	25.90%	23%	YES	No	No	6LD	3020	Yes
	Florida's Turnpike	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	1,304	920	108	1,076	2488	4.12%		2822	In	334	36.25%	23%	YES	No	No	6LD	3020	Yes
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	1,204	920	100	918	2122	3.33%		2470	Out	238	25.90%	23%	YES	No	No	6LD	3020	Yes
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	1,304	920	108	709	2121	3.09%		2455	In	334	36.25%	23%	YES	No	No	6LD	3020	Yes
	S Jenkins Rd	Selvitz Rd	2L	EB	Urban Principal Arterial-CI	1,204	920	100	827	2131	3.63%		2369	Out	238	25.90%	23%	YES	No	No	6LD	3020	Yes
	S Jenkins Rd	Selvitz Rd	2L	WB	Urban Principal Arterial-CI	1,304	920	108	630	2042	2.84%		2376	In	334	36.25%	23%	YES	No 2L, Yes 4L	No 2L, No 4L	6LD	3020	Yes
	Selvitz Rd	S 25th St	4 D(C)	EB	Urban Principal Arterial-CI	940	2100	78	688	1706	3.80%		1903	Out	197	9.37%	19%	YES	Yes	Yes	N/A		Yes
	Selvitz Rd	S 25th St	4 D(C)	WB	Urban Principal Arterial-CI	801	2100	67	541	1409	3.59%		1685	In	276	13.12%	19%	YES	Yes	Yes	N/A		Yes
	S 25th St	Oleander	4 D(C)	EB	Urban Principal Arterial-CI	942	2100	78	688	1708	3.79%		1874	Out	166	7.89%	16%	YES	Yes	Yes	N/A		Yes
	S 25th St	Oleander	4 D(C)	WB	Urban Principal Arterial-CI	802	2100	67	541	1410	3.59%		1642	In	232	11.05%	16%	YES	Yes	Yes	N/A		Yes
	Oleander	US-1	4 D(C)	EB	Urban Principal Arterial-CI	654	2100	54	688	1396	4.85%		1562	Out	166	7.89%	16%	YES	Yes	Yes	N/A		Yes
	Oleander	US-1	4 D(C)	WB	Urban Principal Arterial-CI	890	2100	66	541	1497	3.59%		1639	In	232	11.05%	16%	YES	Yes	Yes	N/A		Yes
Okeechobee Rd	I95	Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	1,578	4240	131	205	1914	1.22%		2204	Out	290	6.84%	28%	YES	Yes	Yes	N/A		Yes
	I95	Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	1,709	4240	142	247	2098	1.29%		2504	In	406	9.58%	28%	YES	Yes	Yes	N/A		Yes
	Jenkins Rd	McNeil Rd	8LD	EB	Urban Principal Arterial-CI	1,515	4040	126	122	1764	0.95%	1277	2046	Out	269	6.67%	26%	YES	Yes	Yes	N/A		Yes
	Jenkins Rd	McNeil Rd	8LD	WB	Urban Principal Arterial-CI	1,709	4040	142	163	2014	1.03%		2391	In	377	9.33%	26%	YES	Yes	Yes	N/A		Yes
	McNeil Rd	Virginia Ave	6LD	EB	Urban Principal Arterial-CI	1,522	3170	126	9	1657	0.53%	1765	1926	Out	269	8.50%	26%	YES	Yes	Yes	N/A		Yes
	McNeil Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	1,649	3170	137	8	1794	0.53%	1934	2311	In	377	11.89%	26%	YES	Yes	Yes	N/A		Yes
I-95	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	3041	4580	253	1,548	4842	2.55%		5319	Out	477	10.41%	46%	YES	No	No	8LD	7320	Yes
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	3717	4580	309	995	5021	1.50%		5688	In	667	14.56%	46%	YES	No	No	8LD	7320	Yes
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	2519	4580	209	1,311	4039	2.99%		4315	In	276	6.03%	19%	YES	Yes	Yes	N/A		Yes
	St Lucie West Blvd	Crosstown Pkwy	6LD	NB	Interstate	2873	4580	239	1,950	5062	3.50%		5322	In	161	3.70%	18%	YES	No	No	8LD	7320	Yes
Glades Cut off Rd	W Midway Rd	S. Jenkins Road	2	NB	Urban Minor Arterial-CII	421	730	35	272	728	5.48%		790	Out	62	7.87%	6%	YES	Yes	Yes	N/A		Yes
	W Midway Rd	S. Jenkins Road	2	SB	Urban Minor Arterial-CII	687	730	57	199	943	2.00%		1030	In	87	11.01%	8%	YES	No	No	4LD	2000	Yes
	S Jenkins Rd	Selvitz Rd	2	NB	Urban Minor Arterial-CII	236	830	20	260	516	5.01%		578	Out	62	7.49%	6%	YES	Yes	Yes	N/A		Yes
	S Jenkins Rd	Selvitz Rd	2	SB	Urban Minor Arterial-CII	385	830	32	197	614	2.96%		701	In	87	10.48%	8%	YES	Yes	Yes	N/A		Yes
Virginia Ave	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	1126	3020	94	66	1286	0.83%	1370	1486	Out	166	5.49%	16%	YES	Yes	Yes	N/A		Yes
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	999	3020	83	64	1146	0.86%	1171	1403	In	232	7.68%	16%	YES	Yes	Yes	N/A		Yes
Selvitz Rd	Bayshore Blvd	Midway Rd	2	NB	Minor Arterial	240	750	20	65	325	1.92%		369	In	44	5.80%	3%	YES	Yes	Yes	N/A		Yes
East Torino Pkwy	Midway Rd	Turtle Dove Ln	2	NB	Urban Minor Arterial-CI	625	880	52	55	732	0.99%	733	782	In	29	3.30%	2%	YES	Yes	Yes	N/A		Yes

Source of Functional Classification: St. Lucie County Comprehensive Plan
TPO=2019
(1) Shaded Areas indicate project triggered, not need for background
(2) Midway from Arterial A to I-95 requires 4 D for Background Traffic, Developer funded

Trips In	1450
Trips Out	1036
Total	2486
Years Grown:	16

ROADWAY NEEDS - LINKS

Based on the total traffic volumes, several roadways exceed capacity.

The project proposes to mitigate its impact by use of proportionate share. Florida Statutes state that if any road is determined to be transportation deficient without the project traffic under review, the costs of correcting that deficiency shall be removed from the project's proportionate-share calculation and the necessary transportation improvements to correct that deficiency shall be considered to be in place for purposes of the proportionate-share calculation. **Figure 5** illustrates the roadway improvements to which the project will provide a proportionate share contribution.

Table 5 summarizes the proportionate share by improvement for those improvements not needed by background traffic. As shown, the project's share is $7,506,123. That cost includes the roadway links and one intersection described in an upcoming section on intersection analysis. Long Range planning estimates from FDOT were applied to develop the construction costs. And additional 30% was added for design and contingency. Right-of-way costs based on a 20% increase over assessed values was included as well.

The applicant will pay its proportionate share as follows:

+ The applicant shall pay $5,843,946 to widen or the applicant shall cause to widen Midway Road from Arterial A to I-95 as a six-lane divided roadway with extended turn lanes, prior to pulling building permits that generate more than 805 AM inbound trips, or 873 AM outbound trips,
+ The applicant shall pay $806,463 to widen Midway Road from Glades Cut-off to NW East Torino Parkway as a six-lane divided arterial prior to pulling building permits that generate 920 AM outbound trips,
+ The applicant shall pay $132,932 to widen Midway Road from I-95 to Glades Cut-Off prior to pulling building permits that generate more than 1005 PM outbound trips, and
+ The applicant shall pay $722,782 to widen Midway Road from Jenkins Road to Selvitz. prior to pulling building permits that generate more than 1077 PM inbound trips.

DRIVEWAY ANALYSIS

There are three project driveways on Midway Road; Gordy Road (Main Street/Driveway 1), Driveway 2 (Right-in/Right-out), and Pier Avenue (Driveway 3) (Full Access). When the project Village at Midway extends Arterial A, Willow Lakes will connect to Arterial A at Driveway 4.

Figure 6 summarizes the driveway volumes. The top half shows the volumes with Village at Midway and the Arterial A Extension in place. The bottom half illustrates the volumes without the Arterial A Extension and without the Village at Midway traffic volumes. This scenario is included to establish the turn lanes at the project driveways without the connection to Arterial A.



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= 2L to 4L
= 2L to 6L
= 4L to 6L
= 4L to 6L+
= Intersection Improvements

FIGURE 5

Road Improvements to be Prop Shared

WILLOW LAKES

February 2020

TABLE 5a: Prop Share - 2035 - AM

Segment	From	To	Direction	2035 Assignment	Existing 2019 Volume (a)	2035 AM Peak Hour, Direct. Volume	Generalized Service Capacity (b)	Total Cumulative Project Volume-Peak Direction	Total Traffic Peak Direction (2035) (C)	Existing Number of Lanes	Proposed Number of Lanes	Proposed Capacity	Length in Miles	FDOT Unit Cost	Construction Cost	Design/CEI/ Contingency 30%(1)	Right of Way Cost	Total Cost of Improvement	Project Trips adjusted for remaining capacity	Project % of New Capacity	Project Share of Cost	Payment Due (2)
Midway Road	Arterial A	I-95	EB	96.0%	295	1,186	2,100	1022	2208	4D	6D	3020	1.32	4,915,750	3,244,395	973,319	0	4,217,714	108	11.8%	496,957	N/A
	Arterial A	I-95	WB	96.0%	272	2,049	2,100	1301	3350	4D	6LD+	4040	1.187	6,749,409	4,005,774	1,201,732	17,818	5,225,324	3,250	64.4%	3,366,294	805 Inbound
	Glades Cut Off	NW East Torino Parkway	EB	25.0%	1178	1,979	2,100	266	2245	4D	6D	3020	0.28	4,915,750	688,205	206,462	0	894,667	145	15.8%	141,250	920 Outbound
	Glades Cut Off	NW East Torino Parkway	WB	25.0%	1226	2,062	2,100	339	2401	4D	6D	3020	0.28	4,915,750	1,562,405	468,722	3,774	2,034,901	301	32.7%	665,213	1008 Inbound
																				Sub Total:	4,172,757		

(1) Adjustment for Design.CEI/Contingency: 0.3

(d) IN 1355
OUT 1065

(Does not include "yellow" higher value included in PM)

TABLE 5b: Prop Share - 2035 - PM

Segment	From	To	Direction	2035 Assignment	Existing 2019 Volume (a)	2035 PM Peak Hour, Direct. Volume	Generalized Service Capacity (b)	Total Cumulative Project Volume-Peak Direction	Total Traffic Peak Direction (2035) (C)	Existing Number of Lanes	Proposed Number of Lanes	Proposed Capacity	Length in Miles	FDOT Unit Cost	Construction Cost	Design/CEI/ Contingency 30%(1)	Right of Way Cost	Total Cost of Improvement	Cumulative Project Trips adjusted	Project % of New Capacity	Project Share of Cost	Payment Due (2)
Midway Road	Arterial A	I-95	EB	96.0%	347	2,523	3,020	995	3518	6LD	6LD+	4040	1	7,786,736	3,893,368	1,168,010	17,818	5,079,196	498	48.8%	2,477,652	873 Inbound
	Arterial A	I-95	WB	96.0%	376	1,641	2,100	1392	3033	4D	6LD	4040	1.187	4,915,750	2,917,497	875,249	17,818	3,810,564	983	48.1%	1,832,606	N/A
	I-95	Glades Cut- Off	EB	31.0%	911	1,816	2,100	321	2137	4D	6D	3020	1.03	4,915,750	2,531,611	759,483	0	3,291,094	37	4.0%	132,932	1005 Inbound
	Glades Cut Off	NW East Torino Parkway	WB	25.0%	890	1,879	2,100	363	2242	4D	6D	3020	0.28	4,915,750	688,105	206,462	3,774	898,441	142	15.4%	138,184	N/A
	Jenkins Rd	Selvitz	WB	23.0%	1304	2,042	2,100	334	2376	4D	6D	3020	0.75	4,915,750	1,843,406	553,022	17,219	2,413,647	276	29.9%	722,762	1077 Inbound
																				Sub Total:	3,333,366		
																				Total	$7,506,123		

(1) Adjustment for Design.CEI/Contingency

(d) IN 1459
OUT 1036

(Does not include "yellow" higher value included in AM)

FDOT Cost Per Mile Model	
Upgrade Type	Cost
2D To 4D	$5,357,794.05
4D to 6D	$4,915,749.60
6D to 8D	$5,953,076.42
1 Additional Lane	$1,833,659.75
New 2 Lane Roadway	$4,888,101.57
Bridge Section	$155/ Square foot

Right of Way Cost Calculation						
Section	Land Area (Sft)	Land Value	Cost/Sft	Length Needed (Ft)	Width Needed (Ft)	Total Cost
Arterial A to I-95 (WB)	5,079,532	$1,176,954	$0.23	800	80	$17,818
Glades Cut Off to Torino Pkwy (WB)	817,186	$705,700	$0.25	1,040	12	$3,774
Jenkins Rd to Selvitz Rd	770,576	$801,800	$1.04	657	21	$17,219

Total Links + Intersections Prop Share

(2) Payment Due Date Calculated As: The Available Capacity Divided by the Increase in Trips Multiplied by the Directional Project Trips

Threshold (a) = [(b-a)/(c-a)]*d
a = Existing 2019 Volume
b = Existing Capacity
c = 2035 Total Traffic Volume - 2019 Existing Volume
d = Directional Project Trips at Buildout
a = Trip Threshold

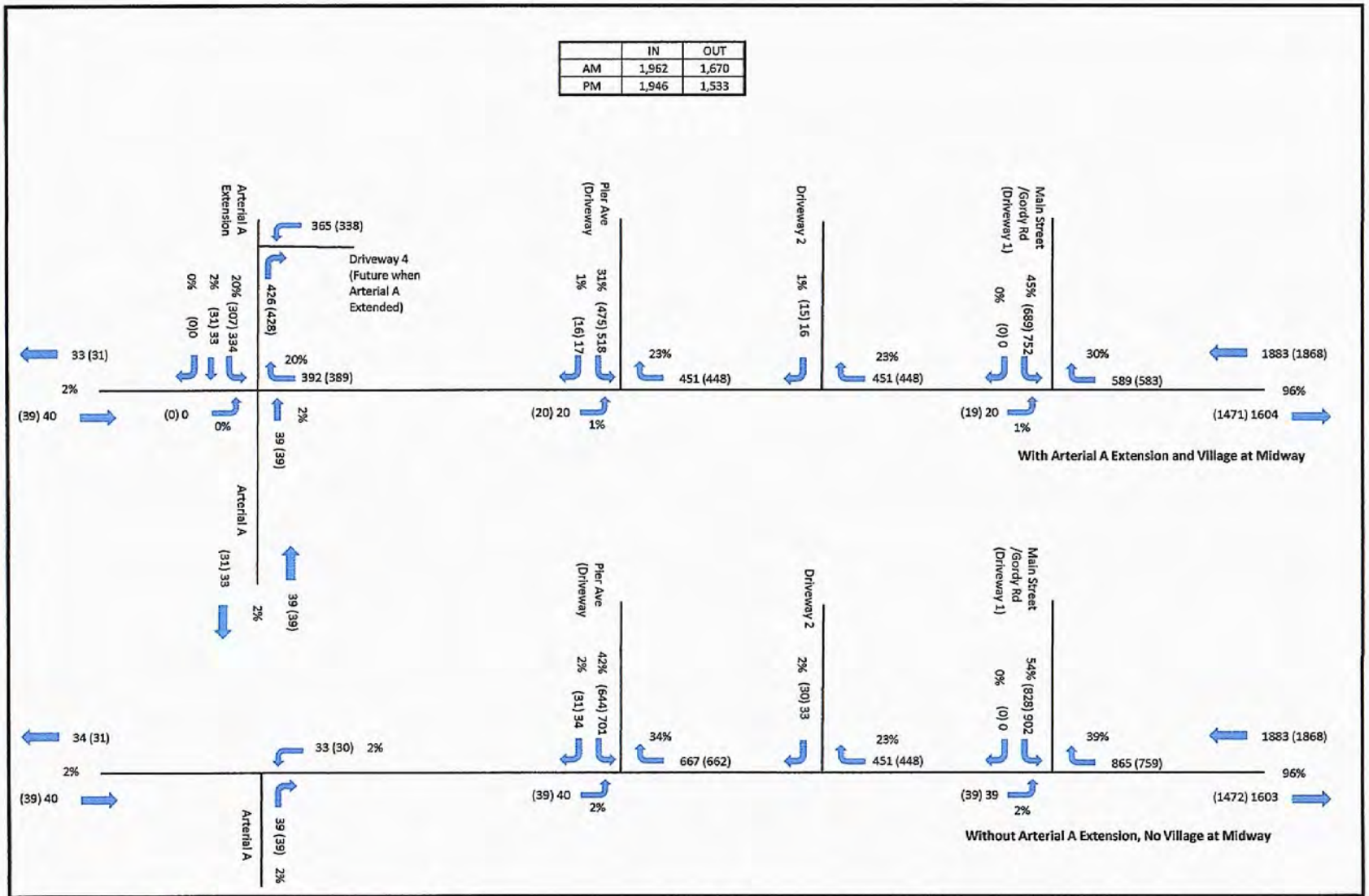

IN OUT
AM 1,962 1,670
PM 1,946 1,533
Arterial A Extension
Pier Ave (Driveway
Driveway 2
Main Street /Gordy Rd (Driveway 1)
Driveway 4 (Future when Arterial A Extended)
365 (338)
426 (428)
392 (389)
33 (31)
(39) 40
(0) 0
39 (39)
(20) 20
451 (448)
589 (583)
1883 (1868)
(1471) 1604
(19) 20
With Arterial A Extension and Village at Midway
Arterial A
(31) 33
34 (31)
33 (30)
667 (662)
865 (759)
(39) 40
(39) 39
(1472) 1603
Without Arterial A Extension, No Village at Midway
NTS
O'ROURKE ENGINEERING & PLANNING
969 SE Federal Hwy, Suite 402
Stuart, Fl, 34994
Job Number:
Date:
Legend
XX (XX) = AM (PM)
Figure 6
Willow Lakes Driveway Volumes
Willow Lakes

Figure 7 illustrates the turn lanes needed at each driveway. These turn lanes will support the traffic with or without Arterial A. The applicant will coordinate with the property owners of Village at Midway and LTC Ranch as appropriate on shared or proximate driveways along Midway Road.

Appendix E Provides the driveway turning movements and the Highway Capacity Manual analysis.

INTERSECTION ANALYSIS/IMPROVEMENTS

Ten intersections were analyzed to determine their operating level of service for the following scenarios; existing, 2035 without project, and 2035 with project traffic. The intersections were analyzed for the AM and PM peak hour using Highway Capacity Manual (HCM) based software as appropriate. **Table 6** summarizes the results of the intersection analysis. As shown, improvements will be needed at several intersections.

Table 7 shows the existing and proposed lanes for the subject intersections. As shown, most of the improvements that are needed will be needed to support background traffic. Therefore, the improvements do not need to be prop shared. The intersection of I-95 Northbound and Midway requires a third westbound through lane. That additional lane is address in the link improvement, so it is not included as an intersection cost.

Appendix F includes the intersection analyses, signal timing worksheet and resultant data.

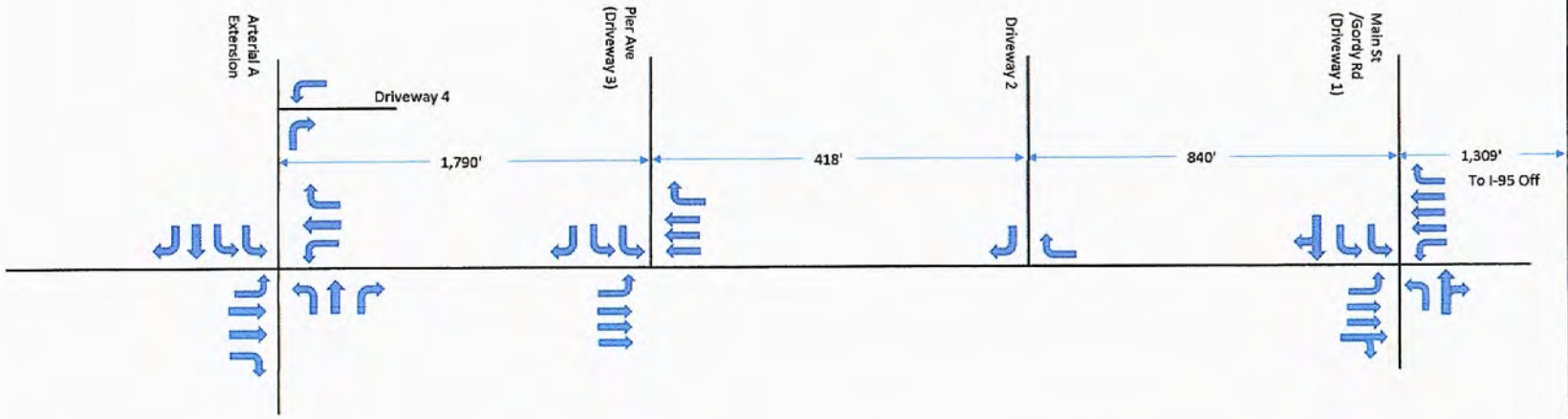
CONCLUSION

Willow Lakes will generate 37,828 daily trips; 2,420 AM Peak Hour trips and 2,486 PM Peak Hour trips. The project will provide sufficient access to the site and make proportionate share payments to mitigate offsite improvements. Improvements along Midway Road are required by multiple developers. The applicant will coordinate relative to the driveways and other construction projects.

The applicant will pay its proportionate share as follows:

+ The applicant shall pay $5,843,946 to widen or the applicant shall cause to widen Midway Road from Arterial A to I-95 as a six-lane divided roadway with extended turn lanes, prior to pulling building permits that generate more than 805 AM inbound trips, or 873 AM outbound trips,
+ The applicant shall pay $806,463 to widen Midway Road from Glades Cut-off to NW East Torino Parkway as a six-lane divided arterial prior to pulling building permits that generate 920 AM outbound trips,
+ The applicant shall pay $132,932 to widen Midway Road from I-95 to Glades Cut-Off prior to pulling building permits that generate more than 1005 PM outbound trips, and
+ The applicant shall pay $722,782 to widen Midway Road from Jenkins Road to Selvitz. prior to pulling building permits that generate more than 1077 PM inbound trips.

The total applicant prop share amount is $7,506,123. With the driveway construction along Midway and the proportionate share payments, concurrency will be satisfied for Willow Lakes. As each site plan is submitted, a trip generation calculation, and an analysis of internal components within that phase of development will be provided.



NTS

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Job Number:

Date:

Legend

xx' = Edge to Edge Spacing

= Lane Geometrics

Figure 7

Driveway Lane Configuration

Willow Lakes

Table 6a: Intersection Analysis with Existing Committed Lanes

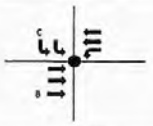
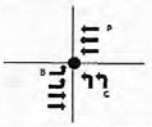
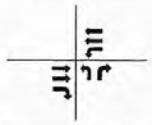
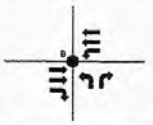
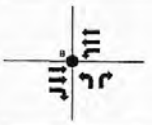
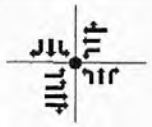
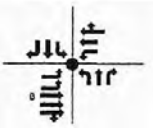
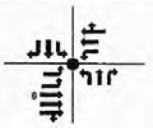
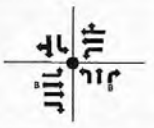
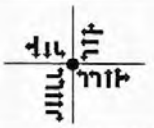
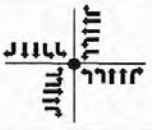
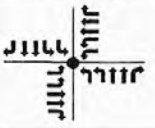
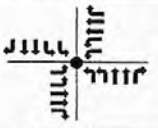
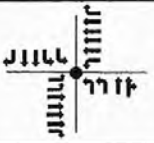
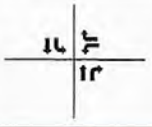
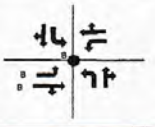
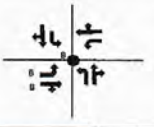
	Intersection	Existing				2035 Background				2035 with Project			
		AM		PM		AM		PM		AM		PM	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1	Midway Rd & Okeechobee Rd	13.6	B	14.9	B	16.3	C	20.5	C	17.5	C	22.2	C
2	I-95 SB Ramp & Midway Rd	15.4	B	15.3	B	29.5	D	142.4	F	57.4	F	134.9	F
3	I-95 NB Ramp & Midway Rd	11.2	B	11.6	B	11	E	114.2	F	97.6	F	112.9	F
4	LTC Pkwy & Midway Rd (unsignalized)	11.5	B	19.7	C	876.3	F	1761.9	F	1545.3	F	2906.5	F
5	Glades Cut Off Rd & Midway Rd	39.8	D	28.7	C	85.2	F	96.7	F	78.9	F	101.3	F
6	Midway Rd & Torino Pkwy	45.2	D	84.2	C	127.8	F	148.6	F	131	F	147.8	F
7	Selvitz Rd & Midway Rd	35.3	D	29.6	C	47.2	D	45.3	D	48.1	D	51.6	D
8	25th St & Midway Rd	23.1	C	22.7	C	41.2	D	46.2	D	47.8	D	53.7	D
9	Jenkins Rd & Okeechobee Rd	32.2	C	31.1	C	42	D	43.1	D	41.8	D	43.5	D
10	Glades Cut Off Rd & Commerce Centre Dr (unsignalized)	17.2	C	11.7	B	N/A	F	N/A	F	N/A	F	N/A	F

Table 6b: Intersection Analysis with Improvements

	Intersection	Existing + Improvements				2035 Background + Improvements				2035 with Project + Improvements			
		AM		PM		AM		PM		AM		PM	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1	Midway Rd & Okeechobee Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	I-95 SB Ramp & Midway Rd	N/A	N/A	N/A	N/A	21.2	D	53.1	D	25.7	D	41.9	D
3	I-95 NB Ramp & Midway Rd	N/A	N/A	N/A	N/A	33.5	C	30.6	C	51.4	D	52.4	D
4	LTC Pkwy & Midway Rd	N/A	N/A	N/A	N/A	29.2	C	36.7	D	29.7	C	47.8	D
5	Glades Cut Off Rd & Midway Rd	N/A	N/A	N/A	N/A	46.9	D	50.4	D	39.7	D	43.6	D
6	Midway Rd & Torino Pkwy	N/A	N/A	N/A	N/A	54.2	D	51.5	D	49.4	D	38.6	D
7	Selvitz Rd & Midway Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	25th St & Midway Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	Jenkins Rd & Okeechobee Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	Glades Cut Off Rd & Commerce Centre Dr	N/A	N/A	N/A	N/A	42.2	D	49.7	D	38.4	D	53.8	D

Note: The HCS may included analyses with subsets of the final improvements to ensure that the background traffic could not operate with fewer improvements than the "with project" scenario

TABLE 7: Intersection Geometrics

Intersection #	Intersection	Existing + Committed (C)	Needs for Existing (N)	Needs for Background (B)	Needs for Project (P)
1	Midway Rd & Okeechobee Rd		N/A	N/A	N/A
2	I-95 SB & Midway Rd		N/A		
3	I-95 NB & Midway Rd		N/A		
4	LTC Parkway & Midway Rd		N/A		
5	Glades Cut Off Rd & Midway Rd		N/A		
6	Midway Rd & Torino Parkway		N/A		
7	Selvitz Rd & Midway Rd		N/A		
8	25th St & Midway Rd		N/A		
9	Jenkins Rd & Okeechobee Rd		N/A	N/A	N/A
10	Glades Cut Off Rd & Commerce Centre Dr		N/A		

(1) ● = Signalized Intersection
(2) N = Needed for Existing Conditions
(3) B = Needed for 2035 Background Conditions
(4) P = Needed for Project
(5) C = Committed Improvement
* = Free Flow

APPENDIX i

Methodology Letter

seorourke@comcast.net

From: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Sent: Monday, February 24, 2020 4:17 PM
To: seorourke@comcast.net
Cc: John Andrews
Subject: FW: Willow Lakes Traffic Methodology - SLC

Please see County comments below. Should you contact the County directly, please include Jack and I in the conversation so that we are all on the same page.

Thanks Susan.

Jennifer Hofmeister, AICP, LCAM | Planning Director | City of Fort Pierce
Planning Department
Phone: 772.467.3730 Fax: 772.466-5808 100 North U.S. 1 Fort Pierce, FL 34950

Website | Facebook | Survey

THE SUNRISE CITY
FORT PIERCE
Florida

From: Kori Benton <bentonk@stlucieco.org>
Sent: Monday, February 24, 2020 3:13 PM
To: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Subject: Willow Lakes Traffic Methodology - SLC

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Good afternoon Jennifer,

Our team is continuing coordination with Susan O'Rourke and Alex Memering of Kimley-Horn (at this time) to pinpoint the Traffic Methodology for the Willow Lakes Impact Report.

Our Public Works Department & Planning Division support the following:

- Please analyze roadways that are impacted by 3% or greater due to project traffic within a 2-mile radius
- For roadways that are impacted by 5% or greater due to project traffic outside of the 2-mile radius, please continue to study the impacted segments until below the 5% impact threshold. *Maximum radius of 5 miles.*

Supplemental Methodology comments include:

- Please provide a background traffic growth calculation for each studied link to show the resultant annual growth rate considering committed traffic. A minimum growth rate of 1% should be applied.
- Please provide a turn lane analysis for each driveway connection on Midway Road based on information found within the FDOT Access Management Guidebook (November 2019) and NCHRP Report 457.

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- Please provide a turn lane analysis for each driveway connection on Midway Road based on information found within the FDOT Access Management Guidebook (November 2019) and NCHRP Report 457.
- Based on discussions within the methodology meeting on February 12, 2019, a 15-year buildout timeframe is proposed. Due the potential impacts to roadways and intersections within the potential study area, please provide a supplementary analysis to determine the timeframe when recommended improvements are required within the 15-year buildout timeframe.
- Please explain where Daily and AM peak hour rates were found for ITE 435 Multipurpose Recreational Facility as there is no Daily of AM peak hour of adjacent street rates for this land use within the ITE Trip Generation Manual, 10th Edition.
- Please check directional splits within the trip generation tables for all land uses and correct accordingly.
- Please use pass-by percentages for ITE 945 Gasoline/Service Station with Convenience Market within the ITE Trip Generation Handbook, 3rd Edition as this is the most similar use to ITE 960 Super Convenience Market/Gas Station.

The County reserves the right to request any other specific area of impact based on a study. Further, we will reserve input on the project traffic distribution until the 2040 Greater Treasure Coast Model is performed.

Unless the City has a Traffic Consultant in place for evaluation of the project, Galvin, Giordano & Associates appears to be our next-in-line for the actual TIR review. We hope to discuss further after evaluation of the proposed Methodology.

Kind regards,
Kori

seorourke@comcast.net

From: seorourke@comcast.net
Sent: Friday, February 28, 2020 12:11 PM
To: 'Jennifer Hofmeister'
Cc: 'John Andrews'
Subject: RE: Willow Lakes Traffic Methodology - SLC

Jennifer,

We are OK with all of these comments and will incorporate the comments into the finalized methodology. We won't be doing some of those items now, such as demonstrating the resultant growth rate, we will include that calculation within the traffic study.

I will update and circulate with the assignment plots attached.

Thanks.

Susan.

Susan E. O'Rourke, P.E.
President

O'Rourke Engineering & Planning
969 SE Federal Highway, Suite 402
Stuart, FL 34994
772 781 7918 o
561 350 8738 c
www.ORourkeEngineering.com

From: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Sent: Monday, February 24, 2020 4:17 PM
To: seorourke@comcast.net
Cc: John Andrews <jandrews@cityoffortpierce.com>
Subject: FW: Willow Lakes Traffic Methodology - SLC

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Thanks Susan.

Jennifer Hofmeister, AICP, LCAM | Planning Director | City of Fort Pierce
Planning Department
Phone: 772.467.3730 Fax: 772.466-5808 100 North U.S. 1 Fort Pierce, FL 34950

Website | Facebook | Survey

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Kind regards,
Kori

Please Note: Florida has very broad public records laws. Most written communications to or from County officials regarding County business are public records available to the public and media upon request. It is the policy of St. Lucie County that all County records shall be open for personal inspection, examination and / or copying. Your e-mail communications will be subject to public disclosure unless an exemption applies to the communication. If you received this email in error, please notify the sender by reply e-mail and delete all materials from all computers.

'.

O'ROURKE
ENGINEERING & PLANNING

February 12, 2020

Methodology for Willow Lakes

A. The traffic analysis will be prepared in accordance with the **Draft TIS Guidelines prepared for the St. Lucie County TPO** and augmented based on discussion between the City of Ft. Pierce and St. Lucie County. The document reflects 5% on links and adjacent link of 1%. **Attachment A** includes the TIS Guideline.

B. Trip Generation for the site is based on ITE rates most closely related to the use. **Attachment B** summarizes the project trip generation and the internal capture. The use of ITE internal capture rates results in internal capture rates that are too high. So, the internal capture rates between certain pairings have been reduced. Those changes are shown in the attachments.

Pass-by will be limited to 10% of adjacent street and pass-by traffic shown separately for distribution and assignment.

Impact Area

According to the Guidelines, the adjacent link should be addressed if It has a one percent impact and the surrounding network should be addressed if the project has an impact of 5% or more.

If the project has 200 or more peak hour trips on a freeway ramp, a merge and weave analysis may be required for FDOT.

Attachment C shows the general study area. **Attachment D** shows the existing roadway geometrics in the study area.

We are in the process of running the 2040 Greater Treasure Coast Model. In the mean time we have presented the assignment for Village at Midway. The results are shown in **Attachment E.** We will run the assignment with and without Village at Midway and the extension of Arterial A.

Background traffic -- Will be determined based on existing counts plus historic growth not to exceed .5% and "other approved projects. We will include the approved DRIs. KHA or the City will provide the data that they have prepared. If other agencies have data, they should provide it as soon as possible.

969 SE Federal Hwy, Suite 402 | Stuart, FL 34994 | 772-781-7918 | SEORourke@comcast.net

Analysis

The Links will be analyzed in tabular format using the TPO capacities. If we feel those capacities are not appropriate we will review them with KHA prior to making adjustments.

Detailed arterial analysis may be used to demonstrate that operational level of service is different than the "theoretical" capacity

Intersections will be analyzed using the Highway Capacity Software by McTrans.

Other

Non-motorized transportation features and transit availability will be summarized for roadways within the study area.

Rights of way will be outlined for all roadways where mitigation is proposed.

Driveways

The project will have two full access driveways and one right-in/right-out driveway.

ATTACHMENT A

TIS Guideline



St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, Florida 34953
772-462-1593 ww.stlucietpo.org

STANDARDIZED TRAFFIC IMPACT STUDIES (TIS) METHODOLOGY AND PROCEDURES

- **ST. LUCIE COUNTY**
- **CITY OF FORT PIERCE**
- **CITY OF PORT ST. LUCIE**

January 2014

APPENDIX A

Existing Traffic Counts and Network Data

D Factor and Off-Peak Volume Calculations

Segment	From	To	Direction	Count Location	2020 TMC Count AM	2020 TMC Count PM	D Factor AM	D Factor PM	2019 AM Peak Hour Volume	2019 PM Peak Hour Volume
Midway Rd	Okeechobee Rd	Shinn Rd	EB	Okeechobee & Midway	172	225	0.48	0.52	272	376
	Okeechobee Rd	Shinn Rd	WB	Okeechobee & Midway	183	207	0.52	0.48	295	347
	Shinn Rd	McCarty Rd	EB	Okeechobee & Midway	172	225	0.48	0.52	272	376
	Shinn Rd	McCarty Rd	WB	Okeechobee & Midway	183	207	0.52	0.48	295	347
	McCarty Rd	11 Mile Rd	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	McCarty Rd	11 Mile Rd	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	11 Mile Rd	Arterial A	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	11 Mile Rd	Arterial A	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	Arterial A	I95	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	Arterial A	I95	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	I95	Glades Cut off Rd	EB	I-95 NB & Midway	918	820	0.45	0.47	758	911
	I95	Glades Cut off Rd	WB	I-95 NB & Midway	1131	910	0.55	0.53	926	1,027
	Glades Cut off Rd	NW East Torino Pkwy	EB	Glades Cut-Off & Midway	921	915	0.49	0.59	1,178	1,281
	Glades Cut off Rd	NW East Torino Pkwy	WB	Glades Cut-Off & Midway	959	641	0.51	0.41	1,226	890
	NW East Torino Pkwy	Florida's Turnpike	EB	Torino & Midway	1030	823	0.55	0.49	1,216	1,253
	NW East Torino Pkwy	Florida's Turnpike	WB	Torino & Midway	841	865	0.45	0.51	995	1,304
	Florida's Turnpike	NW Corporate Way	EB	Torino & Midway	1030	823	0.55	0.49	1,216	1,253
	Florida's Turnpike	NW Corporate Way	WB	Torino & Midway	841	865	0.45	0.51	995	1,304
	NW Corporate Way	S Jenkins Rd	EB	Jenkins & Midway	1004	812	0.54	0.48	1,216	1,204
	NW Corporate Way	S Jenkins Rd	WB	Jenkins & Midway	855	879	0.46	0.52	1,036	1,304
	S Jenkins Rd	Selvitz Rd	EB	Jenkins & Midway	982	822	0.53	0.48	1,216	1,204
	S Jenkins Rd	Selvitz Rd	WB	Jenkins & Midway	863	875	0.47	0.52	1,078	1,304
	Selvitz Rd (3)	S 25th St	EB	25th & Midway	712	786	0.50	0.54	973	940
	Selvitz Rd	S 25th St	WB	25th & Midway	718	670	0.50	0.48	973	801
	S 25th St (4)	Oleander	EB	25th & Midway	680	760	0.56	0.54	1,025	942
	S 25th St	Oleander	WB	25th & Midway	533	656	0.44	0.46	805	802
	Oleander	US-1	EB						635	654
	Oleander	US-1	WB						808	800
Okeechobee Rd	McCarty Rd	Florida's Turnpike	EB						378	391
	McCarty Rd	Florida's Turnpike	WB						378	391
	Florida's Turnpike	S King's Hwy	EB						378	391
	Florida's Turnpike	S King's Hwy	WB						378	391
	S King's Hwy	Crossroads Pkwy	EB						960	1,013
	S King's Hwy	Crossroads Pkwy	WB						960	1,013
	Crossroads Pkwy	I95	EB						1,063	1,086
	Crossroads Pkwy	I95	WB						1,063	1,086
	I95	Jenkins Rd	EB	Jenkins & Okeechobee	1450	1183	0.64	0.48	1,976	1,578
	I95	Jenkins Rd	WB	Jenkins & Okeechobee	810	1304	0.36	0.52	1,112	1,709
	Jenkins Rd	McNeil Rd	EB	Jenkins & Okeechobee	1349	1136	0.66	0.47	1,976	1,516
	Jenkins Rd	McNeil Rd	WB	Jenkins & Okeechobee	689	1271	0.34	0.53	1,018	1,709
	McNeil Rd	Virginia Ave	EB						1,580	1,522
	McNeil Rd	Virginia Ave	WB						851	1,649
	Virginia Ave	35th St	EB						687	727
	Virginia Ave	35th St	WB						687	727
I-95	Orange Ave	Okeechobee Rd	NB						1,822	1,894
	Orange Ave	Okeechobee Rd	SB						1,822	1,894
	Okeechobee Rd	Midway Rd	NB						4,578	3,717
	Okeechobee Rd	Midway Rd	SB						3,181	3,717
	W Midway Rd	St Lucie West Blvd	NB						3,571	3,079
	W Midway Rd	St Lucie West Blvd	SB						3,571	3,079
	St Lucie West Blvd	Crosstown Pkwy	NB						4,048	3,657
	St Lucie West Blvd	Crosstown Pkwy	SB						4,048	3,657
Glades Cut off Rd	Range Line Rd	Reserve Blvd	NB	Glades Cut-Off & Commerce	450	268	0.55	0.52	200	252
	Range Line Rd	Reserve Blvd	SB	Glades Cut-Off & Commerce	375	244	0.45	0.48	164	233
	Reserve Blvd	Commerce Centre Dr	NB	Glades Cut-Off & Commerce	450	268	0.55	0.52	332	332
	Reserve Blvd	Commerce Centre Dr	SB	Glades Cut-Off & Commerce	375	244	0.45	0.48	272	306
	Commerce Centre Dr	W Midway Rd	NB	Glades Cut-Off & Commerce	272	177	0.51	0.56	210	192
	Commerce Centre Dr	W Midway Rd	SB	Glades Cut-Off & Commerce	262	140	0.49	0.44	202	151
	W Midway Rd	S. Jenkins Road	NB	Glades Cut-Off & Midway	374	261	0.56	0.38	669	421
	W Midway Rd	S. Jenkins Road	SB	Glades Cut-Off & Midway	296	432	0.44	0.62	526	687
	S Jenkins Rd	Selvitz Rd	NB	Glades Cut-Off & Midway	374	261	0.56	0.38	370	236
	S Jenkins Rd	Selvitz Rd	SB	Glades Cut-Off & Midway	296	432	0.44	0.62	291	385
SW Saint Lucie West Blvd	I95	California Blvd	EB						1,722	1,670
	I95	California Blvd	WB						1,722	1,670
	California Blvd	Country Club Dr	EB						1,722	1,670
	California Blvd	Country Club Dr	WB						1,722	1,670
	Country Club Dr	Cashmere Blvd	EB						1,722	1,670
	Country Club Dr	Cashmere Blvd	WB						1,722	1,670
	Cashmere Blvd	Florida's Turnpike	EB						2,446	2,308
	Cashmere Blvd	Florida's Turnpike	WB						2,446	2,308
	Florida's Turnpike	Bayshore Blvd	EB						2,446	2,308
	Florida's Turnpike	Bayshore Blvd	WB						2,446	2,308
Jenkins Rd	Edwards Rd	Okeechobee Rd	NB	Jenkins & Okeechobee	315	294	0.46	0.46	468	471
	Edwards Rd	Okeechobee Rd	SB	Jenkins & Okeechobee	364	349	0.54	0.54	549	553
	Okeechobee Rd	Orange Ave	NB	Jenkins & Okeechobee	328	385	0.45	0.48	485	525
	Okeechobee Rd	Orange Ave	SB	Jenkins & Okeechobee	397	425	0.55	0.52	593	569
25th St	Midway Rd	Edwards Rd	NB	25th & Midway	1122	681	0.61	0.38	1,310	749
	Midway Rd	Edwards Rd	SB	25th & Midway	730	1095	0.39	0.62	838	1,222
St James	Bayshore Blvd	Midway Rd	NB	25th & Midway	1032	615	0.68	0.37	1,186	689
	Bayshore Blvd	Midway Rd	SB	25th & Midway	487	1041	0.32	0.63	559	1,173
Virginia Ave	Okeechobee Rd	25th St	EB						1,169	1,126
	Okeechobee Rd	25th St	WB						1,169	1,126
Prima Vista Blvd	Bayshore Blvd	Alroso Blvd	EB						944	1,005
	Bayshore Blvd	Alroso Blvd	WB						944	1,005
	Alroso Blvd	US 1	EB						1,171	1,097
	Alroso Blvd	US 1	WB						1,171	1,097
Selvitz Rd	Bayshore Blvd	Midway Rd	NB	Selvitz & Midway	742	419	0.68	0.36	426	240
	Bayshore Blvd	Midway Rd	SB	Selvitz & Midway	355	746	0.32	0.64	200	426
	Midway Rd	Glades Cut Off Rd	NB	Selvitz & Midway	677	389	0.66	0.45	696	527
	Midway Rd	Glades Cut off Rd	SB	Selvitz & Midway	353	483	0.34	0.55	359	644
East Torino Pkwy	Midway Rd	Turtle Dove Ln	NB	Torino & Midway	966	502	0.65	0.39	1,030	625
	Midway Rd	Turtle Dove Ln	SB	Torino & Midway	515	784	0.35	0.61	555	978

Source: St. Lucie TPO Traffic Counts and Level of Service Report Fall/Winter 2019/2020

(1) St. Lucie County Comprehensive Plan

(2) 2 lane portion fails with background traffic, and conditioned for improvement

Note: Peak Direction Volumes from ST. Lucie County Traffic Counts and LOS Report Fall/Winter 2019/2020

Links analyzed in tables 4a and 4b include the off peak volumes calculated using D factors in Appendix E.

(3) Selvitz to Christensen Rd/ Christensen to 25th St all one capacity

(4) 25th to Sunrise and Sunrise to Oleander same volume and capacity

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
2ND ST	CITRUS AVE to ORANGE AVE	601	2,167	2017	540	190	C	0.704	161	C	0.596
2ND ST	ORANGE AVE to AVENUE A	602	2,217	2017	540	142	C	0.526	133	C	0.493
7TH ST	SUNRISE BLVD to GEORGIA AVE	519	1,022	2019	600	67	C	0.223	75	C	0.250
7TH ST	GEORGIA AVE to DELAWARE AVE	517	1,680	2019	790	101	C	0.259	106	C	0.272
7TH ST	DELAWARE AVE to CITRUS AVE	515	2,567	2019	790	155	C	0.397	153	C	0.392
7TH ST	CITRUS AVE to ORANGE AVE	515	2,567	2019	750	155	C	0.419	153	C	0.414
7TH ST	ORANGE AVE to AVENUE C	603	2,979	2016	750	204	C	0.551	225	C	0.608
7TH ST	AVENUE C to AE BACKUS AVE	603	2,979	2016	540	204	C	0.756	225	C	0.833
7TH ST	AE BACKUS AVE to AVENUE D	603	2,979	2016	750	204	C	0.551	225	C	0.608
7TH ST	AVENUE D to AVENUE H	604	1,767	2017	750	116	C	0.314	113	C	0.305
10TH ST	DELAWARE AVE to ORANGE AVE	605	233	2017	600	25	C	0.083	24	C	0.080
10TH ST	ORANGE AVE to AVENUE C	605	233	2017	600	25	C	0.083	24	C	0.080
10TH ST	AVENUE C to AVENUE D	605	233	2017	540	25	C	0.093	24	C	0.089
13TH ST	VIRGINIA AVE to NEBRASKA AVE	527	6,500	2020	750	401	D	0.535	420	D	0.560
13TH ST	NEBRASKA AVE to GEORGIA AVE	527	6,500	2020	790	401	D	0.508	420	D	0.532
13TH ST	GEORGIA AVE to DELAWARE AVE	525	4,746	2017	750	275	C	0.743	260	C	0.703
13TH ST	DELAWARE AVE to ORANGE AVE	523	3,886	2017	750	256	C	0.692	239	C	0.646
13TH ST	ORANGE AVE to AVENUE B	521	2,776	2017	750	164	C	0.443	160	C	0.432
13TH ST	AVENUE B to AVENUE D	521	2,776	2017	750	164	C	0.443	160	C	0.432
13TH ST	AVENUE D to AVENUE H	165	2,728	2017	750	163	C	0.441	151	C	0.408
13TH ST	AVENUE H to AVENUE I	165	2,728	2017	540	163	C	0.604	151	C	0.559
13TH ST	AVENUE I to AVENUE O	165	2,728	2017	540	163	C	0.604	151	C	0.559
13TH ST	AVENUE O to AVENUE Q	165	2,728	2017	540	163	C	0.604	151	C	0.559
17TH ST	GEORGIA AVE to DELAWARE AVE	606	3,233	2016	600	179	C	0.597	179	C	0.597
17TH ST	DELAWARE AVE to ORANGE AVE	607	6,200	2020	790	294	C	0.754	283	C	0.726

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						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE Q	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	18,275	2017	2,100	1,310	C	0.652	1,222	C	0.608
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	22,049	2017	2,000	1,405	C	0.736	1,401	C	0.734
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	19,612	2017	1,630	1,021	D	0.626	1,015	D	0.623
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE Q	940050	15,331	2017	1,630	807	D	0.495	784	D	0.481
25TH ST	AVENUE Q to JUANITA AVE	945152	13,301	2017	2,000	752	C	0.394	689	C	0.361
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	5,924	2017	2,100	340	C	0.169	380	C	0.189
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	4,991	2017	790	230	C	0.622	230	C	0.622
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

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AIROSO BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	243	15,827	2017	2,100	789	C	0.393	807	C	0.401
AIROSO BLVD	PRIMA VISTA BLVD to FLORESTA DR	101	14,344	2017	2,000	751	C	0.393	760	C	0.398
AIROSO BLVD	FLORESTA DR to ST JAMES DR	301	21,000	2019	2,100	1,114	C	0.554	1,130	C	0.562
ANGLE RD	ORANGE AVE to AVENUE D	100	10,000	2020	790	513	D	0.649	490	D	0.620
ANGLE RD	AVENUE D to AVENUE Q	100	10,000	2020	540	513	D	0.950	490	D	0.907
ANGLE RD	AVENUE Q to 53RD ST	615	8,600	2020	600	508	D	0.847	521	D	0.868
ANGLE RD	53RD ST to KEEN RD	616	6,000	2020	630	319	C	0.532	357	C	0.595
ANGLE RD	KEEN RD to KINGS HWY	616	6,000	2020	880	319	C	0.384	357	C	0.430
ANGLE RD	KINGS HWY to JOHNSTON RD	617	3,267	2016	1,070	201	B	0.529	195	B	0.513
ANGLE RD	JOHNSTON RD to FLORIDA'S TURNPIKE	948505	707	2017	1,070	37	B	0.088	37	B	0.088
AVENUE A	7TH ST to US 1	945034	1,189	2017	790	136	C	0.349	136	C	0.349
AVENUE A	US 1 to INDIAN RIVER DR	945033	2,200	2017	600	147	C	0.490	136	C	0.453
AVENUE D	ANGLE RD to 29TH ST	164	3,683	2016	600	209	C	0.697	205	C	0.683
AVENUE D	29TH ST to 25TH ST	164	3,683	2016	790	209	C	0.536	205	C	0.526
AVENUE D	25TH ST to 17TH ST	163	4,289	2016	750	241	C	0.651	227	C	0.614
AVENUE D	17TH ST to 13TH ST	162	3,711	2016	750	171	C	0.462	185	C	0.500
AVENUE D	13TH ST to 10TH ST	161	2,118	2016	750	100	C	0.270	112	C	0.303
AVENUE D	10TH ST to 7TH ST	160	2,383	2016	750	119	C	0.322	129	C	0.349
AVENUE D	7TH ST to US 1	160	2,383	2016	750	119	C	0.322	129	C	0.349
AVENUE I	25TH ST to 17TH ST	620	2,533	2016	750	218	C	0.589	171	C	0.462
AVENUE I	17TH ST to 13TH ST	620	2,533	2016	750	218	C	0.589	171	C	0.462
AVENUE H	13TH ST to 7TH ST	618	1,583	2017	540	92	C	0.341	99	C	0.367
AVENUE H	7TH ST to US 1	619	1,233	2017	750	67	C	0.181	66	C	0.178
AVENUE Q	ANGLE RD to 25TH ST	700	5,700	2020	750	301	C	0.814	289	C	0.781
AVENUE Q	25TH ST to 17TH ST	701	3,937	2016	750	281	C	0.759	314	C	0.849

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AVENUE Q	17TH ST to 13TH ST	701	3,937	2016	540	281	D	0.520	314	D	0.581
AVENUE Q	13TH ST to US 1	685	1,867	2017	540	105	C	0.389	108	C	0.400
AVENUE C	10TH ST to 7TH ST	631	350	2017	540	20	C	0.074	21	C	0.078
BAYSHORE BLVD	MOUNTWELL ST to PORT ST LUCIE BLVD	621	6,000	2019	830	373	C	0.478	324	C	0.415
BAYSHORE BLVD	PORT ST LUCIE BLVD to THORNHILL DR	309	28,260	2018	2,100	1,335	C	0.664	1,297	C	0.645
BAYSHORE BLVD	THORNHILL DR to CROSSTOWN PKWY	948508	22,081	2017	2,100	1,019	C	0.534	1,019	C	0.534
BAYSHORE BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	307	27,000	2019	2,100	1,394	C	0.694	1,356	C	0.675
BAYSHORE BLVD	PRIMA VISTA BLVD to FLORESTA DR	305	17,500	2019	920	829	C	0.953	858	C	0.986
BAYSHORE BLVD	FLORESTA DR to SELVITZ RD	622	13,000	2019	790	707	C	0.943	623	C	0.831
BAYSHORE BLVD	SELVITZ RD to 25TH ST	622	13,000	2019	750	707	D	0.943	623	D	0.831
BEACH AVE	OLEANDER AVE to RIO MAR DR	623	3,500	2017	540	247	C	0.915	211	C	0.781
BECKER RD	VILLAGE PKWY to I-95	624	2,500	2017	3,170	196	C	0.063	178	C	0.058
BECKER RD	I-95 to SAVONA BLVD	625	21,000	2019	2,000	1,809	C	0.947	1,616	C	0.846
BECKER RD	SAVONA BLVD to PORT ST LUCIE BLVD	626	18,000	2019	2,100	1,142	C	0.568	1,083	C	0.539
BECKER RD	ALBACORE ST to DARWIN BLVD	302	13,500	2019	1,500	863	C	0.603	842	C	0.589
BECKER RD	PORT ST LUCIE BLVD to ALBACORE ST	302	13,500	2019	2,100	863	C	0.429	842	C	0.419
BECKER RD	ATHENA DR to FLORIDA'S TURNPIKE	627	15,000	2019	1,500	1,320	C	0.923	1,244	C	0.870
BECKER RD	DARWIN BLVD to ATHENA DR	627	15,000	2019	2,000	1,320	C	0.691	1,244	C	0.651
BECKER RD	FLORIDA'S TURNPIKE to SOUTHBEND BLVD	628	20,000	2019	2,100	1,333	C	0.663	1,657	C	0.824
BECKER RD	SOUTHBEND BLVD to GILSON RD	629	15,000	2019	920	956	F	1.039	1,182	F	1.285
BELL AVE	25TH ST to SUNRISE BLVD	104	4,758	2019	790	313	C	0.803	326	C	0.836
BELL AVE	SUNRISE BLVD to OLEANDER AVE	102	3,854	2019	600	217	C	0.723	223	C	0.743
CASHMERE BLVD	PEACOCK BLVD to TORINO PKWY	676	10,159	2018	630	714	F	1.133	589	C	0.982
CALIFORNIA BLVD	CAMEO BLVD to DEL RIO BLVD	633	7,813	2018	750	503	D	0.671	429	D	0.572
CALIFORNIA BLVD	DEL RIO BLVD to SAVONA BLVD	634	14,000	2019	920	774	C	0.890	771	C	0.886

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CALIFORNIA BLVD	SAVONA BLVD to DEL RIO BLVD	635	12,500	2019	920	800	C	0.920	788	C	0.906
CALIFORNIA BLVD	DEL RIO BLVD to CROSSTOWN PKWY	636	15,000	2019	920	946	F	1.028	952	F	1.035
CALIFORNIA BLVD	CROSSTOWN PKWY to HEATHERWOOD BLVD	234	19,500	2019	920	962	F	1.046	1,085	F	1.179
CALIFORNIA BLVD	HEATHERWOOD BLVD to ST LUCIE WEST BLVD	234	19,500	2019	920	962	F	1.046	1,085	F	1.179
CALIFORNIA BLVD	ST LUCIE WEST BLVD to COUNTRY CLUB DR	233	9,100	2019	920	488	C	0.561	484	C	0.556
CALIFORNIA BLVD	COUNTRY CLUB DR to UNIVERSITY BLVD	724	7,800	2019	790	531	C	0.708	466	C	0.621
CALIFORNIA BLVD	UNIVERSITY BLVD to PEACOCK BLVD	724	7,800	2019	630	531	C	0.885	466	C	0.777
CALIFORNIA BLVD	PEACOCK BLVD to TORINO PKWY	637	13,000	2019	630	968	F	1.537	821	F	1.303
CASHMERE BLVD	DEL RIO BLVD to CROSSTOWN PKWY	642	10,021	2018	920	698	C	0.802	627	C	0.721
CASHMERE BLVD	CROSSTOWN PKWY to HEATHERWOOD BLVD	232	13,000	2019	920	749	C	0.861	666	C	0.766
CASHMERE BLVD	HEATHERWOOD BLVD to ST LUCIE WEST BLVD	232	13,000	2019	920	749	C	0.861	666	C	0.766
CASHMERE BLVD	ST LUCIE WEST BLVD to PEACOCK BLVD	231	14,000	2019	920	1,141	F	1.240	1,099	F	1.195
CARLTON RD	CARLTON RD (S) to OKEECHOBEE RD	641	392	2017	390	34	B	0.155	31	B	0.141
CAMEO BLVD	PORT ST LUICE BLVD to CALIFORNIA BLVD	638	4,600	2019	750	376	D	0.501	281	C	0.759
CAMEO BLVD	CALIFORNIA BLVD to CROSSTOWN PKWY	639	9,319	2018	790	673	D	0.852	536	D	0.678
CAMPBELL RD	PICOS RD to ORANGE AVE	640	533	2017	540	44	C	0.163	43	C	0.159
CANE SLOUGH RD	US 1 to LENNARD RD	167	9,772	2016	1,710	535	C	0.695	545	C	0.708
CITRUS AVE	7TH ST to US 1	643	1,083	2019	750	150	C	0.405	150	C	0.405
CITRUS AVE	US 1 to 2ND ST	940160	4,131	2017	790	246	C	0.631	251	C	0.644
CITRUS AVE	2ND ST to INDIAN RIVER DR	644	4,276	2016	540	261	C	0.967	263	C	0.974
COMMUNITY BLVD	WESTCLIFFE LN to TRADITION PKWY	647	5,317	2017	1,470	362	C	0.548	336	C	0.509
COMMERCE CENTER DR	CROSSTOWN PKWY to ST LUCIE WEST BLVD	645	5,819	2017	1,710	363	C	0.471	390	C	0.506
COMMERCE CENTER DR	ST LUCIE WEST BLVD to GLADES CUT-OFF RD	646	7,500	2019	540	400	D	0.741	460	D	0.852
CORTEZ BLVD	35TH ST to 25TH ST	948500	2,171	2017	750	105	C	0.284	105	C	0.284
CORTEZ BLVD	25TH ST to SUNRISE BLVD	648	2,950	2019	750	211	C	0.570	193	C	0.522

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COUNTRY CLUB DR	ST LUCIE WEST BLVD to CALIFORNIA BLVD	725	8,300	2019	1,710	535	C	0.695	489	C	0.635
CROSSTOWN PKWY	COMMERCE CENTER DR to I-95	650	16,233	2016	3,170	1,008	C	0.326	865	C	0.280
CROSSTOWN PKWY	I-95 to CALIFORNIA BLVD	651	24,500	2020	3,170	1,290	C	0.417	1,244	C	0.403
CROSSTOWN PKWY	CALIFORNIA BLVD to CASHMERE BLVD	652	25,000	2020	3,170	1,299	C	0.420	1,395	C	0.451
CROSSTOWN PKWY	CASHMERE BLVD to CAMEO BLVD	653	26,500	2019	3,170	1,256	C	0.406	1,307	C	0.423
CROSSTOWN PKWY	CAMEO BLVD to BAYSHORE BLVD	654	30,500	2019	3,170	1,502	C	0.486	1,556	C	0.504
CROSSTOWN PKWY	BAYSHORE BLVD to AIROSO BLVD	655	25,000	2020	3,170	1,320	C	0.427	1,384	C	0.448
CROSSTOWN PKWY	AIROSO BLVD to SANDIA DR	656	5,400	2016	3,170	348	C	0.118	297	C	0.101
CROSSTOWN PKWY	SANDIA DR to MANTH LN	657	6,400	2016	3,170	344	C	0.117	360	C	0.122
CROSSTOWN PKWY	FLORESTA DR to US 1	658	19,000	2020	3,170	1,019	C	0.347	1,124	C	0.382
CROSSROADS PKWY	OKEECHOBEE RD to KINGS HWY	649	2,142	2017	790	108	C	0.277	107	C	0.274
DARWIN BLVD	BECKER RD to PAAR DR	235	7,298	2018	630	728	F	1.156	642	F	1.019
DARWIN BLVD	PAAR DR to TULIP BLVD	235	7,298	2018	920	728	C	0.837	642	C	0.738
DARWIN BLVD	TULIP BLVD to PORT ST LUCIE BLVD	659	13,500	2019	920	673	C	0.774	708	C	0.814
DEL RIO BLVD	PORT ST LUCIE BLVD to CALIFORNIA BLVD	311	8,100	2019	920	633	C	0.728	570	C	0.655
DEL RIO BLVD	CALIFORNIA BLVD to CASHMERE BLVD	660	8,400	2019	880	512	C	0.617	508	C	0.612
DEL RIO BLVD	CASHMERE BLVD to CALIFORNIA BLVD	661	4,800	2017	880	281	C	0.339	294	C	0.354
DELAWARE AVE	HARTMAN RD to 33RD ST	662	1,667	2016	600	259	C	0.863	208	C	0.693
DELAWARE AVE	33RD ST to 25TH ST	500	3,118	2017	1,710	207	C	0.269	237	C	0.308
DELAWARE AVE	25TH ST to OKEECHOBEE RD	948526	3,122	2017	1,220	144	C	0.197	144	C	0.197
DELAWARE AVE	OKEECHOBEE RD to 13TH ST	663	12,000	2020	790	657	D	0.832	611	D	0.773
DELAWARE AVE	13TH ST to 10TH ST	664	7,402	2017	750	497	D	0.663	411	D	0.548
DELAWARE AVE	10TH ST to 7TH ST	664	7,402	2017	600	497	D	0.828	411	D	0.685
DELAWARE AVE	7TH ST to US 1	665	7,200	2020	750	390	D	0.520	402	D	0.536
EAST TORINO PKWY	CASHMERE BLVD to TORINO PKWY	710	11,500	2020	830	716	C	0.918	653	C	0.837

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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EAST TORINO PKWY	TORINO PKWY to MIDWAY RD	237	14,500	2020	880	1,030	F	1.170	978	F	1.111
EASY ST	US 1 to BUCHANAN DR	106	8,029	2018	750	601	D	0.801	483	D	0.644
EASY ST	BUCHANAN DR to YUCCA DR	106	8,029	2018	540	601	F	1.036	483	D	0.894
EDWARDS RD	JENKINS RD to MCNEIL RD	174	11,500	2020	630	573	C	0.955	594	C	0.990
EDWARDS RD	MCNEIL RD to SELVITZ RD	174	11,500	2020	700	573	C	0.868	594	C	0.900
EDWARDS RD	SELVITZ RD to 25TH ST	110	15,000	2020	880	755	C	0.910	771	C	0.929
EDWARDS RD	25TH ST to SUNRISE BLVD	108	16,697	2019	1,630	877	D	0.538	867	D	0.532
EDWARDS RD	SUNRISE BLVD to OLEANDER AVE	502	15,207	2019	1,630	754	D	0.463	735	D	0.451
EDWARDS RD	OLEANDER AVE to US 1	173	9,581	2019	1,630	527	C	0.722	460	C	0.630
FARMER'S MARKET RD	OLEANDER AVE to US 1	112	1,876	2019	750	130	C	0.351	127	C	0.343
FLORESTA DR	OAKLYN ST to PORT ST LUCIE BLVD	317	13,000	2019	920	900	D	0.978	687	C	0.790
FLORESTA DR	THORNHILL DR to CROSSTOWN PKWY	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	PORT ST LUCIE BLVD to THORNHILL DR	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	CROSSTOWN PKWY to PRIMA VISTA BLVD	109	11,000	2019	920	671	C	0.771	576	C	0.662
FLORESTA DR	PRIMA VISTA BLVD to AIROSO BLVD	107	9,600	2019	920	559	C	0.643	601	C	0.691
FLORESTA DR	SELVITZ RD to BAYSHORE BLVD	313	4,467	2018	630	349	C	0.582	365	C	0.608
FLORESTA DR	AIROSO BLVD to SELVITZ RD	313	4,467	2018	880	349	C	0.420	365	C	0.440
FT PIERCE BLVD	INDRIO RD to EMERSON AVE	226	3,555	2019	540	267	C	0.989	273	D	0.506
GARDENIA AVE	OLEANDER AVE to US 1	666	2,817	2017	750	188	C	0.508	200	C	0.541
GATLIN BLVD	W OF I-95 to E OF I-95	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	E OF I-95 to SAVAGE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVAGE BLVD to ROSSER BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	ROSSER BLVD to SAVONA BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVONA BLVD to PORT ST LUCIE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GEORGIA AVE	25TH ST to OKEECHOBEE RD	667	4,700	2020	600	290	C	0.967	262	C	0.873

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GEORGIA AVE	OKEECHOBEE RD to 17TH ST	667	4,700	2020	750	290	C	0.784	262	C	0.708
GEORGIA AVE	17TH ST to 13TH ST	508	4,733	2019	600	264	C	0.880	268	C	0.893
GEORGIA AVE	13TH ST to 7TH ST	506	2,169	2019	600	134	C	0.447	137	C	0.457
GEORGIA AVE	7TH ST to US 1	504	1,938	2019	600	122	C	0.407	135	C	0.450
GILSON RD	MARTIN C.L. to BECKER RD	111	11,000	2019	710	949	F	1.249	954	F	1.255
GILSON RD	BECKER RD to LAKERIDGE DR	111	11,000	2019	540	949	F	1.636	954	F	1.645
GLADES CUT-OFF RD	RANGE LINE RD to RESERVE BLVD	668	2,833	2017	1,070	200	B	0.526	252	B	0.663
GLADES CUT-OFF RD	RESERVE BLVD to COMMERCE CENTER DR	119	3,585	2016	1,070	332	B	0.874	332	B	0.874
GLADES CUT-OFF RD	CARLTON RD to RANGE LINE RD	668	2,833	2017	390	200	B	0.909	252	C	0.646
GLADES CUT-OFF RD	COMMERCE CENTER DR to MIDWAY RD	940279	2,770	2017	920	210	C	0.241	192	C	0.221
GLADES CUT-OFF RD	MIDWAY RD to JENKINS RD	115	12,500	2020	790	669	D	0.847	687	D	0.870
GLADES CUT-OFF RD	JENKINS RD to SELVITZ RD	113	6,600	2020	830	370	C	0.474	385	C	0.494
GRAHAM RD	KINGS HWY to JENKINS RD	669	3,733	2017	630	255	C	0.425	243	C	0.405
GREEN RIVER PKWY	MARTIN C.L. to CHARLESTON DR	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	CHARLESTON DR to MELALEUCA BLVD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	MELALEUCA BLVD to WALTON RD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
HARTMAN RD	OKEECHOBEE RD to PETERSON RD	670	5,867	2017	750	388	D	0.517	357	C	0.965
HARTMAN RD	PETERSON RD to DELAWARE AVE	670	5,867	2017	540	388	D	0.719	357	D	0.661
HARTMAN RD	DELAWARE AVE to ORANGE AVE	670	5,867	2017	790	388	C	0.995	357	C	0.915
HEADER CANAL RD	OKEECHOBEE RD to ORANGE AVE	121	560	2019	670	46	B	0.209	56	B	0.255
HILLMOOR DR	US 1 to LENNARD RD	671	5,900	2019	790	306	C	0.785	389	C	0.997
I-95	GATLIN BLVD to ST LUCIE WEST BLVD	941901	79,065	2017	4,580	4,048	C	0.884	3,657	C	0.798
I-95	ST LUCIE WEST BLVD to MIDWAY RD	941904	63,486	2017	4,580	3,571	C	0.780	3,079	B	0.916
I-95	MIDWAY RD to OKEECHOBEE RD	941902	75,846	2017	4,580	4,578	C	10	3,717	C	0.812
I-95	OKEECHOBEE RD to ORANGE AVE	941903	45,500	2009	7,320	1,822	B	0.405	1,894	B	0.421

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I-95	ORANGE AVE to INDRIO RD	941905	43,452	2017	7,320	2,090	B	0.464	1,924	B	0.428
INDIAN RIVER DR	CITRUS AVE to ORANGE AVE	945029	5,228	2017	750	311	C	0.841	356	C	0.962
INDIAN RIVER DR	ORANGE AVE to AVENUE A	940003	5,888	2017	750	344	C	0.930	335	C	0.905
INDIAN RIVER DR	AVENUE D to SEAWAY DR	940004	5,971	2017	790	349	C	0.895	411	D	0.520
INDIAN RIVER DR	AVENUE A to AVENUE D	940004	5,971	2017	540	349	D	0.646	411	D	0.761
INDRIO RD	PRIVATE RD to I-95 W RAMP	940128	951	2017	1,080	69	B	0.168	75	B	0.183
INDRIO RD	I-95 W RAMP to I-95 E RAMP	940128	951	2017	3,240	69	B	0.038	75	B	0.041
INDRIO RD	I-95 E RAMP to KOBLEGARD RD	940038	10,455	2017	3,240	598	B	0.330	629	B	0.348
INDRIO RD	KOBLEGARD RD to JOHNSTON RD	940038	10,455	2017	700	598	C	0.906	629	C	0.953
INDRIO RD	JOHNSTON RD to EMERSON AVE	940038	10,455	2017	880	598	C	0.720	629	C	0.758
INDRIO RD	EMERSON RD to SEMINOLE RD	940281	9,876	2017	920	595	C	0.684	501	C	0.576
INDRIO RD	SEMINOLE RD to KINGS HWY	940281	9,876	2017	790	595	D	0.753	501	D	0.634
INDRIO RD	KINGS HWY to SLASH PINE TRL	114	6,600	2020	790	422	D	0.534	413	D	0.523
INDRIO RD	SLASH PINE TRL to US 1	114	6,600	2020	920	422	C	0.485	413	C	0.475
INDRIO RD	US 1 to OLD DIXIE HWY	672	917	2016	750	64	C	0.173	86	C	0.232
JENNINGS RD	US 1 to LENNARD RD	673	4,600	2016	2,100	304	C	0.151	248	C	0.123
JENKINS RD	EDWARDS RD to OKEECHOBEE RD	133	10,500	2020	880	549	C	0.661	553	C	0.666
JENKINS RD	OKEECHOBEE RD to GRAHAM RD	131	10,500	2020	920	593	C	0.682	569	C	0.654
JENKINS RD	GRAHAM RD to PETERSON RD	131	10,500	2020	630	593	C	0.988	569	C	0.948
JENKINS RD	PETERSON RD to ORANGE AVE	131	10,500	2020	920	593	C	0.682	569	C	0.654
JOHNSTON RD	ANGLE RD to L20	674	2,600	2016	1,070	176	B	0.463	171	B	0.450
JOHNSTON RD	L20 to MEADOWOOD DR	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	MEADOWOOD DR to OLD JOHNSTON RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	OLD JOHNSTON RD to INDRIO RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	INDRIO RD to RUSSOS RD	135	9,600	2020	1,070	544	C	0.716	545	C	0.717

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JOHNSTON RD	RUSSOS RD to INDIAN RIVER C.L.	135	9,600	2020	1,070	544	C	0.716	545	C	0.717
JUANITA AVE	53RD ST to 25TH ST	122	2,432	2017	750	157	C	0.424	143	C	0.386
JUANITA AVE	25TH ST to US 1	120	3,321	2017	750	185	C	0.500	182	C	0.492
KEEN RD	ANGLE RD to JUANITA AVE	129	2,885	2019	630	174	C	0.290	203	C	0.338
KEEN RD	JUANITA AVE to ST LUCIE BLVD	129	2,885	2019	630	174	C	0.290	203	C	0.338
KINGS HWY	OKEECHOBEE RD to CROSSROADS PKWY	940757	8,234	2017	830	361	C	0.435	369	C	0.445
KINGS HWY	CROSSROADS PKWY to GRAHAM RD	940757	8,234	2017	660	361	C	0.547	369	C	0.559
KINGS HWY	GRAHAM RD to PICOS RD	940076	8,216	2017	660	405	C	0.614	389	C	0.589
KINGS HWY	PICOS RD to ORANGE AVE	940076	8,216	2017	830	405	C	0.488	389	C	0.469
KINGS HWY	ORANGE AVE to ANGLE RD	940077	16,792	2017	870	885	D	0.962	890	D	0.967
KINGS HWY	ANGLE RD to ST LUCIE BLVD	940751	11,394	2017	830	627	C	0.755	630	C	0.759
KINGS HWY	ST LUCIE BLVD to INDRIO RD	940006	13,481	2017	830	836	D	0.950	786	C	0.947
KITTERMAN RD	OLEANDER AVE to US 1	124	3,402	2018	750	224	C	0.605	203	C	0.549
KITTERMAN RD	US 1 to LENNARD EXT	678	2,250	2017	750	128	C	0.346	130	C	0.351
KIRBY LOOP RD	EDWARDS RD to 35TH ST	677	4,479	2016	630	296	C	0.493	362	C	0.603
LENNARD RD	US 1 to MARIPOSA AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MARIPOSA AVE to MELALEUCA BLVD	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MELALEUCA BLVD to JENNINGS RD	325	18,500	2019	1,630	953	D	0.585	984	D	0.604
LENNARD RD	JENNINGS RD to HILLMOOR DR	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	HILLMOOR DR to TIFFANY AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	TIFFANY AVE to WALTON RD	323	5,765	2016	1,710	301	C	0.391	305	C	0.396
LENNARD RD	WALTON RD to S OF SAVANNA CLUB BLVD	679	4,455	2016	790	390	C	10	381	C	0.977
LYNGATE DR	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	306	9,400	2020	920	588	C	0.676	626	C	0.720
LYNGATE DR	MORNINGSIDE BLVD to US 1	306	9,400	2020	920	588	C	0.676	626	C	0.720
MARIPOSA AVE	LENNARD RD to HALLAHAN ST	166	6,400	2019	880	485	C	0.584	686	C	0.827

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MCNEIL RD	OKEECHOBEE RD to KIRBY LOOP RD	682	4,600	2020	790	281	C	0.721	280	C	0.718
MCNEIL RD	KIRBY LOOP RD to EDWARDS RD	682	4,600	2020	540	281	D	0.520	280	D	0.519
MCCARTY RD	WILLIAMS RD to MIDWAY RD	680	375	2017	540	33	C	0.122	35	C	0.130
MCCARTY RD	MIDWAY RD to OKEECHOBEE RD	681	400	2020	540	34	C	0.126	35	C	0.130
MELALEUCA BLVD	LENNARD RD to GREEN RIVER PKWY	683	9,804	2018	920	648	C	0.745	584	C	0.671
MIDWAY RD	EAST TORINO PKWY to MILNER DR	134	22,500	2020	880	1,216	F	1.382	1,304	F	1.482
MIDWAY RD	MILNER DR to W OF SELVITZ RD	134	22,500	2020	790	1,216	F	1.539	1,304	F	1.651
MIDWAY RD	OKEECHOBEE RD to SHINN RD	940732	5,118	2017	760	295	C	0.440	376	C	0.561
MIDWAY RD	SHINN RD to MCCARTY RD	940732	5,118	2017	630	295	C	0.492	376	C	0.627
MIDWAY RD	MCCARTY RD to I-95	940732	5,118	2017	700	295	C	0.447	376	C	0.570
MIDWAY RD	I-95 to GLADES CUT-OFF RD	945140	16,655	2017	2,100	926	C	0.461	1,027	C	0.511
MIDWAY RD	GLADES CUT-OFF RD to EAST TORINO PKWY	228	21,500	2020	2,100	1,226	C	0.610	1,281	C	0.637
MIDWAY RD	W OF SELVITZ RD to SELVITZ RD	134	22,500	2020	920	1,216	F	1.322	1,304	F	1.417
MIDWAY RD	SELVITZ RD to CHRISTENSEN RD	132	18,500	2020	920	973	F	1.058	940	F	1.022
MIDWAY RD	CHRISTENSEN RD to 25TH ST	132	18,500	2020	790	973	F	1.158	940	F	1.119
MIDWAY RD	25TH ST to SUNRISE BLVD	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	SUNRISE BLVD to OLEANDER AVE	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	OLEANDER AVE to US 1	242	15,309	2016	790	808	E	0.962	800	E	0.952
MIDWAY RD	US 1 to WALLACE ST	940023	3,709	2017	790	287	C	0.736	317	C	0.813
MIDWAY RD	WALLACE ST to WEATHERBEE RD	940023	3,709	2017	920	287	C	0.330	317	C	0.364
MIDWAY RD	WEATHERBEE RD to INDIAN RIVER DR	940023	3,709	2017	630	287	C	0.478	317	C	0.528
MORNINGSIDE BLVD	WESTMORELAND BLVD to PORT ST LUCIE BLVD	333	2,654	2017	920	159	C	0.183	152	C	0.175
MORNINGSIDE BLVD	PORT ST LUCIE BLVD to LYNGATE DR	331	2,900	2020	880	230	C	0.277	244	C	0.294
NEBRASKA AVE	25TH ST to 13TH ST	684	3,767	2017	1,710	234	C	0.304	197	C	0.256
OAKRIDGE DR	MOUNTWELL ST to OAKLYN ST	621	6,000	2019	700	373	C	0.565	324	C	0.491

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OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

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OLD DIXIE HWY	ST LUCIE BLVD to INDRIO RD	227	2,041	2016	790	150	C	0.385	116	C	0.297
OLD DIXIE HWY	INDRIO RD to INDIAN RIVER C.L.	948523	1,227	2017	870	57	C	0.069	57	C	0.069
OLEANDER AVE	BEACH AVE to KITTERMAN RD	692	2,900	2017	540	175	C	0.648	193	C	0.715
OLEANDER AVE	KITTERMAN RD to MIDWAY RD	141	6,498	2017	750	406	D	0.541	426	D	0.568
OLEANDER AVE	MIDWAY RD to WEATHERBEE RD	139	7,100	2020	750	388	D	0.517	421	D	0.561
OLEANDER AVE	WEATHERBEE RD to BELL AVE	139	7,100	2020	540	388	D	0.719	421	D	0.780
OLEANDER AVE	BELL AVE to FARMER'S MARKET RD	240	12,500	2020	540	671	F	1.157	647	F	1.116
OLEANDER AVE	FARMER'S MARKET RD to EDWARDS RD	240	12,500	2020	750	671	D	0.895	647	D	0.863
OLEANDER AVE	EDWARDS RD to WISTERIA AVE	505	10,000	2020	750	611	D	0.815	554	D	0.739
OLEANDER AVE	WISTERIA AVE to GARDENIA AVE	505	10,000	2020	540	611	F	1.053	554	E	0.955
OLEANDER AVE	GARDENIA AVE to VIRGINIA AVE	505	10,000	2020	790	611	D	0.773	554	D	0.701
OLEANDER AVE	VIRGINIA AVE to SUNRISE BLVD	503	4,561	2019	600	259	C	0.863	270	C	0.900
ORANGE AVE	OKEECHOBEE C.L. to SNEED RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SNEED RD to HEADER CANAL RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SHINN RD to CAMPBELL RD	940144	2,722	2017	380	149	B	0.355	149	B	0.355
ORANGE AVE	CAMPBELL RD to KINGS HWY	940144	2,722	2017	1,070	149	B	0.355	149	B	0.355
ORANGE AVE	KINGS HWY to I-95	940041	18,112	2017	2,000	780	C	0.388	786	C	0.391
ORANGE AVE	I-95 to JENKINS RD	940035	14,009	2017	2,000	962	C	0.479	905	C	0.450
ORANGE AVE	JENKINS RD to HARTMAN RD	940028	14,189	2017	2,000	764	C	0.380	710	C	0.353
ORANGE AVE	HARTMAN RD to ANGLE RD	940028	14,189	2017	2,000	764	C	0.380	710	C	0.353
ORANGE AVE	ANGLE RD to 25TH ST	940151	10,749	2013	1,710	847	D	0.495	985	D	0.576
ORANGE AVE	25TH ST to 17TH ST	945040	13,196	2017	1,630	690	C	0.945	757	D	0.464
ORANGE AVE	17TH ST to 13TH ST	945040	13,196	2017	1,710	690	C	0.896	757	C	0.983
ORANGE AVE	13TH ST to 10TH ST	945040	13,196	2017	370	690	D	0.920	757	E	0.946
ORANGE AVE	10TH ST to 7TH ST	940155	8,760	2017	300	443	D	0.738	509	D	0.848

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ORANGE AVE	7TH ST to US 1	945134	7,219	2017	300	460	D	0.767	409	D	0.682
ORANGE AVE	US 1 to 2ND ST	945133	3,645	2017	300	232	C	0.773	227	C	0.757
ORANGE AVE	2ND ST to INDIAN RIVER DR	945133	3,645	2017	370	232	C	0.627	227	C	0.614
PARR DR	PORT ST LUCIE BLVD to DARWIN BLVD	209	1,108	2016	700	81	C	0.123	71	C	0.108
PARR DR	DARWIN BLVD to TULIP BLVD	723	1,900	2019	540	167	C	0.619	126	C	0.467
PARR DR	SAVONA BLVD to PORT ST LUCIE BLVD	209	1,108	2016	700	81	C	0.123	71	C	0.108
PARR DR	ROSSER BLVD to SAVONA BLVD	209	1,108	2016	630	81	C	0.135	71	C	0.118
PEACOCK BLVD	CALIFORNIA BLVD to CASHMERE BLVD	693	4,717	2017	630	408	C	0.680	340	C	0.567
PEACOCK BLVD	UNIVERSITY BLVD to CALIFORNIA BLVD	694	10,000	2019	920	746	C	0.857	634	C	0.729
PEACOCK BLVD	ST LUCIE WEST BLVD to UNIVERSITY BLVD	948514	15,534	2017	2,100	717	C	0.375	717	C	0.375
PETERSON RD	BENT CREEK DR to HARTMAN RD	695	1,183	2017	540	94	C	0.348	80	C	0.296
PICOS RD	CAMPBELL RD to KINGS HWY	696	1,333	2017	540	92	C	0.341	86	C	0.319
PORT ST LUCIE BLVD	MARTIN C.L. to BECKER RD	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	BECKER RD to PAAR DR	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	PAAR DR to TULIP BLVD	948519	15,868	2017	700	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	TULIP BLVD to DARWIN BLVD	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	DARWIN BLVD to GATLIN BLVD	697	32,000	2019	3,020	1,720	C	0.585	1,731	C	0.589
PORT ST LUCIE BLVD	GATLIN BLVD to DEL RIO BLVD	698	38,000	2019	3,170	2,215	C	0.717	1,957	C	0.633
PORT ST LUCIE BLVD	DEL RIO BLVD to CAMEO BLVD	945074	47,644	2017	3,170	3,186	F	1.01	2,892	C	0.936
PORT ST LUCIE BLVD	CAMEO BLVD to FLORIDA'S TURNPIKE	945074	47,644	2017	3,020	3,186	F	1.055	2,892	C	0.984
PORT ST LUCIE BLVD	FLORIDA'S TURNPIKE to BAYSHORE BLVD	945074	47,644	2017	3,170	3,186	F	1.01	2,892	C	0.936
PORT ST LUCIE BLVD	BAYSHORE BLVD to AIROSO BLVD	945073	48,955	2017	3,020	3,094	F	1.025	3,065	F	1.015
PORT ST LUCIE BLVD	AIROSO BLVD to FLORESTA DR	940780	49,175	2017	3,020	3,027	F	1	2,653	C	0.902
PORT ST LUCIE BLVD	FLORESTA DR to VETERANS MEMORIAL PKWY	940778	61,616	2017	3,020	4,415	F	1.462	3,293	F	1.090
PORT ST LUCIE BLVD	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	940776	41,526	2017	3,020	2,499	C	0.850	2,217	C	0.754

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PORT ST LUCIE BLVD	MORNINGSIDE BLVD to US 1	945072	40,456	2017	3,170	3,072	C	0.994	1,916	C	0.620
PRIMA VISTA BLVD	BAYSHORE BLVD to AIROSO BLVD	314	21,500	2020	2,100	944	C	0.470	1,005	C	0.500
PRIMA VISTA BLVD	AIROSO BLVD to FLORESTA DR	150	25,425	2018	2,100	1,171	C	0.583	1,097	C	0.546
PRIMA VISTA BLVD	FLORESTA DR to NARANJA AVE	148	26,500	2019	2,100	1,514	C	0.753	1,408	C	0.700
PRIMA VISTA BLVD	NARANJA AVE to RIO MAR DR	148	26,500	2019	2,000	1,514	C	0.793	1,408	C	0.737
PRIMA VISTA BLVD	RIO MAR DR to US 1	146	26,283	2018	2,100	1,278	C	0.636	1,165	C	0.580
PRIMA VISTA BLVD	US 1 to LENNARD RD	699	7,400	2017	1,710	449	C	0.583	452	C	0.587
RANGE LINE RD	MARTIN C.L. to BECKER RD	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RANGE LINE RD	BECKER RD to 2 MI S OF GLADES CUT-OFF RD	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RANGE LINE RD	2 MI S OF GLADES CUT-OFF RD to GLADES CUT-OF...	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RIO MAR DR	PRIMA VISTA BLVD to BEACH AVE	147	6,600	2020	750	408	D	0.544	429	D	0.572
RIO MAR DR	BEACH AVE to US 1	147	6,600	2020	790	408	D	0.516	429	D	0.543
ROSSER BLVD	APRICOT RD to GATLIN BLVD	948510	3,425	2017	920	158	C	0.19	158	C	0.19
ROSSER BLVD	PAAR DR to APRICOT RD	948510	3,425	2017	1,070	158	B	0.376	158	B	0.376
SAVONA BLVD	BECKER RD to PAAR DR	236	9,800	2019	790	893	F	1.063	796	E	0.948
SAVONA BLVD	PAAR DR to GATLIN BLVD	236	9,800	2019	750	893	F	1.116	796	E	0.995
SAVONA BLVD	GATLIN BLVD to CALIFORNIA BLVD	702	14,500	2019	790	787	D	0.996	732	D	0.927
SAVAGE BLVD	GATLIN BLVD to GALIANO RD	168	3,922	2018	920	258	C	0.297	208	C	0.239
SAVANNAH RD	US 1 to INDIAN RIVER DR	514	2,188	2019	540	155	C	0.574	153	C	0.567
SELVITZ RD	BAYSHORE BLVD to ST JAMES BLVD	948501	8,756	2017	750	426	D	0.568	426	D	0.568
SELVITZ RD	ST JAMES BLVD to MIDWAY RD	948501	8,756	2017	750	426	D	0.568	426	D	0.568
SELVITZ RD	MIDWAY RD to GLADES CUT-OFF RD	703	10,400	2019	700	696	D	0.994	644	C	0.976
SELVITZ RD	GLADES CUT-OFF RD to EDWARDS RD	704	14,000	2020	790	787	D	0.996	752	D	0.952
SHINN RD	MIDWAY RD to OKEECHOBEE RD	705	775	2017	580	51	C	0.100	49	C	0.096
SHINN RD	OKEECHOBEE RD to ORANGE AVE	149	819	2019	1,080	62	B	0.151	62	B	0.151

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SNEED RD	OKEECHOBEE RD to ORANGE AVE	151	1,079	2019	670	68	B	0.309	83	B	0.377
SOUTHBEND BLVD	BECKER RD to FLORESTA DR	337	16,000	2019	790	931	F	1.108	971	F	1.156
SR A1A NORTH	US 1 to OLD DIXIE HWY	940709	6,370	2017	920	430	C	0.494	430	C	0.494
SR A1A NORTH	OLD DIXIE HWY to N HWY A1A	706	10,500	2020	2,000	558	C	0.641	621	C	0.714
SR A1A NORTH	SHOREWINDS DR to INDIAN RIVER C.L.	940114	8,090	2017	920	435	C	0.500	477	C	0.548
SR A1A SOUTH	NETTLES ISLAND to FPL PLANT	940719	5,507	2017	920	337	C	0.387	302	C	0.347
SR A1A SOUTH	FPL PLANT to BLUE HERON BLVD	940116	3,825	2017	700	457	C	0.692	367	C	0.556
SR A1A SOUTH	BLUE HERON BLVD to SEAWAY DR	945016	7,908	2017	600	427	D	0.712	511	D	0.852
SR A1A SOUTH	OCEAN DR to BINNEY DR	940115	13,023	2017	600	648	F	1.012	678	F	1.059
SR A1A SOUTH	BINNEY DR to S CAUSEWAY PARK	940115	13,023	2017	790	648	D	0.820	678	D	0.858
SR A1A SOUTH	S CAUSEWAY PARK to INDIAN RIVER DR	940711	11,974	2017	1,550	659	C	0.955	596	C	0.864
SR A1A SOUTH	INDIAN RIVER DR to US 1	940711	11,974	2017	1,710	659	C	0.856	596	C	0.774
ST JAMES DR	AIROSO BLVD to ST JAMES BLVD	172	16,500	2020	2,100	1,129	C	0.562	1,088	C	0.541
ST JAMES DR	ST JAMES BLVD to PEACHTREE BLVD	239	19,000	2020	2,100	1,345	C	0.669	1,301	C	0.647
ST JAMES DR	PEACHTREE BLVD to TELFORD AVE	172	16,500	2020	1,800	1,129	C	0.656	1,088	C	0.633
ST JAMES DR	TELFORD AVE to MIDWAY RD	345	19,500	2020	2,100	1,188	C	0.591	1,173	C	0.584
ST JAMES BLVD	SELVITZ RD to ST JAMES DR	707	4,750	2017	790	279	C	0.715	275	C	0.705
ST LUCIE BLVD	KINGS HWY to KEEN RD	156	5,710	2019	880	310	C	0.373	407	C	0.490
ST LUCIE BLVD	KEEN RD to 25TH ST	156	5,710	2019	880	310	C	0.373	407	C	0.490
ST LUCIE BLVD	25TH ST to SENECA AVE	940270	3,819	2017	750	195	C	0.527	199	C	0.538
ST LUCIE BLVD	SENECA AVE to US 1	940270	3,819	2017	790	195	C	0.500	199	C	0.510
ST LUCIE WEST BLVD	COMMERCE CENTER DR to W OF I-95	152	13,500	2019	700	662	D	0.946	683	D	0.976
ST LUCIE WEST BLVD	I-95 to CALIFORNIA BLVD	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831
ST LUCIE WEST BLVD	CALIFORNIA BLVD to COUNTRY CLUB DR	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831
ST LUCIE WEST BLVD	COUNTRY CLUB DR to CASHMERE BLVD	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831

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ST LUCIE WEST BLVD	CASHMERE BLVD to BAYSHORE BLVD	316	46,000	2019	3,170	2,446	C	0.792	2,308	C	0.747
SUNRISE BLVD	MIDWAY RD to BELL AVE	155	3,590	2016	540	249	C	0.922	233	C	0.863
SUNRISE BLVD	BELL AVE to EDWARDS RD	153	3,814	2016	750	253	C	0.684	286	C	0.773
SUNRISE BLVD	EDWARDS RD to CORTEZ BLVD	511	7,300	2020	600	647	F	1.011	515	D	0.858
SUNRISE BLVD	CORTEZ BLVD to VIRGINIA AVE	511	7,300	2020	750	647	D	0.863	515	D	0.687
SUNRISE BLVD	VIRGINIA AVE to OLEANDER AVE	509	5,300	2020	750	417	D	0.556	411	D	0.548
SUNRISE BLVD	OLEANDER AVE to 7TH ST	708	3,900	2017	1,540	243	C	0.352	282	C	0.409
SUNRISE BLVD	7TH ST to US 1	708	3,900	2017	1,710	243	C	0.316	282	C	0.366
TIFFANY AVE	US 1 to HILLMOOR DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	HILLMOOR DR to VILLAGE GREEN DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	VILLAGE GREEN DR to LENNARD RD	320	4,666	2017	2,100	242	C	0.120	261	C	0.130
TORINO PKWY	CASHMERE BLVD to CALIFORNIA BLVD	709	7,800	2018	630	404	C	0.673	443	C	0.738
TORINO PKWY	CALIFORNIA BLVD to EAST TORINO PKWY	238	4,314	2018	630	255	C	0.425	223	C	0.372
TRADITION PKWY	COMMUNITY BLVD to VILLAGE PKWY	711	8,367	2018	1,710	996	D	0.582	1,144	D	0.669
TRADITION PKWY	VILLAGE PKWY to W OF I-95	712	36,500	2019	3,170	2,021	C	0.654	1,924	C	0.623
TULIP BLVD	DARWIN BLVD to PORT ST LUCIE BLVD	713	8,200	2019	790	524	D	0.663	456	D	0.577
TULIP BLVD	PORT ST LUCIE BLVD to PAAR DR	714	9,133	2018	790	639	D	0.809	493	D	0.624
TULIP BLVD	PAAR DR to DARWIN BLVD	714	9,133	2018	790	639	D	0.809	493	D	0.624
TURNPIKE FEEDER RD	TURNPIKE FEEDER RD SB RAMP to US 1	940078	4,989	2015	660	653	C	0.989	653	C	0.989
TURNPIKE FEEDER RD	INDIAN PINES BLVD to TURNPIKE FEEDER RD SB R...	940269	10,253	2017	870	676	C	0.777	620	C	0.713
TURNPIKE FEEDER RD	INDRIO RD to INDIAN PINES BLVD	940745	12,876	2017	870	696	C	0.800	732	C	0.841
US 1	MARTIN C.L. to LENNARD RD	945071	41,817	2017	4,240	1,904	C	0.457	2,239	C	0.537
US 1	LENNARD RD to PORT ST LUCIE BLVD	945071	41,817	2017	4,040	1,904	C	0.480	2,239	C	0.564
US 1	PORT ST LUCIE BLVD to JENNINGS RD	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545
US 1	JENNINGS RD to TIFFANY AVE	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545

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US 1	TIFFANY AVE to WALTON RD	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545
US 1	WALTON RD to VILLAGE GREEN DR	945150	43,634	2017	3,020	2,364	C	0.804	2,119	C	0.721
US 1	VILLAGE GREEN DR to SPANISH LAKES BLVD	940265	47,369	2017	3,170	2,516	C	0.814	2,356	C	0.762
US 1	SPANISH LAKES BLVD to PRIMA VISTA BLVD	940265	47,369	2017	3,170	2,516	C	0.814	2,356	C	0.762
US 1	PRIMA VISTA BLVD to RIO MAR DR	940264	36,624	2017	3,170	1,694	C	0.548	1,667	C	0.539
US 1	RIO MAR DR to KITTERMAN RD	940266	30,753	2017	3,170	1,503	C	0.486	1,361	C	0.440
US 1	KITTERMAN RD to S OF SAEGER AVE	940266	30,753	2017	3,020	1,503	C	0.511	1,361	C	0.463
US 1	S OF SAEGER AVE to EASY ST	940266	30,753	2017	3,170	1,503	C	0.486	1,361	C	0.440
US 1	EASY ST to MIDWAY RD	945156	29,579	2017	3,170	1,379	C	0.446	1,340	C	0.434
US 1	MIDWAY RD to WEATHERBEE RD	940012	27,675	2017	2,100	1,300	C	0.647	1,316	C	0.655
US 1	WEATHERBEE RD to FARMER'S MARKET RD	940012	27,675	2017	2,000	1,300	C	0.681	1,316	C	0.689
US 1	FARMER'S MARKET RD to EDWARDS RD	940012	27,675	2017	2,000	1,300	C	0.681	1,316	C	0.689
US 1	EDWARDS RD to SAVANNAH RD	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	GARDENIA AVE to VIRGINIA AVE	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	SAVANNAH RD to GARDENIA AVE	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	VIRGINIA AVE to OHIO AVE	945003	23,845	2017	2,000	1,148	C	0.601	1,157	C	0.606
US 1	OHIO AVE to GEORGIA AVE	945003	23,845	2017	1,630	1,148	D	0.704	1,157	D	0.710
US 1	GEORGIA AVE to DELAWARE AVE	945008	21,107	2017	1,630	1,088	D	0.667	1,040	D	0.638
US 1	DELAWARE AVE to CITRUS AVE	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	CITRUS AVE to ORANGE AVE	940118	20,283	2017	1,630	1,009	D	0.619	910	D	0.558
US 1	ORANGE AVE to AVENUE A	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AVENUE A to AE BACKUS AVE	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AE BACKUS AVE to AVENUE D	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AVENUE D to SR A1A SOUTH	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	SR A1A SOUTH to AVENUE H	715	33,500	2020	2,100	1,766	C	0.879	1,742	C	0.867

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**



Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIO RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIO RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

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St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
VILLAGE PKWY	WESTCLIFFE LN to CROSSROADS PKWY	720	12,000	2019	1,540	640	C	0.928	634	C	0.919
WALTON RD	US 1 to VILLAGE GREEN DR	330	15,156	2019	1,710	915	D	0.535	841	D	0.492
WALTON RD	VILLAGE GREEN DR to LENNARD RD	328	13,000	2019	1,710	690	C	0.896	684	C	0.888
WALTON RD	LENNARD RD to GREEN RIVER PKWY	326	9,382	2018	880	569	C	0.686	627	C	0.755
WALTON RD	GREEN RIVER PKWY to INDIAN RIVER DR	324	5,402	2018	630	416	C	0.693	430	C	0.717
WESTCLIFFE LN	TREMONTE AVE to VILLAGE PKWY	722	6,267	2018	1,470	439	C	0.665	338	C	0.512
WEATHERBEE RD	OLEANDER AVE to US 1	721	3,574	2019	750	265	C	0.716	242	C	0.654
WEATHERBEE RD	US 1 to MIDWAY RD	158	6,300	2020	750	431	D	0.575	461	D	0.615
WESTMORELAND BLVD	MORNINGSIDE BLVD to PORT ST LUCIE BLVD	339	13,000	2019	920	685	C	0.787	729	C	0.838
WESTMORELAND BLVD	MARTIN C.L. to MORNINGSIDE BLVD	245	9,700	2019	920	540	C	0.621	598	C	0.687

Countywide Performance

Weighted V/C = **0.69**

% VMT below Standard = **8.04%**

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
* **Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

MIDWAY ROAD FROM GLADES CUT OFF ROAD TO SELVITZ ROAD - RESERVE

4385431 Non-SIS



Project Description: FUNDING ACTION
Extra Description: 2019 TPO PRIORITY #2 RESERVE FOR FM 231440-3
Lead Agency: MANAGED BY FDOT
From: GLADES CUT OFF ROAD
Length: 0
To: SELVITZ ROAD
Phase Group: CONSTRUCTION

Phase	Fund Code	2020	2021	2022	2023	2024	Total
CST	SA	0	0	0	0	1,000,000	1,000,000
CST	SU	0	0	0	0	1,000,000	1,000,000
						2,000,000	**2,000,000**

A-21

Prior Year Cost: 0
Future Year Cost: 0
Total Project Cost: 2,000,000
LRTP: Page 6-5

Notes

I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT MIDWAY ROAD
4397541 SIS



Project Description: INTERCHANGE - ADD LANES
Extra Description: MIDWAY ROAD AT I-95 NB & SB OFF-RAMP INTERSECTION SHORT TERM IMPROVEMENTS; A)ADD SECOND LEFT TURN LANES TO BOTH NB AND SB OFF-RAMPS
Lead Agency: MANAGED BY FDOT **From:** OFF-RAMPS
Length: 0.775 **To:** MIDWAY RD
Phase Group: PRELIMINARY ENGINEERING, RAILROAD & UTILITIES, CONSTRUCTION, ENVIRONMENTAL

Phase	Fund Code	2020	2021	2022	2023	2024	Total
PE	DIH	20,000	0	0	0	0	20,000
PE	DS	230,000	0	0	0	0	230,000
RRU	DS	10,000	0	0	0	0	10,000
CST	DIH	0	0	57,472	0	0	57,472
CST	DS	0	0	1,468,717	0	0	1,468,717
ENV	DS	10,000	30,000	0	0	0	40,000
		270,000	**30,000**	**1,526,189**			**1,826,189**

A-22
Prior Year Cost: 0
Future Year Cost: 0
Total Project Cost: 1,826,189
LRTP: Page 6-2

Notes

I-95 @ ST LUCIE WEST BLVD
4353371 SIS



A-23

Prior Year Cost: 1,196,654
Future Year Cost: 0
Total Project Cost: 17,818,063
LRTP: Page 6-2

Project Description: INTERCHANGE - ADD LANES
Extra Description: 2017 TPO PRIORITY #5 FROM COMMERCE CENTER DRIVE TO PEACOCK BLVD., WIDENING OF ROADWAY TO ACCOMMODATE THREE EB LANES AND TWO WB LANES ACROSS THE BRIDGE OVER I-95 AND BUILD A NEW EB BRIDGE. WIDENING THE SOUTHBOUND OFF RAMP INTERSECTION TO PROVIDE TWO LEFT TURN LANES AND ONE RIGHT TURN LANE. WIDENING THE...
Lead Agency: MANAGED BY FDOT **From:** SR-9/I-95
Length: 1.814 **To:** ST LUCIE WEST BLVD
Phase Group: PRELIMINARY ENGINEERING, RAILROAD & UTILITIES, CONSTRUCTION, CONTRACT INCENTIVES, ENVIRONMENTAL

Phase	Fund Code	2020	2021	2022	2023	2024	Total
RRU	DDR	0	400,000	0	0	0	400,000
CST	LF	0	0	3,100,000	0	0	3,100,000
CST	DDR	0	0	10,153,103	0	0	10,153,103
CST	DIH	0	0	108,786	0	0	108,786
CST	TRIP	0	0	2,113,636	0	0	2,113,636
CST	TRWR	0	0	565,884	0	0	565,884
INC	DDR	0	0	150,000	0	0	150,000
ENV	DDR	30,000	0	0	0	0	30,000
		30,000	**400,000**	**16,191,409**			**16,621,409**

Notes

I-95 FROM MARTIN/ST. LUCIE COUNTY LINE TO OKEECHOBEE ROAD
4226816 SIS



Project Description: PD&E/EMO STUDY
Lead Agency: MANAGED BY FDOT
Length: 15.499
Phase Group: P D & E

From: MARTIN/ST. LUCIE COUNTY LINE
To: OKEECHOBEE ROAD

Phase	Fund Code	2020	2021	2022	2023	2024	Total
PDE	ACNP	0	0	0	0	550,000	550,000
						550,000	**550,000**

Prior Year Cost: 2,536,059
Future Year Cost: 2,110,000
Total Project Cost: 11,992,052
LRTP: Page 7-1

A-24

Notes

APPENDIX B

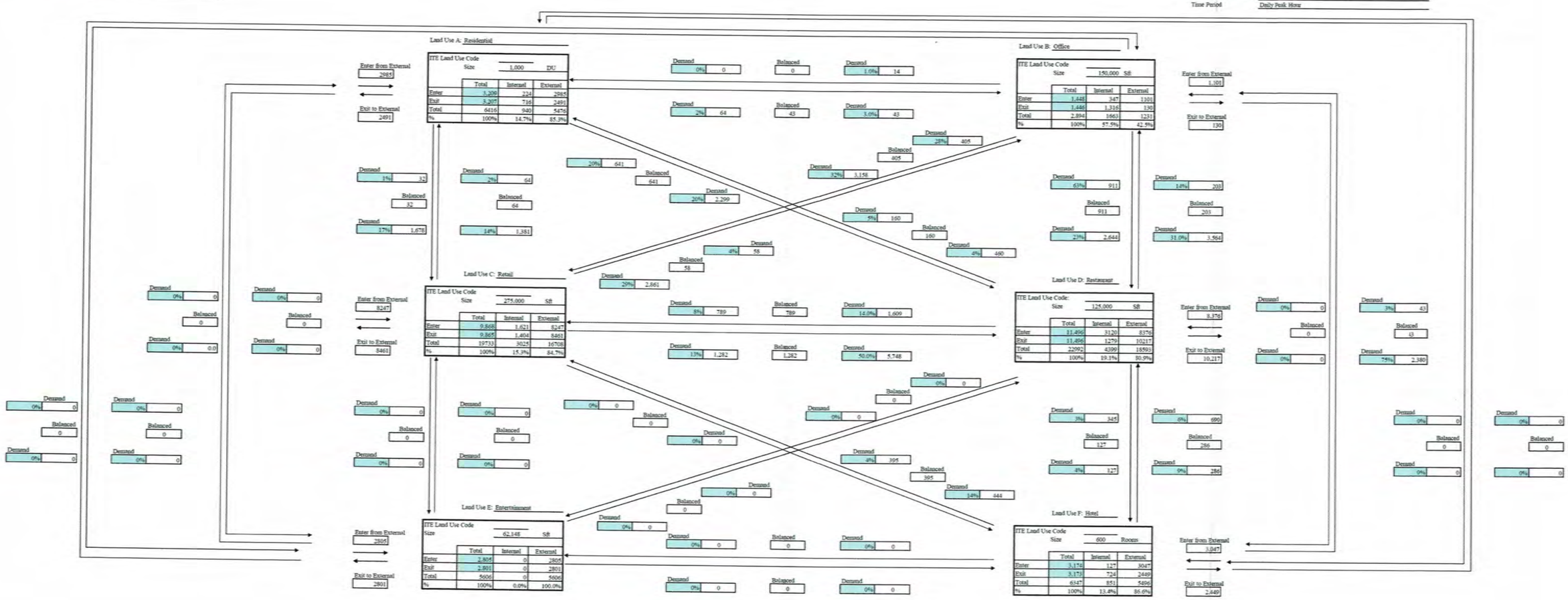
AM and PM Trip Generation
Proposed Future Land Use

Attachment B: Daily Internal Traffic

PROJECT
TRIP INTERNALIZATION - Daily

Analyst: James Kemp
Date: Feb-20

Name of Devlpt: Willow Lakes
Time Period: Daily Peak Hour



Net External Trips for Multi-Use Development

	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	2985		1101		8247		8376		2805		3,047		26561	
Exit	2491		130		8461		10217		2801		2,449		26549	
Total	5476		1231		16708		18593		5606		5496		53110	
Single-Use Trip Gen Estimate	6416		2894		19733		22992		5606		6347		63988	Internal Capture
														17.0%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

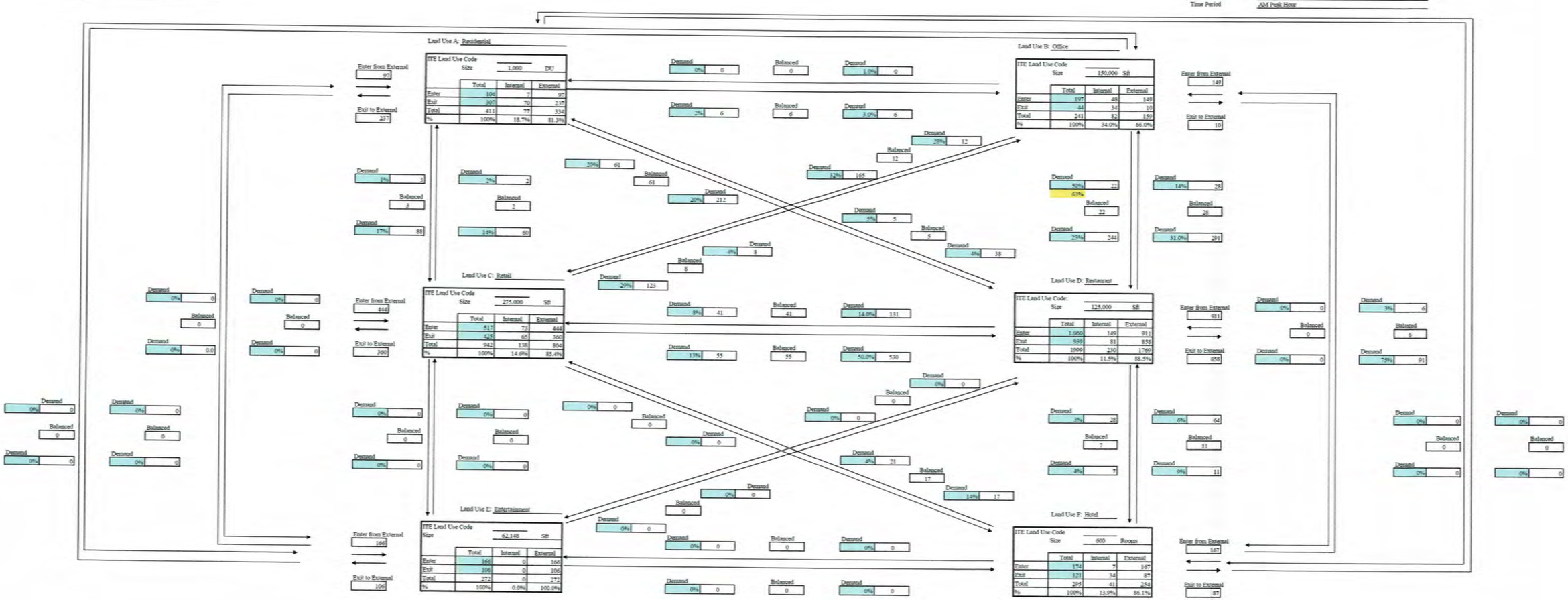
X% Denotes % Used
X% Denotes ITE Value if different from % Used
Balanced Denotes Internal Trips Computed

Attachment B: AM Internal Traffic - Phase 1

PROJECT
TRIP INTERNALIZATION - AM

Analyst: James Kemp
Date: Feb-20

Name of Devlpt: Willow Lakes
Time Period: AM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	97		149		444		911		166		167		1934	
Exit	237		10		360		858		106		87		1658	Internal
Total	334		159		804		1769		272		254		3592	Capture
Single-Use Trip Gen Estimate	411		241		942		1999		272		295		4160	13.7%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

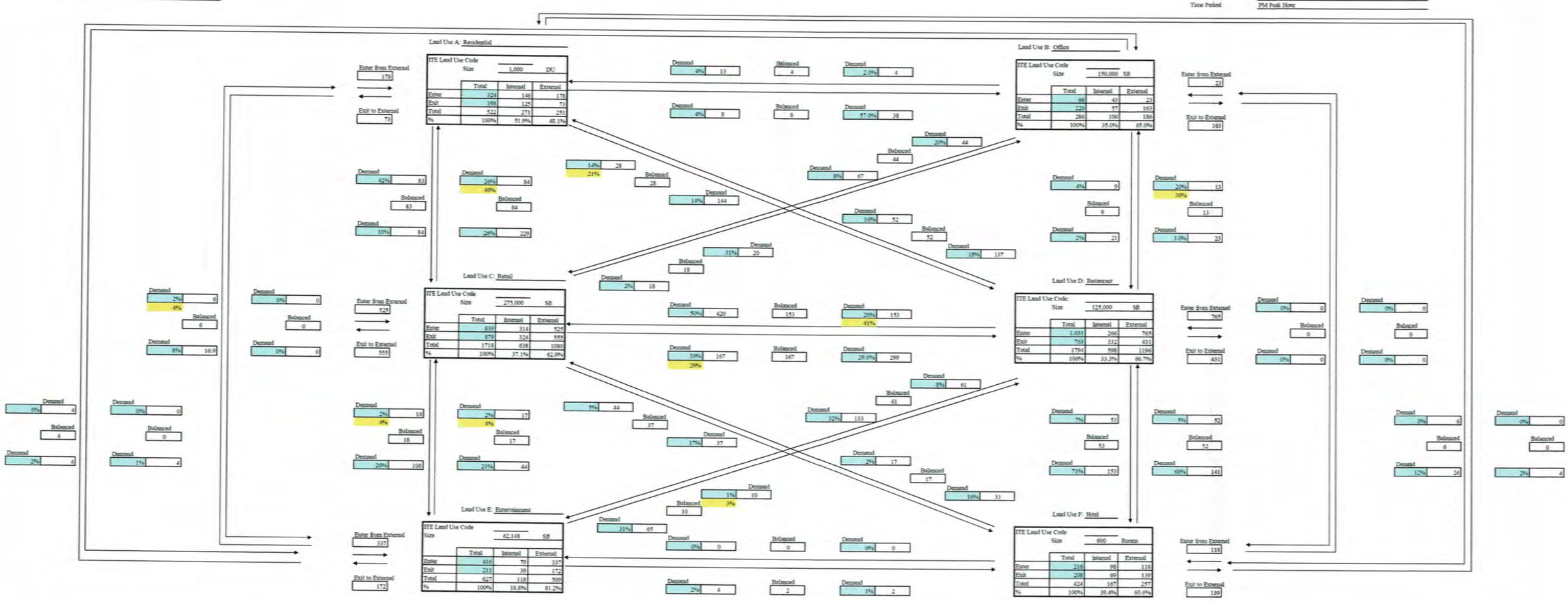
X%	Denotes % Used
X%	Denotes ITE Value if different from % Used
Balanced	Denotes Internal Trips Computed

Attachment B: PM Internal Traffic

PROJECT
TRIP INTERNALIZATION - PM

Analyst: James Kemp
Date: Feb-20

Name of Devlpt: Willow Lakes
Time Period: PM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	178		23		525		765		337		118		1946	
Exit	73		163		555		431		172		139		1533	Internal
Total	251		186		1080		1196		509		257		3479	Capture
Single-Use Trip Gen Estimate	522		286		1718		1794		627		424		5371	35.2%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

X% Denotes % Used
X% Denotes ITE Value if different from % Used
Balanced Denotes Internal Trips Computed

APPENDIX C

Model Assignment

Southern Assignment

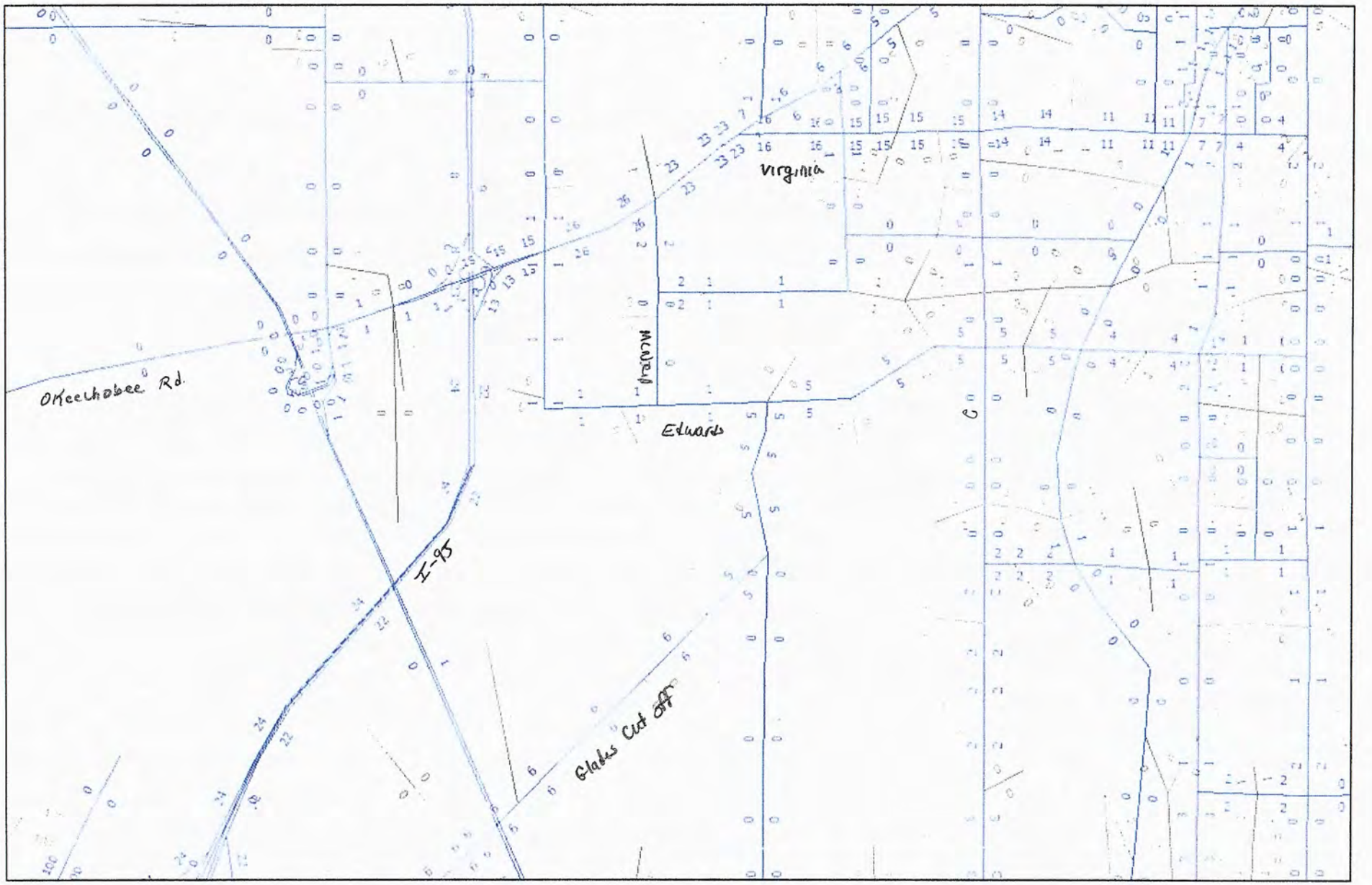


C-1

NO VAN

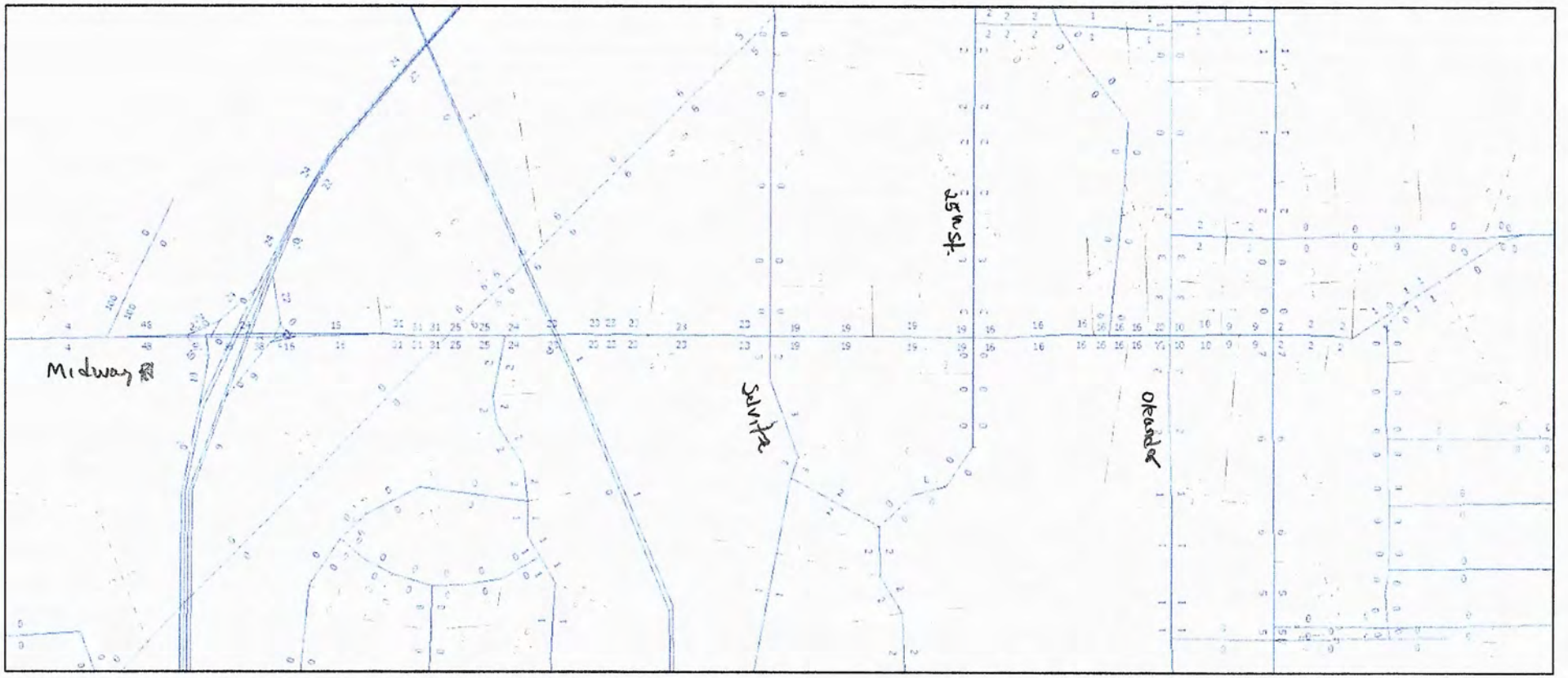
N/A

Northern Assignment



No VAM

Eastern Assignment

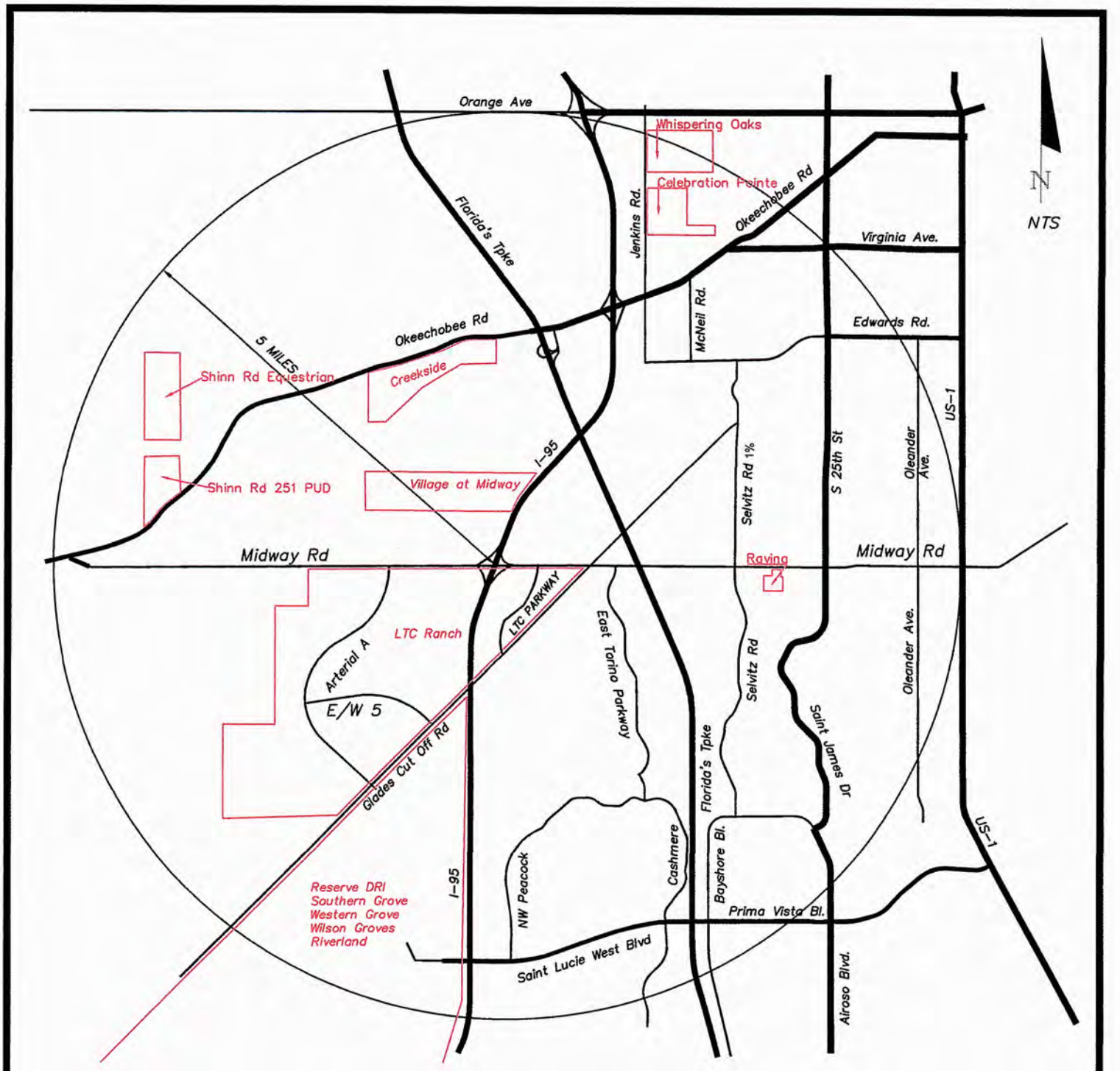


APPENDIX D

2035 Background Traffic Data

Other Projects

The Village at Midway
Whispering Oaks
Shinn Road
Rio Lago
Ravinia
Creekside
Western Annexation: Western Grove, Southern Grove, Riverland, Wilson Grove
Village of Sunset Lake
LTC Ranch



O'Rourke Engineering & Planning

O'ROURKE ENGINEERING & PLANNING

772-781-7918
969 SE Federal Highway Suite 402
Stuart, Florida 34994

Approved Project Locations

WILLOW LAKES

February 2020

| AM APPROVED PROJECTS | | | Southern Grove DRI | | | | | | Western Grove DRI | | | | | | Wilson Groves DRI | | | | | | Riverland DRI | | | | | | LTC Ranch | | | | | | Creekside | | | | | | Palm Breezes Club | | | | | | 10 Village of Sunset Lakes St. Lucie County | | | | | | 36 Rio Lago St. Lucie County | | | | | | 44 Celebration Pointe City of Fort Pierce | | | | | | Shinn Road 251 PUD | | | | | | Shinn Road Equestrian Estates | | | | | | Sedona Ria Frontera | | | | | | 37 Whispering Oaks | | | | | | Village at Midway | | | | | | Ravinia | | | | | | St. Lucie Commerce Center | | | | | | SUM Directional N/E | | | SUM Directional S/W | | | Directional N/E | | Directional S/W | |
|---|---|---

| PM APPROVED PROJECTS | | | Southern Grove DRI | | | | Western Grove DRI | | | | Wilson Groves DRI | | | | Riverland DRI | | | | LTC Ranch | | | | Creekside | | | | Palm Breezes Club | | | | 10 Village of Sunset Lakes St. Lucie County | | | | 36 Rio Lago St. Lucie County | | | | 44 Celebration Pointe City of Fort Pierce | | | | Shinn Road 251 PUD | | | | Shinn Road Equestrian Estates | | | | Sedona fka Frontera | | | | 37 Whispering Oaks | | | | Village at Midway | | | | Ravinia | | | | St. Lucie Commerce Center | | | | SJM Directional N/E | | SJM Directional S/W | | Directional N/E | | Directional S/W | |
|---|---|---

Table 2a Trip Generation - Daily

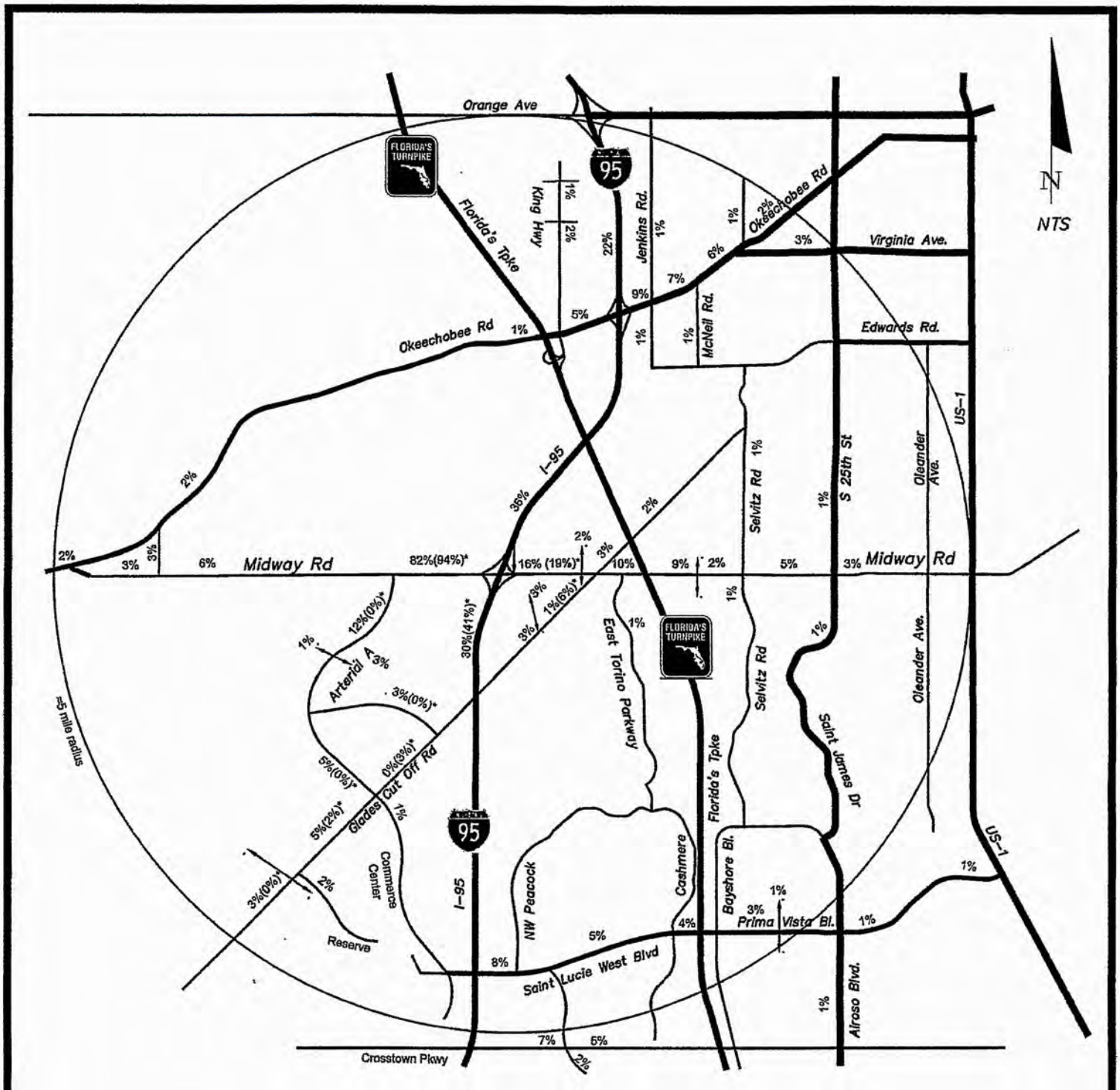
Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split		Gross Trips			Internalization Trips (2)				Net External Trips			Pass-by Trips		Net New Trips		
				% In	% Out	In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Warehouse	150	1,500,000 SF	Ln(T)=0.86ln(x)+2.24	50%	50%	2,531	2,530	5,061	144	131	275	5.4%	2,387	2,399	4,786	479	10.0%	2,154	2,153	4,307
Apartment	220	650 DU	T=6.06(x)+123.56	50%	50%	2,032	2,031	4,063	793	709	1,502	37.0%	1,239	1,322	2,561	0	0.0%	1,281	1,280	2,561
Shopping Center	820	160,000 SF	Ln(T)=0.65ln(x)+5.83	50%	50%	4,609	4,609	9,218	706	792	1,498	16.3%	3,903	3,817	7,720	2625	34.00%	2,548	2,547	5,095
General Light Industrial	110	1,200,000 SF	T=7.47(x)-101.92	50%	50%	4,431	4,431	8,862	253	229	482	5.4%	4,178	4,202	8,380	838	10.0%	3,771	3,771	7,542
Convience Store	851	5,000 SF	T=737.99(x)	50%	50%	1,845	1,845	3,690	282	317	599	16.2%	1,563	1,528	3,091	1886	61.0%	603	602	1,205
Fast Food Restaurant	934	10,000 SF	T=496.12(x)	50%	50%	2,481	2,480	4,961	508	508	1,016	20.5%	1,973	1,972	3,945	1933	49.0%	1,006	1,006	2,012
High Turnover Restaurant	932	25,000 SF	T=127.15(x)	50%	50%	1,590	1,589	3,179	326	326	652	20.5%	1,264	1,263	2,527	1087	43.0%	720	720	1,440
TOTAL						19,519	19,515	39,034	3,012	3,012	6,024	15.4%	16,507	16,503	33,010	8848	26.8%	12,083	12,079	24,162

Table 2b Trip Generation - AM

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split		Gross Trips			Internalization Trips (2)				Net External Trips			Pass-by Trips		Net New Trips		
				% In	% Out	In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Warehouse	150	1,500,000 SF	Ln(T)=0.55Ln(x)+1.88	79%	21%	289	77	366	24	22	46	12.6%	265	55	320	32	10.0%	228	60	288
Apartment	220	650 DU	T=0.49Ln(x)+3.73	20%	80%	64	258	322	4	60	64	19.9%	60	198	258	0	0.0%	52	206	258
Shopping Center	820	160,000 SF	Ln(T)=0.61Ln(x)+2.24	62%	38%	129	79	208	35	28	63	30.3%	94	51	145	49	34.00%	60	36	96
General Light Industrial	110	1,200,000 SF	T=1.18(x)-89.28	88%	12%	1,168	159	1,327	86	78	164	12.4%	1,082	81	1,163	116	10.0%	921	126	1,047
Convience Store	851	5,000 SF	T=67.03(x)	50%	50%	168	167	335	46	59	105	31.3%	122	108	230	140	61.0%	45	45	90
Fast Food Restaurant	934	10,000 SF	T=45.42(x)	51%	49%	232	222	454	82	49	131	28.9%	150	173	323	158	49.0%	84	81	165
High Turnover Restaurant	932	25,000 SF	T=10.81(x)	55%	45%	149	121	270	48	29	77	28.5%	101	92	193	83	43.0%	61	49	110
TOTAL						2,199	1,083	3,282	325	325	650	19.8%	1,874	758	2,632	578	22.0%	1,451	603	2,054

Table 2c Trip Generation - PM

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split		Gross Trips			Internalization Trips (2)				Net External Trips			Pass-by Trips		Net New Trips		
				% In	% Out	In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Warehouse	150	1,500,000 SF	Ln(T)=0.64Ln(x)+1.14	25%	75%	84	253	337	4	10	14	4.2%	80	243	323	32	10.0%	73	218	291
Apartment	220	650 DU	T=0.55Ln(x)+17.65	65%	35%	244	131	375	86	61	147	39.2%	158	70	228	0	0.0%	148	80	228
Shopping Center	820	160,000 SF	Ln(T)=0.67Ln(x)+3.31	48%	52%	394	427	821	100	88	188	22.9%	294	339	633	215	34.00%	201	217	418
General Light Industrial	110	1,200,000 SF	T=1.43(x)-157.36	12%	88%	187	1,372	1,559	20	48	68	4.4%	167	1,324	1,491	149	10.0%	161	1,181	1,342
Convience Store	851	5,000 SF	T=52.41(x)	51%	49%	134	128	262	34	27	61	23.3%	100	101	201	123	61.0%	40	38	78
Fast Food Restaurant	934	10,000 SF	T=32.65(x)	52%	48%	170	157	327	58	63	121	37.0%	112	94	206	101	49.0%	55	50	105
High Turnover Restaurant	932	25,000 SF	T=9.85(x)	55%	45%	135	111	246	43	48	91	37.0%	92	63	155	67	43.0%	48	40	88
TOTAL						1,348	2,579	3,927	345	345	690	17.6%	1,003	2,234	3,237	687	21.2%	726	1,824	2,550



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Traffic Engineering, Transportation Planning
772-781-7918
969 SE Federal Highway Suite 402
Stuart, Florida 34994

LEGEND

xx% - Assignment w/ Arterial A

(xx%)* - Assignment w/out Arterial A

FIGURE 4

PROJECT % ASSIGNMENT

THE VILLAGE AT MIDWAY

JUNE 2015

PROJECT TRAFFIC

To estimate traffic generated by the Whispering Oaks Development, the ITE Trip Generation, 7th Edition trip rates were applied. These calculations provide an estimate of the typical generation. Trip generation for the project is shown in Table 2.

TABLE 2: Project Trip Generation

Land Use	Units	ITE Land Use Code	Daily Trip Equation (Trips)	PM Peak Hour Trip Equation (Trips)	%In/ %Out (trips in/trip out)
Town Home	231	230	Ln(T)= 0.85Ln(x) + 2.55(1308)	Ln(T) = 0.82Ln(x)+ 0.32 (119)	67%/ 33% (80/39)
Single Family	145	210	Ln(T)=0.92Ln(x)+2.71 (1464)	Ln(T)=0.90Ln(x)+ 0.53 (150)	63/37 (94/55)
	376		2772	269	174/ 95

The PM peak hour total trips would be 269 with 174 entering and 95 exiting the project.

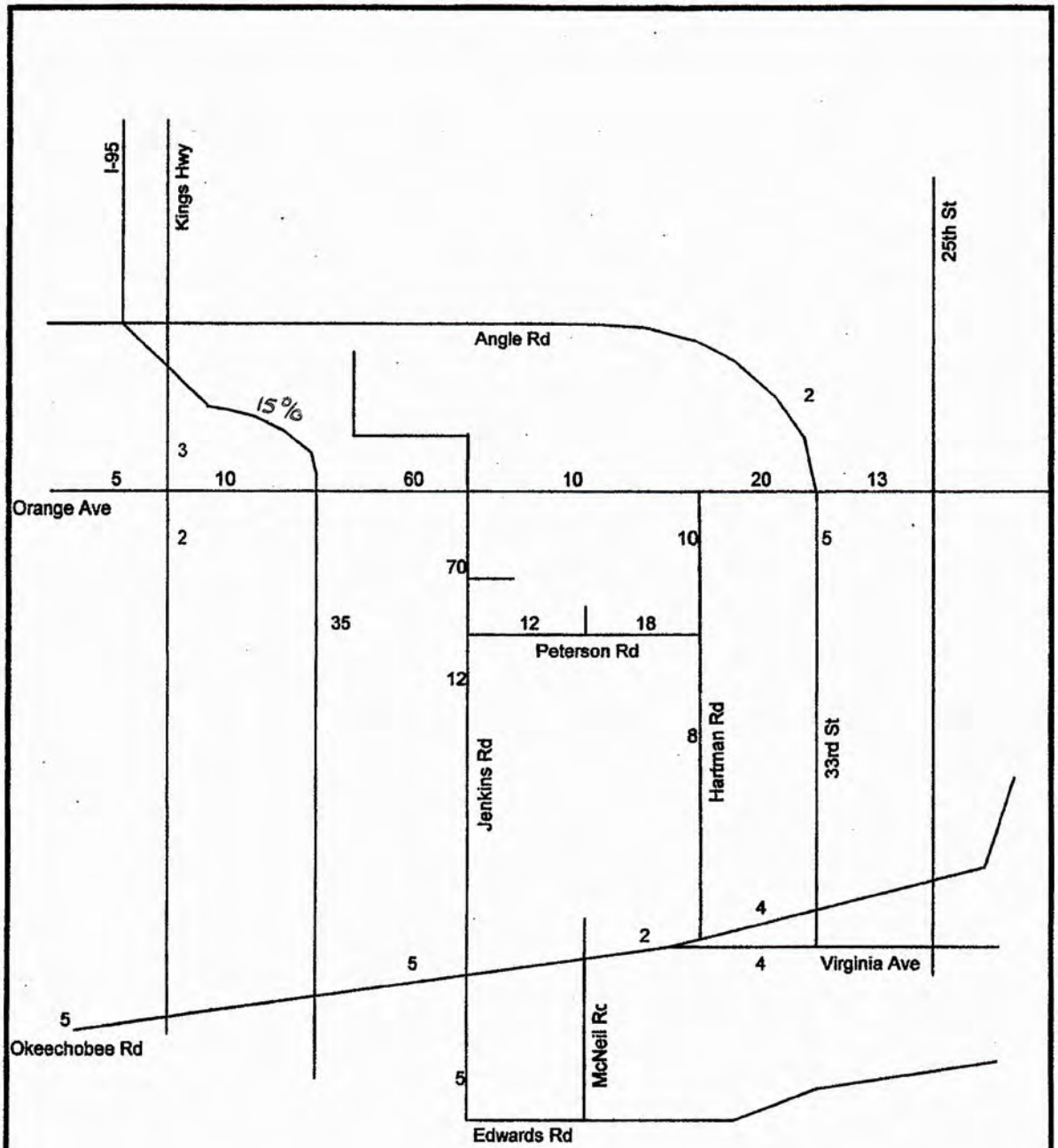
PROJECT DISTRIBUTION / ASSIGNMENT/ IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network.

Distribution -- The project general geographic traffic distribution was estimated as 15% north, 45% south, 25% east and 15% west.

Assignment -- This general distribution led to an assignment of external, new trips to the roadway network. Figure 2 illustrates the trip assignment and resultant trips.

The project provided a connection to Peterson Road to enhance the distribution of traffic. Additionally, the project will provide right-of-way on Jenkins Road for possible future widening.



North
not to scale

Figure 2

Project Percent Assignment

Whispering Oaks

Exhibit 2
Shinn Road 251 PUD
Trip Generation

DAILY

Land Use	Intensity	Trip Generation Rate (1)	Total Trips	Internal Trips		External Trips	Pass-by Trips (1)		New External Trips
High Turnover Restaurant	10,000 SF	127.15 /1,000 SF	1,272	25	2.0%	1,247	312	25.0%	935
Retail	85,000 SF	Ln(T)=0.65Ln(X)+5.83	6,110	61	1.0%	6,049	1,512	25.0%	4,537
Residential-Single Family	50 DUs	Ln (T) = 0.92Ln (X)+2.71	550	110	20.0%	440	-	0.0%	440
Drive-In Bank	5,000 SF	246.49 /1000 SF	1,232	37	3.0%	1,195	359	30.0%	836
TOTALS			9,164	233	2.5%	8,931	2,183		6,748

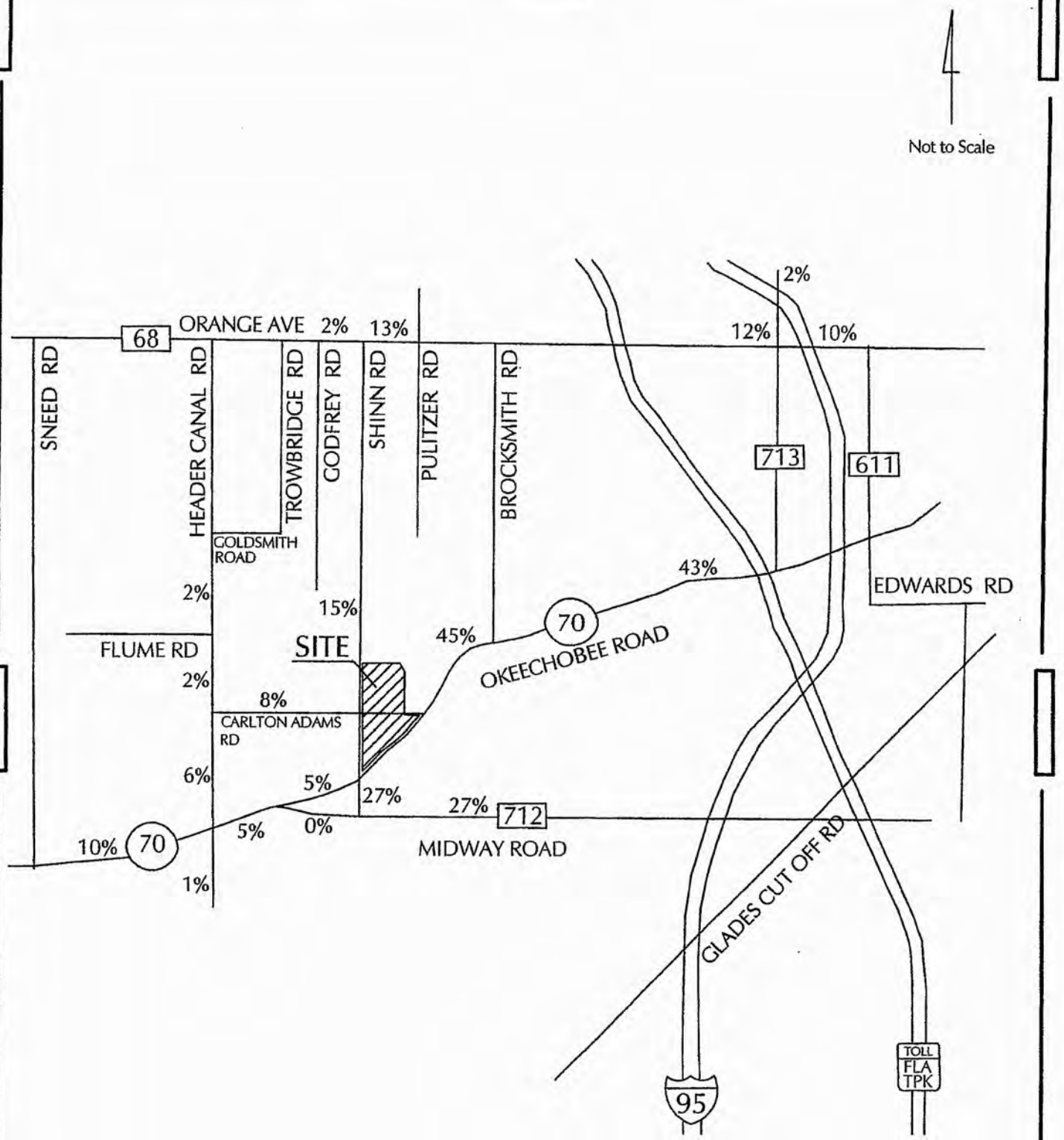
AM PEAK HOUR

Land Use	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips		External Trips			Pass-by Trips (1)		New Trips		
			In	Out	Trips			In	Out	Trips			In	Out	Trips
High Turnover Restaurant	10,000 SF	11.52 /1,000 SF (52/48)	60	55	115	5	4.0%	57	53	110	28	25.0%	42	40	82
Retail	85,000 SF	1.03 /1,000 SF (61/39)	54	34	88	3	3.0%	52	33	85	21	25.0%	39	25	64
Residential-Single Family	50 DUs	T=0.70(X)+9.43(25/75)	11	33	44	9	20.0%	9	26	35	-	0.0%	9	26	35
Drive-In Bank	5,000 SF	12.34 /1,000 SF (56/44)	35	27	62	3	5.0%	33	26	59	18	30.0%	23	18	41
TOTALS			160	149	309	20	6.5%	151	138	289	67		113	109	222

PM PEAK HOUR

Land Use	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips		External Trips			Pass-by Trips (1)		New Trips		
			In	Out	Trips			In	Out	Trips			In	Out	Trips
High Turnover Restaurant	10,000 SF	10.92 /1,000 SF (61/39)	66	43	109	5	5.0%	63	41	104	26	25.0%	46	31	78
Retail	85,000 SF	Ln (T) = 0.660Ln (X)+3.40(48/52)	270	292	562	6	1.0%	267	289	556	139	25.0%	200	217	417
Residential-Single Family	50 DUs	Ln (T) = 0.90Ln (X)+0.53(63/37)	36	21	57	11	20.0%	29	17	46	-	0.0%	29	17	46
Drive-In Bank	5,000 SF	45.74 /1,000 SF (50/50)	115	115	229	9	4.0%	109	110	220	66	30.0%	76	76	154
TOTALS			487	471	957	31	3.2%	468	457	926	231		351	341	695

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition.



SHINN ROAD 251 PUD	EXHIBIT 3A PROJECT TRAFFIC DISTRIBUTION	PTC

Exhibit 3
Shinn Road Equestrian Estates
Trip Generation

DAILY

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips
Residential Single Family	210	106 Dus	Ln (T) = 0.920Ln (X)+2.71	1,097
TOTAL		106 Dus		1,097

AM PEAK HOUR

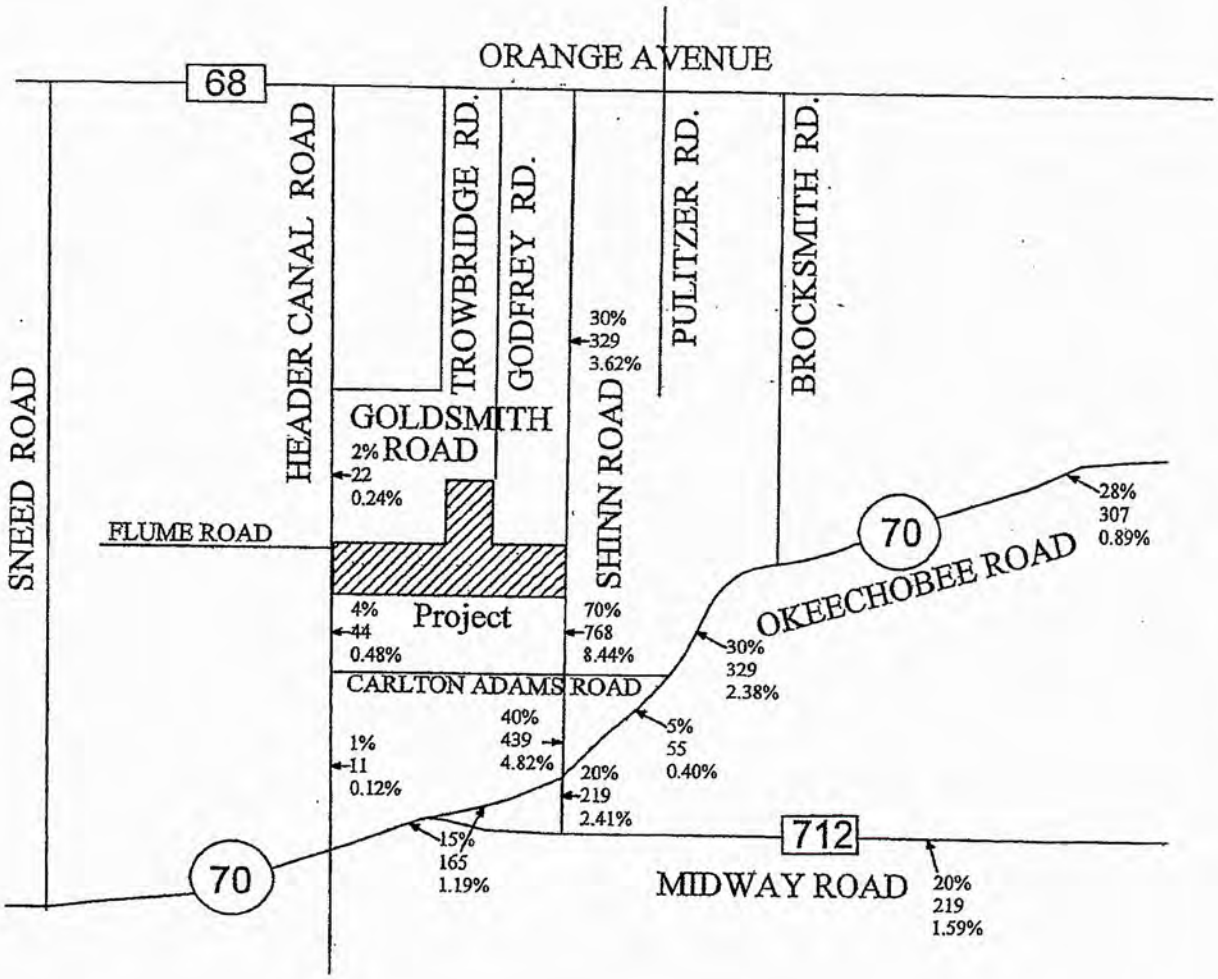
Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential Single Family	210	106 Dus	T=0.700(X)+9.43(25/75)	21	63	84
TOTALS				21	63	84

PM PEAK HOUR

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential Single Family	210	106 Dus	Ln (T) = 0.90Ln (X)+0.53(63/37)	71	42	113
TOTALS				71	42	113

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition.

Not to Scale



LEGEND

20% - PROJECT TRAFFIC DISTRIBUTION
219 - DAILY TRAFFIC ASSIGNMENT
2.41% - PROJECT TRAFFIC IMPACT

04-04-06
05-031 S

Shinn Road
Equestrian Estates

EXHIBIT 4

TRAFFIC DISTRIBUTION

PTC

EXISTING TRAFFIC CONDITIONS

The Peak Season, Average Daily Traffic Volume for the roadways in the study area were obtained from the Spring 2005, St. Lucie Urban Area Metropolitan Planning Organization traffic counts. These counts include the committed trips for the roadway link as published in the Spring 2005 Counts, and are summarized below:

Roadway	Segment	LOS AADT	Current AADT	Current AADT plus committed	LOS
Keen Road	north of project entrance	14,600	2,400	2,400	B
	south of project entrance	14,600	2,400	2,400	B
St. Lucie Boulevard	west of Keen Road	16,900	6,300	6,300	C
	east of Keen Road	16,900	6,300	6,300	C
Angle Road	west of Keen Road	16,900	10,600	10,600	C
	east of Keen Road	16,900	10,600	10,600	C
	west of No. Kings Highway	14,600	n/a	n/a	
No. Kings Highway	north of Angle Road	16,900	14,700	14,700	D
	south of Angle Road	16,900	14,000	14,000	D

TRIP GENERATION

The Trip Generation for the proposed Rio Lago Subdivision project was developed by utilizing the "Institute of Transportation Engineers Trip Generation Manual, Seventh Edition" which established the Trip Generation Rates for the proposed facility.

In developing the Trip Generation Rates, the ITE Manual was utilized for the AADT volumes. The following Tables have been provided to depict the Trip Generation Rates for this development. Table I depicts the 24-Hour Daily Volumes.

The Land Use Codes 210 "Single Family Detached Housing".

TABLE I
Average Daily Trip Generation Volume

Land Use	Dwelling Units (Each/SF)	Rate	Volume (Trips/Day)
ITE Code 210	72	$Ln(T) = 0.92Ln(X) + 2.71$ $T = [e^{(0.92Ln(72)+2.71)}]$	768
		Total New Trips per Day =	768

TABLE II
P.M. Peak Hour Trip Generation Volume

Land Use	Dwelling Units (Each/SF)	Rate	Volume (Trips/Day)
ITE Code 210	72	$Ln(T) = 0.90Ln(X) + 0.53$ $T = [e^{(0.90Ln(72)+0.53)}]$	79
		Total New Trips per Day =	79

TRIP DISTRIBUTION

The Trip Distribution from the site onto the surrounding network was derived based upon a review of the surrounding destinations for shopping, school and work; local knowledge and experience in evaluating traffic and travel patterns in the area and an assessment of the condition of the existing Transportation Network in the area. A summary of the Major Trip Assignments was estimated and a graphical representation follows on the next page.

A summary of the additional trips created by the project are as follows:

TABLE 1
Trip Distribution – Average Daily Trips

Roadway	Segment	project trip assignments as % of total trips generated	project trips as number of total
Keen Road	north of project entrance	20%	154
	south of project entrance	80%	614
St. Lucie Boulevard	west of Keen Road	5%	38
	east of Keen Road	15%	115
Angle Road	west of Keen Road	30%	230
	east of Keen Road	50%	384
	west of No. Kings Highway	1%	8
No. Kings Highway	north of Angle Road	7%	54
	south of Angle Road	22%	169

Exhibit 2
Ravinia
Trip Generation

DAILY

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips
Residential-Single	210	150 DUs	9.52 /DU	1,428
TOTAL		150 DUs		1,428

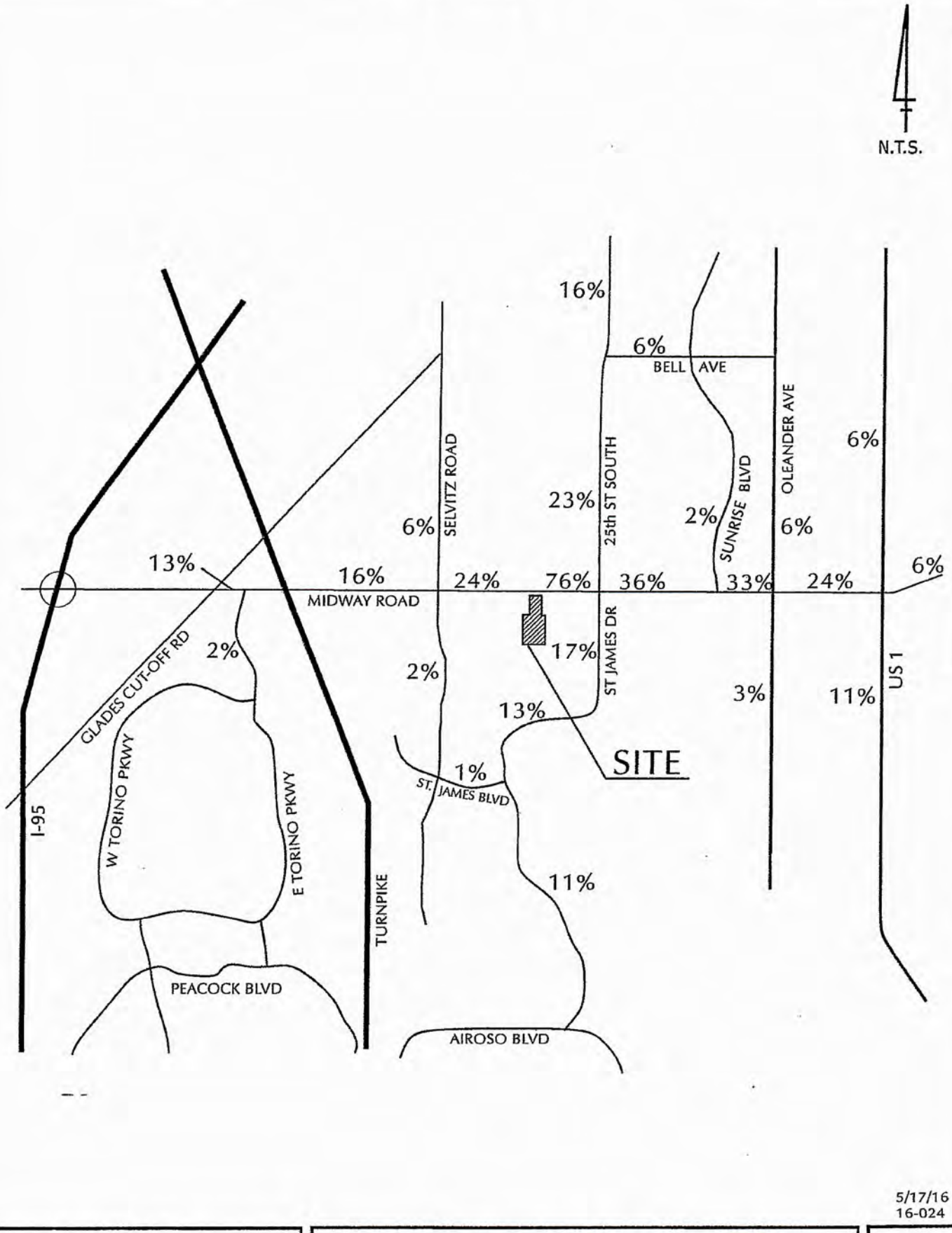
AM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential-Single	210	150 DUs	0.75 /DU (25/75)	28	85	113
TOTAL		150 DUs		28	85	113

PM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential-Single	210	150 DUs	1.00 /DU (63/37)	95	55	150
TOTAL		150 DUs		95	55	150

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition.



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16-024

RAVINIA	EXHIBIT 3A PROJECT TRAFFIC DISTRIBUTION	PTC

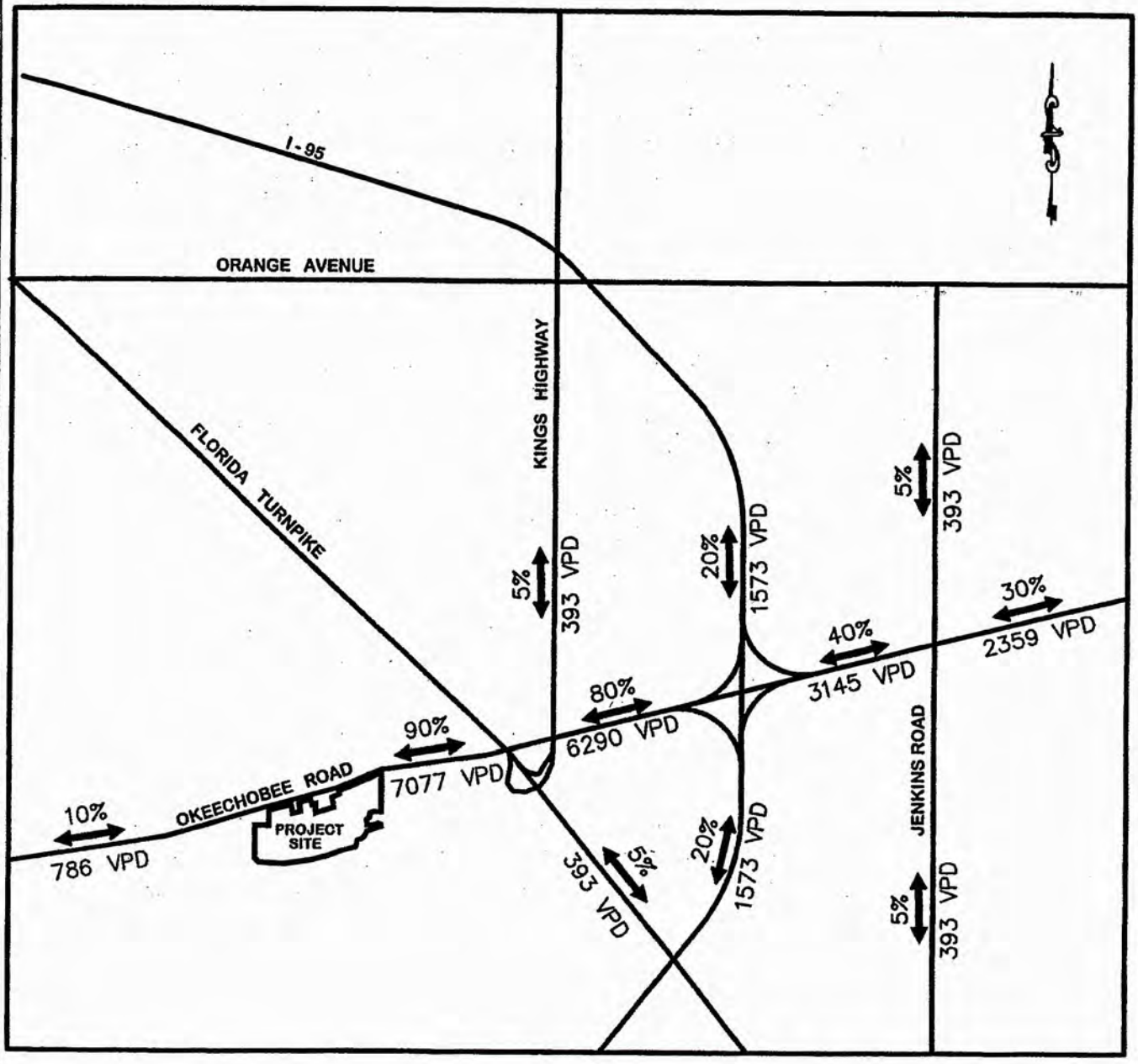

FIGURE 2

CULPEPPER & TERPENING, INC.
CONSULTING ENGINEERS
&
LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
AUTHORIZATION NO. 4286

CREEKSIDE

TRIP DISTRIBUTION

JOB NO: 03-126	SCALE: N.T.S.
FILE: 03-126 EXH.DWG	DATE: 3-15-04

PROPOSED TRAFFIC GENERATION:

The additional traffic, which will be generated by the development of the Creekside PUD, is based upon the number and type of residential dwellings. The Institute of Transportation Engineer's Trip Generation Manual, Sixth Edition, Code 210 "Residential Single Family", Code 230 "Residential Condominium/Townhouse", Code 412 "County Park, and Code 814 Specialty Retail Center" was utilized to develop the trip generation rates. The trip generation of the facility for both the Average Daily Traffic and PM Peak Hour Traffic is calculated as follows:

Table No. 1
Average Daily Traffic

Land Use	ITE Code	Units/Size	ADT Rates	ADT
Single Family	210	443 DU	.920Ln(443)+2.707	4,077 VPD
Town Houses	230	397 DU	.850Ln(397)+2.564	2,101 VPD
County Park	412	3 Acres	2.28 Trips/Acre	7 VPD
Commercial	814	30,000 SF	40.67/1,000 SF*	1,678 VPD
			Total	7,863 VPD

* The commercial component of the development will result in pass-by and internal capture for the home to shopping portion of the standard trips generated. This percentage of pass-by and internal capture is typically estimated to be 25% for shopping centers. The trip generation rate for the commercial component is therefore reduced by 25% prior to application to the existing roadway network.

Table No. 2
PM Peak Hour Traffic

Land Use	Units/Size	Peak Hour Avg. Rate	Directional Distribution		Directional Volumes	
			Enter	Exit	Enter	Exit
Single Family	443 DU	.901Ln(443)+.527	64%	36%	263vph	147vph
Town Houses	397 DU	.827Ln(397)+.309	67%	33%	129vph	63vph
County Park	3 Acres	.06/Acre	41%	59%	0 vpd	0 vpd
Commercial	55,000 SF	2.59/1,000 SF*	43%	57%	46vph	61vph
			Totals		438vph	271vph

Table 3
Western Annexation Study
Cumulative Daily External Trips

Phase / DRI	Western Grove	Southern Grove	Riverland	Wilson Groves	TOTAL
Phase 1 (2010)	7,963	13,292	32,007	25,883	**79,145**
Phase 2 (2015)	26,969	66,403	110,332	61,492	**265,196**
Phase 3 (2020)	46,620	117,010	134,672	83,762	**382,064**
Phase 4 (2025)	46,975	163,121	140,083	96,188	**446,367**

Table 4
Western Annexation Study
Cumulative External P.M. Peak Hour Trips

Phase / DRI	Western Grove			Southern Grove			Riverland			Wilson Groves		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Phase 1 (2010)	2,493	2,044	4,537	5,123	6,697	11,820	6,942	6,519	13,461	4,166	4,484	8,650
Phase 2 (2015)	1,480	1,138	2,618	3,157	3,469	6,626	5,944	4,991	10,935	3,261	2,986	6,247
Phase 3 (2020)	497	300	797	734	555	1,289	1,728	1,491	3,219	1,380	1,193	2,573
Phase 4 (2025)	2,510	2,061	4,571	6,990	10,071	17,061	7,095	7,277	14,372	4,543	5,639	10,182

Table 4
Western Annexation Study
Cumulative External P.M. Peak Hour Trips – Grand Totals

Phase	In	Out	Total
Phase 1 (2010)	**18,724**	**19,744**	**38,468**
Phase 2 (2015)	**13,842**	**12,584**	**26,426**
Phase 3 (2020)	**4,339**	**3,539**	**7,878**
Phase 4 (2025)	**21,138**	**25,048**	**46,186**

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic NB/EB	Project Traffic SB/WB	Service Volume	Impact NB/EB	Impact SB/WB	Significant Impact NB/EB	Significant Impact SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	3.0%	4,894	210	302	810	26%	37%	Y	Y
	Becker Rd. to E/W 4 (Paar Dr.)	2	0.7%	1,142	49	70	810	6%	9%	Y	Y
	E/W 4 (Paar Dr.) to E/W 3	2	0.8%	1,305	56	81	810	7%	10%	Y	Y
	E/W 3 to E/W 1	2	1.0%	1,631	101	70	810	12%	9%	Y	Y
	E/W 1 to Gatlin Blvd.	2	0.5%	816	50	35	810	6%	4%	Y	N
	Gatlin Blvd. to West Virginia Blvd.	2	0.1%	163	10	7	810	1%	1%	N	N
	West Virginia Blvd. to Glades Cut-Off Rd.	2	0.4%	652	40	28	810	5%	3%	N	N
Glades Cut-Off Rd.	Range Line / CR 609 to N/S A	2	0.0%	0	0	0	760	0%	0%	N	N
	N/S A to Commerce Center Pkwy.	2	0.1%	163	10	7	760	1%	1%	N	N
	Commerce Center Pkwy to Midway Rd.	2	0.1%	163	10	7	760	1%	1%	N	N
	N. of Midway Rd.	2	0.2%	326	20	14	760	3%	2%	N	N
N/S A	Gatlin Blvd. to E/W XY	4	0.8%	1,305	81	56	1860	4%	3%	N	N
	E/W XY to West Virginia Blvd.	4	0.5%	816	50	35	1860	3%	2%	N	N
	West Virginia Blvd. to Glades Cut-Off Rd.	2	0.1%	163	10	7	860	1%	1%	N	N
Community Blvd.	Gatlin Blvd. to E/W XY	2	1.1%	1,794	111	77	860	13%	9%	Y	Y
Commerce Center Pkwy.	West Virginia Blvd. to St. Lucie West Blvd.	4	1.9%	3,099	191	133	1860	10%	7%	Y	Y
	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.8%	1,305	81	56	860	9%	7%	Y	Y
Village Pkwy.	Gatlin Blvd. to E/W XY	6	10.7%	17,454	1,078	748	2790	39%	27%	Y	Y
	E/W XY to West Virginia Blvd.	4	5.8%	9,461	584	405	1860	31%	22%	Y	Y
I-95	Martin Hwy. to Becker Rd.	6	13.9%	22,674	972	1,400	5410	18%	26%	Y	Y
	Becker Rd. to E/W 3	6	10.0%	16,312	699	1,007	5410	13%	19%	Y	Y
	E/W 3 to Gatlin Blvd.	6	8.3%	13,539	580	836	5410	11%	15%	Y	Y
	Gatlin Blvd. to West Virginia Blvd.	6	11.2%	18,270	1,128	783	5410	21%	14%	Y	Y
	West Virginia Blvd. to St. Lucie West Blvd.	6	7.9%	12,887	796	552	5410	15%	10%	Y	Y
	St. Lucie West Blvd. to Midway Rd.	6	4.7%	7,667	473	329	5410	9%	6%	Y	Y
NW Peacock Blvd. Loop	St. Lucie West Blvd. to California Blvd.	2	1.2%	1,957	121	84	760	16%	11%	Y	Y
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Rosser Blvd.	Becker Rd. to Paar Dr.	4	2.0%	3,262	140	201	1620	9%	12%	Y	Y
	Paar Dr. to E/W 3	4	1.7%	2,773	119	171	1620	7%	11%	Y	Y
	E/W 3 to Gatlin Blvd.	4	4.2%	6,851	294	423	1620	18%	26%	Y	Y
W. Torino Pkwy.	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N
E Torino Pkwy.	NW Peacock Blvd. to Midway Rd.	2	0.2%	326	20	14	760	3%	2%	N	N
S Torino Pkwy.	California Blvd. to Cashmere Blvd.	2	0.2%	326	20	14	760	3%	2%	N	N
California Blvd.	Del Rio Blvd. to Savonna Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N
	Savonna Blvd. to Del Rio Blvd.	2	0.4%	652	28	40	760	4%	5%	N	Y
	Del Rio Blvd. to West Virginia Blvd.	2	0.2%	326	14	20	760	2%	3%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	4	1.0%	1,631	101	70	1620	6%	4%	Y	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.2%	326	20	14	760	3%	2%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.2%	326	20	14	760	3%	2%	N	N
Savona Blvd.	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.7%	1,142	49	70	760	6%	9%	Y	Y
	Gatlin Blvd. to California Blvd.	2	1.4%	2,284	141	98	760	19%	13%	Y	Y
Cashmere Blvd.	Del Rio Blvd. to West Virginia Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.4%	652	40	28	760	5%	4%	Y	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	California Blvd. to Cashmere Blvd.	2	0.3%	489	30	21	760	4%	3%	N	N
	Cashmere Blvd. to California Blvd.	2	0.1%	163	10	7	760	1%	1%	N	N
Port St. Lucie Blvd.	Martin Hwy. to Becker Rd.	4	2.3%	3,752	161	232	1860	9%	12%	Y	Y
	Becker Rd. to Paar Dr.	2	2.8%	4,567	196	282	890	22%	32%	Y	Y
	Paar Dr. to Darwin Blvd.	2	3.2%	5,220	224	322	890	25%	36%	Y	Y
	Darwin Blvd. to Gatlin Blvd.	4	2.7%	4,404	189	272	1860	10%	15%	Y	Y
	Gatlin Blvd. to Del Rio Blvd.	6	8.2%	13,376	826	573	2790	30%	21%	Y	Y
	Del Rio Blvd. to Bayshore Blvd.	6	6.5%	10,603	655	454	2790	23%	16%	Y	Y
	Bayshore Blvd. to Airoso Blvd.	6	4.9%	7,993	493	343	2790	18%	12%	Y	Y
	Airoso Blvd. to Southbend Blvd./Floresta Dr.	6	3.7%	6,035	373	259	2790	13%	9%	Y	Y
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	3.3%	5,383	332	231	2790	12%	8%	Y	Y
	Midport Rd. to US-1	6	2.0%	3,262	201	140	2790	7%	5%	Y	Y
	US-1 to Lennard Rd.	4	0.9%	1,468	91	63	1860	5%	3%	N	N
Darwin Blvd.	Becker Rd. to Port St. Lucie Blvd.	2	0.1%	163	7	10	760	1%	1%	N	N
Turnpike	Martin Hwy. to Becker Rd.	4	1.2%	1,957	84	121	2940	3%	4%	N	N
	Becker Rd. to Port St. Lucie Blvd.	4	0.0%	0	0	0	2940	0%	0%	N	N
	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N
Bayshore Blvd.	Oakridge Blvd. to Port. St. Lucie Blvd.	4	0.8%	1,305	56	81	1860	3%	4%	N	N
	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.3%	489	30	21	1860	2%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.5%	816	50	35	1860	3%	2%	N	N
	Prima Vista Blvd. to Selvitz Rd.	2	0.6%	979	60	42	760	8%	6%	Y	Y
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
Selvitz Rd.	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N
	E/W 5 to Midway Rd.	2	0.1%	163	10	7	760	1%	1%	N	N
	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N
St. James Dr.	Bayshore Blvd. to E/W 5	4	0.4%	652	40	28	1860	2%	2%	N	N
	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N
25 th Street	N. of Midway	4	0.1%	163	10	7	1860	1%	0%	N	N
Airoso Blvd.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.7%	1,142	70	49	1860	4%	3%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	1.2%	1,957	121	84	1860	7%	5%	Y	N
	Prima Vista Blvd. to Floresta Dr.	4	0.3%	489	30	21	1860	2%	1%	N	N
	Floresta Dr. to St. James Blvd.	4	0.3%	489	30	21	1860	2%	1%	N	N
Southbend Blvd.	Becker Rd. to Oakridge Blvd.	2	0.9%	1,468	63	91	760	8%	12%	Y	Y
	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Floresta Dr.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.4%	652	40	28	1860	2%	2%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.2%	326	20	14	1860	1%	1%	N	N
	Prima Vista Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
Oleander Ave.	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Midport Rd.	Port St. Lucie Blvd. to Lyngate Dr.	4	0.5%	816	50	35	1860	3%	2%	N	N
	Lyngate Dr. to West Virginia Dr.	4	0.1%	163	10	7	1860	1%	0%	N	N
High Meadows Ave.	CR 714 to Martin Downs Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N
	Martin Downs Blvd. to Mapp Rd/Murphy Rd.	2	0.1%	163	7	10	760	1%	1%	N	N
Gilson Rd.	Mapp Rd/Murphy Rd. to Becker Rd.	2	1.0%	1,631	70	101	760	9%	13%	Y	Y

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
US-1	Lennard Rd. to Port St. Lucie Blvd.	8	1.8%	2,936	181	126	3540	5%	4%	Y	N
	Port. St. Lucie Blvd. to Tiffany Dr./Lyngate Dr.	6	0.5%	816	50	35	2790	2%	1%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	0.5%	816	50	35	2790	2%	1%	N	N
	West Virginia Dr. to Village Green Dr.	6	0.2%	326	20	14	2790	1%	1%	N	N
	Village Green Dr. to Savannah Club Blvd.	6	0.2%	326	20	14	2790	1%	1%	N	N
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.1%	163	10	7	2790	0%	0%	N	N
	St. Lucie West Blvd. to E/W 6	6	0.1%	163	10	7	2790	0%	0%	N	N
	E/W 6 to Midway Rd.	6	0.1%	163	10	7	2790	0%	0%	N	N
	N. of Midway	6	0.1%	163	10	7	2790	0%	0%	N	N
Lennard Rd.	US-1 to Tiffany Dr./Lyngate Dr.	4	0.2%	326	20	14	1620	1%	1%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.3%	489	30	21	1620	2%	1%	N	N
	West Virginia Dr. to Savannah Club Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
SR 714/Martin Hwy	Range Line Rd. to I-95	2	0.2%	326	14	20	860	2%	2%	N	N
	I-95 to Port St. Lucie Blvd.	2	2.0%	3,262	201	140	860	23%	16%	Y	Y
	Port St. Lucie Blvd. to Turnpike	4	1.2%	1,957	121	84	1860	7%	5%	Y	N
SR 714/Martin Downs Blvd.	N. of FL. TPK Entrance to High Meadows Ave.	4	0.6%	979	60	42	1860	3%	2%	N	N
	E. of High Meadows Ave.	4	0.5%	816	50	35	1860	3%	2%	N	N
CR 714	Turnpike to High Meadows Ave.	4	2.0%	3,262	201	140	1620	12%	9%	Y	Y
	High Meadows Ave. to Berry Ave.	4	1.7%	2,773	171	119	1620	11%	7%	Y	Y
Mapp Rd/Murphy Rd.	E. of High Meadows Ave.	2	0.3%	489	30	21	760	4%	3%	N	N
Becker Rd.	I-95 to Rosser Rd.	6	8.8%	14,355	886	615	2790	32%	22%	Y	Y
	Rosser Blvd. to Savona Blvd.	4	4.4%	7,177	443	308	1860	24%	17%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	4.3%	7,014	433	301	1860	23%	16%	Y	Y
	Port St. Lucie Blvd. to Darwin Blvd.	4	4.8%	7,830	483	336	1860	26%	18%	Y	Y
	Darwin Blvd. to Turnpike	4	4.9%	7,993	493	343	1860	27%	18%	Y	Y
	Turnpike to Southbend Blvd.	4	3.1%	5,057	312	217	1860	17%	12%	Y	Y
	Southbend Blvd. to Gilson Rd.	4	1.0%	1,631	101	70	1860	5%	4%	Y	N
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	7.5%	12,234	755	524	1860	41%	28%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	6.6%	10,766	665	461	1860	36%	25%	Y	Y
Gatlin Blvd.	Range Line Rd. to N/S A	4	2.6%	4,241	182	262	1860	10%	14%	Y	Y
	N/S A to Community Blvd.	4	6.3%	10,277	440	634	1860	24%	34%	Y	Y
	Community Blvd. to Village Pkwy.	4	3.3%	5,383	231	332	1860	12%	18%	Y	Y
	Village Pkwy. to I-95	8	12.2%	19,901	1,229	853	3540	35%	24%	Y	Y
	I-95 to Rosser Blvd.	6	9.9%	16,149	997	692	2790	36%	25%	Y	Y
	Rosser Blvd. to Savona Blvd.	6	7.9%	12,887	796	552	2790	29%	20%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	6	9.9%	16,149	997	692	2790	36%	25%	Y	Y
Westmoreland Blvd.	Port St. Lucie Blvd. to US-1	2	0.6%	979	60	42	760	8%	6%	Y	Y
Oakridge Blvd.	Bayshore Blvd. to Southbend Blvd.	4	0.8%	1,305	81	56	1620	5%	3%	Y	N
Tiffany Dr/Lyngate Dr.	Midport Rd. to US-1	2	0.3%	489	30	21	760	4%	3%	N	N
	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
E/W XY	N/S A to Community Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Commerce Center Parkway to Village Pkwy.	4	0.7%	1,142	49	70	1620	3%	4%	N	N

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	0.8%	1,305	56	81	1620	3%	5%	N	Y
	N/S A to Village Pkwy.	4	4.1%	6,688	287	413	1860	15%	22%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	2.9%	4,731	292	203	2790	10%	7%	Y	Y
	Commerce Center Pkwy. to I-95	6	2.1%	3,426	211	147	2790	8%	5%	Y	Y
	I-95 to California Blvd.	6	4.3%	7,014	433	301	2790	16%	11%	Y	Y
	California Blvd. to Cashmere Rd.	6	3.2%	5,220	322	224	2790	12%	8%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	3.2%	5,220	322	224	2790	12%	8%	Y	Y
	Bayshore Blvd. to Airoso Blvd.	6	2.7%	4,404	272	189	2790	10%	7%	Y	Y
	Airoso Blvd. to Floresta Dr.	6	1.6%	2,610	161	112	2790	6%	4%	Y	N
	Floresta Dr. to Midport Rd.	6	1.4%	2,284	141	98	2790	5%	4%	Y	N
	Midport Rd. to US-1	6	1.3%	2,121	131	91	2790	5%	3%	N	N
	US-1 to Villagegreen Dr.	4	0.4%	652	40	28	1860	2%	2%	N	N
	Villagegreen Dr. to Lennard Rd.	4	0.4%	652	40	28	1860	2%	2%	N	N
St. Lucie W/ Prima Vista Blvd.	Commerce Center Pkwy. to I-95	4	1.9%	3,099	133	191	1800	7%	11%	Y	Y
	I-95 to NW Peacock Blvd.	6	3.0%	4,894	302	210	2710	11%	8%	Y	Y
	NW Peacock Blvd. to California Blvd.	6	1.2%	1,957	121	84	2710	4%	3%	N	N
	California Blvd. to Cashmere Rd.	4	1.4%	2,284	141	98	1800	8%	5%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	0.6%	979	60	42	2710	2%	2%	N	N
	Bayshore Blvd. to Airoso Blvd.	4	0.3%	489	30	21	1800	2%	1%	N	N
	Airoso Blvd. to Floresta Dr.	4	0.9%	1,468	91	63	1800	5%	4%	Y	N
	Floresta Dr. to US-1	4	0.5%	816	50	35	1800	3%	2%	N	N
Midway Rd.	W. of Eleven Mile Rd.	2	0.2%	326	14	20	860	2%	2%	N	N
	Eleven Mile Rd. to Commerce Center Pkwy.	2	0.3%	489	21	30	860	2%	3%	N	N
	Commerce Center Pkwy. to I-95	2	0.2%	326	14	20	860	2%	2%	N	N
	I-95 to Glades Cut-Off Rd.	4	1.0%	1,631	70	101	1860	4%	5%	N	Y
	Glades Cut-Off Rd to Torino Pkwy	4	0.8%	1,305	81	56	1860	4%	3%	N	N
	Torino Pkwy to Selvitz Rd.	4	0.8%	1,305	81	56	1860	4%	3%	N	N
	Selvitz Rd. to S. 25th St.	4	0.6%	979	60	42	1860	3%	2%	N	N
	S. 25th St. to Sunrise Blvd.	2	0.5%	816	50	35	860	6%	4%	Y	N
	Sunrise Blvd. to Oleander Ave.	2	0.5%	816	50	35	860	6%	4%	Y	N
	Oleander Ave. to US-1	2	0.3%	489	30	21	860	3%	2%	N	N
	E. of US-1	2	0.2%	326	20	14	860	2%	2%	N	N

External Traffic	
IN	6,990
OUT	10,071
Daily	163,121

TABLE TR-4

Western Annexation Study
2025 Western Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic NB/EB	Project Traffic SB/WB	Service Volume	Impact NB/EB	Impact SB/WB	Significant Impact NB/EB	Significant Impact SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	16.8%	7,892	768	422	1620	47%	26%	Y	Y
	N/S A to Village Pkwy.	4	25.4%	11,932	1,161	638	1860	62%	34%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	18.6%	8,737	467	850	2790	17%	30%	Y	Y
	Commerce Center Pkwy. to I-95	6	17.2%	8,080	432	786	2790	15%	28%	Y	Y
	I-95 to California Blvd.	6	11.5%	5,402	289	526	2790	10%	19%	Y	Y
	California Blvd. to Cashmere Rd.	6	8.9%	4,181	223	407	2790	8%	15%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	8.4%	3,946	211	384	2790	8%	14%	Y	Y
	Bayshore Blvd. to Airoso Blvd.	6	7.0%	3,288	176	320	2790	6%	11%	Y	Y
	Airoso Blvd. to Floresta Dr.	6	5.1%	2,396	128	233	2790	5%	8%	N	Y
	Floresta Dr. to Midport Rd.	6	4.7%	2,208	118	215	2790	4%	8%	N	Y
	Midport Rd. to US-1	6	4.3%	2,020	108	197	2790	4%	7%	N	Y
	US-1 to Villagegreen Dr.	4	1.2%	564	30	55	1860	2%	3%	N	N
	Villagegreen Dr. to Lennard Rd.	4	1.1%	517	28	50	1860	2%	3%	N	N
St. Lucie W/ Prima Vista Blvd.	Commerce Center Pkwy. to I-95	4	1.5%	705	38	69	1800	2%	4%	N	N
	I-95 to NW Peacock Blvd.	6	3.0%	1,409	75	137	2710	3%	5%	N	Y
	NW Peacock Blvd. to California Blvd.	6	1.0%	470	25	46	2710	1%	2%	N	N
	California Blvd. to Cashmere Rd.	4	1.2%	564	30	55	1800	2%	3%	N	N
	Cashmere Rd. to Bayshore Blvd.	6	0.4%	188	10	18	2710	0%	1%	N	N
	Bayshore Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1800	0%	0%	N	N
	Airoso Blvd. to Floresta Dr.	4	0.9%	423	23	41	1800	1%	2%	N	N
	Floresta Dr. to US-1	4	0.5%	235	13	23	1800	1%	1%	N	N
Midway Rd.	W. of Eleven Mile Rd.	2	0.4%	188	18	10	860	2%	1%	N	N
	Eleven Mile Rd. to Commerce Center Pkwy.	2	0.5%	235	23	13	860	3%	2%	N	N
	Commerce Center Pkwy. to I-95	2	0.0%	0	0	0	860	0%	0%	N	N
	I-95 to Glades Cut-Off Rd.	4	0.4%	188	18	10	1860	1%	1%	N	N
	Glades Cut-Off Rd to Torino Pkwy	4	1.0%	470	25	46	1860	1%	2%	N	N
	Torino Pkwy to Selvitz Rd.	4	1.0%	470	25	46	1860	1%	2%	N	N
	Selvitz Rd. to S. 25th St.	4	0.8%	376	20	37	1860	1%	2%	N	N
	S. 25th St. to Sunrise Blvd.	2	0.7%	329	18	32	860	2%	4%	N	N
	Sunrise Blvd. to Oleander Ave.	2	0.9%	423	23	41	860	3%	5%	N	N
	Oleander Ave. to US-1	2	0.4%	188	10	18	860	1%	2%	N	N
	E. of US-1	2	0.2%	94	5	9	860	1%	1%	N	N

External Traffic	
IN	4,571
OUT	2,510
Daily	46,975

TABLE TR-4

Western Annexation Study
2025 Western Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
US-1	Lennard Rd. to Port St. Lucie Blvd.	8	2.4%	1,127	60	110	3540	2%	3%	N	N
	Port. St. Lucie Blvd. to Tiffany Dr./Lyngate Dr.	6	2.6%	1,221	65	119	2790	2%	4%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	2.6%	1,221	65	119	2790	2%	4%	N	N
	West Virginia Dr. to Village Green Dr.	6	0.2%	94	5	9	2790	0%	0%	N	N
	Village Green Dr. to Savannah Club Blvd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	St. Lucie West Blvd. to E/W 6	6	0.1%	47	3	5	2790	0%	0%	N	N
	E/W 6 to Midway Rd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	N. of Midway	6	0.1%	47	3	5	2790	0%	0%	N	N
Lennard Rd.	US-1 to Tiffany Dr./Lyngate Dr.	4	0.1%	47	3	5	1620	0%	0%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.1%	47	3	5	1620	0%	0%	N	N
	West Virginia Dr. to Savannah Club Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
SR 714/Martin Hwy	Range Line Rd. to I-95	2	0.0%	0	0	0	860	0%	0%	N	N
	I-95 to Port St. Lucie Blvd.	2	1.8%	846	45	82	860	5%	10%	Y	Y
	Port St. Lucie Blvd. to Turnpike	4	0.8%	376	20	37	1860	1%	2%	N	N
SR 714/Martin Downs Blvd.	N. of FL. TPK Entrance to High Meadows Ave.	4	0.3%	141	8	14	1860	0%	1%	N	N
	E. of High Meadows Ave.	4	0.2%	94	5	9	1860	0%	0%	N	N
CR 714	Turnpike to High Meadows Ave.	4	1.1%	517	28	50	1620	2%	3%	N	N
	High Meadows Ave. to Berry Ave.	4	0.8%	376	20	37	1620	1%	2%	N	N
Mapp Rd/Murphy Rd.	E. of High Meadows Ave.	2	0.2%	94	5	9	760	1%	1%	N	N
Becker Rd.	I-95 to Rosser Rd.	6	1.4%	658	35	64	2790	1%	2%	N	N
	Rosser Blvd. to Savona Blvd.	4	1.1%	517	28	50	1860	2%	3%	N	N
	Savona Blvd. to Port St. Lucie Blvd.	4	1.1%	517	28	50	1860	2%	3%	N	N
	Port St. Lucie Blvd. to Darwin Blvd.	4	2.1%	986	53	96	1860	3%	5%	N	Y
	Darwin Blvd. to Turnpike	4	2.1%	986	53	96	1860	3%	5%	N	Y
	Turnpike to Southbend Blvd.	4	1.3%	611	33	59	1860	2%	3%	N	N
	Southbend Blvd. to Gilson Rd.	4	0.9%	423	23	41	1860	1%	2%	N	N
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	2.4%	1,127	60	110	1860	3%	6%	N	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	2.3%	1,080	58	105	1860	3%	6%	N	Y
Gatlin Blvd.	Range Line Rd. to N/S A	4	24.7%	11,603	1,129	620	1860	61%	33%	Y	Y
	N/S A to Community Blvd.	4	31.0%	14,562	778	1,417	1860	42%	76%	Y	Y
	Community Blvd. to Village Pkwy.	4	22.2%	10,428	557	1,015	1860	30%	55%	Y	Y
	Village Pkwy. to I-95	6	14.4%	6,764	361	658	3540	10%	19%	Y	Y
	I-95 to Rosser Blvd.	6	6.9%	3,241	173	315	2790	6%	11%	Y	Y
	Rosser Blvd. to Savona Blvd.	6	4.7%	2,208	118	215	2790	4%	8%	N	Y
	Savona Blvd. to Port St. Lucie Blvd.	6	3.7%	1,738	93	169	2790	3%	6%	N	Y
Westmoreland Blvd.	Port St. Lucie Blvd. to US-1	2	0.3%	141	8	14	760	1%	2%	N	N
Oakridge Blvd.	Bayshore Blvd. to Southbend Blvd.	4	0.7%	329	18	32	1620	1%	2%	N	N
Tiffany Dr/Lyngate Dr.	Midport Rd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
E/W XY	N/S A to Community Blvd.	2	4.9%	2,302	123	224	760	16%	29%	Y	Y
	Commerce Center Parkway to Village Pkwy.	4	2.5%	1,174	63	114	1620	4%	7%	N	Y

TABLE TR-4

Western Annexation Study

2025 Western Grove Significant Impact

External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	California Blvd. to Cashmere Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	Cashmere Blvd. to California Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
Port St. Lucie Blvd.	Martin Hwy. to Becker Rd.	4	1.2%	564	55	30	1860	3%	2%	N	N
	Becker Rd. to Paar Dr.	2	2.2%	1,033	101	55	890	11%	6%	Y	Y
	Paar Dr. to Darwin Blvd.	2	0.6%	282	27	15	890	3%	2%	N	N
	Darwin Blvd. to Gatlin Blvd.	4	0.7%	329	32	18	1860	2%	1%	N	N
	Gatlin Blvd. to Del Rio Blvd.	6	3.0%	1,409	137	75	2790	5%	3%	N	N
	Del Rio Blvd. to Bayshore Blvd.	6	2.3%	1,080	58	105	2790	2%	4%	N	N
	Bayshore Blvd. to Airoso Blvd.	6	1.6%	752	40	73	2790	1%	3%	N	N
	Airoso Blvd. to Southbend Blvd./Floresta Dr.	6	1.6%	752	40	73	2790	1%	3%	N	N
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	1.3%	611	33	59	2790	1%	2%	N	N
	Midport Rd. to US-1	6	0.9%	423	23	41	2790	1%	1%	N	N
	US-1 to Lennard Rd.	4	0.5%	235	13	23	1860	1%	1%	N	N
Darwin Blvd.	Becker Rd. to Port St. Lucie Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
Turnpike	Martin Hwy. to Becker Rd.	4	0.5%	235	23	13	2940	1%	0%	N	N
	Becker Rd. to Port St. Lucie Blvd.	4	0.0%	0	0	0	2940	0%	0%	N	N
	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N
Bayshore Blvd.	Oakridge Blvd. to Port. St. Lucie Blvd.	4	0.7%	329	32	18	1860	2%	1%	N	N
	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.6%	282	15	27	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.7%	329	18	32	1860	1%	2%	N	N
	Prima Vista Blvd. to Selvitz Rd.	2	0.5%	235	13	23	760	2%	3%	N	N
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
Selvitz Rd.	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N
	E/W 5 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N
St. James Dr.	Bayshore Blvd. to E/W 5	4	0.5%	235	13	23	1860	1%	1%	N	N
	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N
25 th Street	N. of Midway	4	0.0%	0	0	0	1860	0%	0%	N	N
Airoso Blvd.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.6%	282	15	27	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	1.3%	611	33	59	1860	2%	3%	N	N
	Prima Vista Blvd. to Floresta Dr.	4	0.5%	235	13	23	1860	1%	1%	N	N
	Floresta Dr. to St. James Blvd.	4	0.5%	235	13	23	1860	1%	1%	N	N
Southbend Blvd.	Becker Rd. to Oakridge Blvd.	2	0.7%	329	32	18	760	4%	2%	N	N
	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Floresta Dr.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.3%	141	8	14	1860	0%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.1%	47	3	5	1860	0%	0%	N	N
	Prima Vista Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
Oleander Ave.	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Midport Rd.	Port St. Lucie Blvd. to Lyngate Dr.	4	0.2%	94	5	9	1860	0%	0%	N	N
	Lyngate Dr. to West Virginia Dr.	4	0.2%	94	5	9	1860	0%	0%	N	N
High Meadows Ave.	CR 714 to Martin Downs Blvd.	2	0.3%	141	14	8	760	2%	1%	N	N
	Martin Downs Blvd. to Mapp Rd/Murphy Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Gilson Rd.	Mapp Rd/Murphy Rd. to Becker Rd.	2	0.6%	282	27	15	760	4%	2%	N	N

TABLE TR-4

Western Annexation Study

2025 Western Grove Significant Impact

External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	2.8%	1,315	128	70	810	16%	9%	Y	Y
	Becker Rd. to E/W 4 (Paar Dr.)	2	2.3%	1,080	105	58	810	13%	7%	Y	Y
	E/W 4 (Paar Dr.) to E/W 3	2	2.7%	1,268	123	68	810	15%	8%	Y	Y
	E/W 3 to E/W 1	2	3.3%	1,550	151	83	810	19%	10%	Y	Y
	E/W 1 to Gatlin Blvd.	2	3.6%	1,691	165	90	810	20%	11%	Y	Y
	Gatlin Blvd. to West Virginia Blvd.	2	0.5%	235	13	23	810	2%	3%	N	N
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.1%	517	50	28	810	6%	3%	Y	N
Glades Cut-Off Rd.	Range Line / CR 609 to N/S A	2	0.1%	47	3	5	760	0%	1%	N	N
	N/S A to Commerce Center Pkwy.	2	4.7%	2,208	118	215	760	16%	28%	Y	Y
	Commerce Center Pkwy to Midway Rd.	2	1.2%	564	30	55	760	4%	7%	N	Y
	N. of Midway Rd.	2	0.5%	235	13	23	760	2%	3%	N	N
N/S A	Gatlin Blvd. to E/W XY	4	16.0%	7,516	402	731	1860	22%	39%	Y	Y
	E/W XY to West Virginia Blvd.	4	13.5%	6,342	339	617	1860	18%	33%	Y	Y
	West Virginia Blvd. to Glades Cut-Off Rd.	2	4.7%	2,208	118	215	860	14%	25%	Y	Y
Community Blvd.	Gatlin Blvd. to E/W XY	2	0.9%	423	41	23	860	5%	3%	N	N
Commerce Center Pkwy.	West Virginia Blvd. to St. Lucie West Blvd.	4	1.4%	658	35	64	1860	2%	3%	N	N
	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.1%	47	3	5	860	0%	1%	N	N
Village Pkwy.	Gatlin Blvd. to E/W XY	6	1.1%	517	50	28	2790	2%	1%	N	N
	E/W XY to West Virginia Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
I-95	Martin Hwy. to Becker Rd.	6	9.5%	4,463	434	238	5410	8%	4%	Y	N
	Becker Rd. to E/W 3	6	9.6%	4,510	439	241	5410	8%	4%	Y	N
	E/W 3 to Gatlin Blvd.	6	7.6%	3,570	347	191	5410	6%	4%	Y	N
	Gatlin Blvd. to West Virginia Blvd.	6	0.0%	0	0	0	5410	0%	0%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	6	5.8%	2,725	146	265	5410	3%	5%	N	N
	St. Lucie West Blvd. to Midway Rd.	6	4.1%	1,926	103	187	5410	2%	3%	N	N
NW Peacock Blvd. Loop	St. Lucie West Blvd. to California Blvd.	2	1.9%	893	48	87	760	6%	11%	Y	Y
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Rosser Blvd.	Becker Rd. to Paar Dr.	4	0.2%	94	9	5	1620	1%	0%	N	N
	Paar Dr. to E/W 3	4	0.0%	0	0	0	1620	0%	0%	N	N
	E/W 3 to Gatlin Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
W. Torino Pkwy.	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N
E Torino Pkwy.	NW Peacock Blvd. to Midway Rd.	2	0.2%	94	5	9	760	1%	1%	N	N
S Torino Pkwy.	California Blvd. to Cashmere Blvd.	2	0.3%	141	8	14	760	1%	2%	N	N
California Blvd.	Del Rio Blvd. to Savonna Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Savonna Blvd. to Del Rio Blvd.	2	0.5%	235	23	13	760	3%	2%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.6%	282	27	15	760	4%	2%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	4	1.9%	893	48	87	1620	3%	5%	N	Y
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.3%	141	8	14	760	1%	2%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.3%	141	8	14	760	1%	2%	N	N
Savona Blvd.	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.8%	376	37	20	760	5%	3%	N	N
	Gatlin Blvd. to California Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
Cashmere Blvd.	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.5%	235	13	23	760	2%	3%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic NB/EB	Project Traffic SB/WB	Service Volume	Impact NB/EB	Impact SB/WB	Significant Impact NB/EB	Significant Impact SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	0.2%	192	9	11	1620	1%	1%	N	N
	N/S A to Village Pkwy.	4	5.4%	5,194	245	305	1860	13%	16%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	3.1%	2,982	175	141	2790	6%	5%	Y	Y
	Commerce Center Pkwy. to I-95	6	2.7%	2,597	152	123	2790	5%	4%	Y	N
	I-95 to California Blvd.	6	3.1%	2,982	175	141	2790	6%	5%	Y	Y
	California Blvd. to Cashmere Rd.	6	2.3%	2,212	130	104	2790	5%	4%	N	N
	Cashmere Rd. to Bayshore Blvd.	6	2.0%	1,924	113	91	2790	4%	3%	N	N
	Bayshore Blvd. to Airoso Blvd.	6	1.6%	1,539	90	73	2790	3%	3%	N	N
	Airoso Blvd. to Floresta Dr.	6	0.7%	673	39	32	2790	1%	1%	N	N
	Floresta Dr. to Midport Rd.	6	0.6%	577	34	27	2790	1%	1%	N	N
	Midport Rd. to US-1	6	0.6%	577	34	27	2790	1%	1%	N	N
	US-1 to Villagegreen Dr.	4	0.2%	192	11	9	1860	1%	0%	N	N
	Villagegreen Dr. to Lennard Rd.	4	0.2%	192	11	9	1860	1%	0%	N	N
St. Lucie W/ Prima Vista Blvd.	Commerce Center Pkwy. to I-95	4	0.4%	385	18	23	1800	1%	1%	N	N
	I-95 to NW Peacock Blvd.	6	2.3%	2,212	130	104	2710	5%	4%	N	N
	NW Peacock Blvd. to California Blvd.	6	0.7%	673	39	32	2710	1%	1%	N	N
	California Blvd. to Cashmere Rd.	4	1.0%	962	56	45	1800	3%	3%	N	N
	Cashmere Rd. to Bayshore Blvd.	6	0.4%	385	23	18	2710	1%	1%	N	N
	Bayshore Blvd. to Airoso Blvd.	4	0.1%	96	6	5	1800	0%	0%	N	N
	Airoso Blvd. to Floresta Dr.	4	0.4%	385	23	18	1800	1%	1%	N	N
	Floresta Dr. to US-1	4	0.3%	289	17	14	1800	1%	1%	N	N
Midway Rd.	W. of Eleven Mile Rd.	2	0.2%	192	9	11	860	1%	1%	N	N
	Eleven Mile Rd. to Commerce Center Pkwy.	2	0.3%	289	14	17	860	2%	2%	N	N
	Commerce Center Pkwy. to I-95	2	0.8%	770	36	45	860	4%	5%	N	Y
	I-95 to Glades Cut-Off Rd.	4	0.7%	673	32	39	1860	2%	2%	N	N
	Glades Cut-Off Rd to Torino Pkwy	4	0.7%	673	39	32	1860	2%	2%	N	N
	Torino Pkwy to Selvitz Rd.	4	0.7%	673	39	32	1860	2%	2%	N	N
	Selvitz Rd. to S. 25th St.	4	0.6%	577	34	27	1860	2%	1%	N	N
	S. 25th St. to Sunrise Blvd.	2	0.5%	481	28	23	860	3%	3%	N	N
	Sunrise Blvd. to Oleander Ave.	2	0.5%	481	28	23	860	3%	3%	N	N
	Oleander Ave. to US-1	2	0.3%	289	17	14	860	2%	2%	N	N
	E. of US-1	2	0.1%	96	6	5	860	1%	1%	N	N

External Traffic	
IN	4,543
OUT	5,639
Daily	96,188

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic NB/EB	Project Traffic SB/WB	Service Volume	Impact NB/EB	Impact SB/WB	Significant Impact NB/EB	Significant Impact SB/WB
US-1	Lennard Rd. to Port St. Lucie Blvd.	8	0.7%	673	39	32	3540	1%	1%	N	N
	Port. St. Lucie Blvd. to Tiffany Dr./Lyngate D	6	0.0%	0	0	0	2790	0%	0%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	0.0%	0	0	0	2790	0%	0%	N	N
	West Virginia Dr. to Village Green Dr.	6	0.2%	192	11	9	2790	0%	0%	N	N
	Village Green Dr. to Savannah Club Blvd.	6	0.2%	192	11	9	2790	0%	0%	N	N
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.0%	0	0	0	2790	0%	0%	N	N
	St. Lucie West Blvd. to E/W 6	6	0.1%	96	6	5	2790	0%	0%	N	N
	E/W 6 to Midway Rd.	6	0.1%	96	6	5	2790	0%	0%	N	N
	N. of Midway	6	0.1%	96	6	5	2790	0%	0%	N	N
Lennard Rd.	US-1 to Tiffany Dr./Lyngate Dr.	4	0.3%	289	17	14	1620	1%	1%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.2%	192	11	9	1620	1%	1%	N	N
	West Virginia Dr. to Savannah Club Blvd.	4	0.1%	96	6	5	1620	0%	0%	N	N
	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
SR 714/Martin Hwy	Range Line Rd. to I-95	2	0.1%	96	6	5	860	1%	1%	N	N
	I-95 to Port St. Lucie Blvd.	2	1.3%	1,250	73	59	860	8%	7%	Y	Y
	Port St. Lucie Blvd. to Turnpike	4	0.9%	866	51	41	1860	3%	2%	N	N
SR 714/Martin Downs Blvd.	N. of FL. TPK Entrance to High Meadows Av	4	0.7%	673	39	32	1860	2%	2%	N	N
	E. of High Meadows Ave.	4	0.6%	577	34	27	1860	2%	1%	N	N
CR 714	Turnpike to High Meadows Ave.	4	1.7%	1,635	96	77	1620	6%	5%	Y	N
	High Meadows Ave. to Berry Ave.	4	1.4%	1,347	79	64	1620	5%	4%	N	N
Mapp Rd/Murphy Rd.	E. of High Meadows Ave.	2	0.3%	289	17	14	760	2%	2%	N	N
Becker Rd.	I-95 to Rosser Rd.	6	8.5%	8,176	479	386	2790	17%	14%	Y	Y
	Rosser Blvd. to Savona Blvd.	4	5.6%	5,387	316	254	1860	17%	14%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	5.5%	5,290	310	250	1860	17%	13%	Y	Y
	Port St. Lucie Blvd. to Darwin Blvd.	4	4.9%	4,713	276	223	1860	15%	12%	Y	Y
	Darwin Blvd. to Turnpike	4	4.9%	4,713	276	223	1860	15%	12%	Y	Y
	Turnpike to Southbend Blvd.	4	3.1%	2,982	175	141	1860	9%	8%	Y	Y
	Southbend Blvd. to Gilson Rd.	4	0.8%	770	45	36	1860	2%	2%	N	N
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	7.2%	6,926	406	327	1860	22%	18%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	6.7%	6,445	378	304	1860	20%	16%	Y	Y
Gatlin Blvd.	Range Line Rd. to N/S A	4	0.8%	770	36	45	1860	2%	2%	N	N
	N/S A to Community Blvd.	4	0.4%	385	18	23	1860	1%	1%	N	N
	Community Blvd. to Village Pkwy.	4	0.0%	0	0	0	1860	0%	0%	N	N
	Village Pkwy. to I-95	8	1.6%	1,539	90	73	3540	3%	2%	N	N
	I-95 to Rosser Blvd.	6	1.0%	962	56	45	2790	2%	2%	N	N
	Rosser Blvd. to Savona Blvd.	6	1.8%	1,731	102	82	2790	4%	3%	N	N
	Savona Blvd. to Port St. Lucie Blvd.	6	1.3%	1,250	73	59	2790	3%	2%	N	N
Westmoreland Blvd.	Port St. Lucie Blvd. to US-1	2	0.3%	289	17	14	760	2%	2%	N	N
Oakridge Blvd.	Bayshore Blvd. to Southbend Blvd.	4	0.3%	289	17	14	1620	1%	1%	N	N
Tiffany Dr/Lyngate Dr.	Midport Rd. to US-1	2	0.2%	192	11	9	760	1%	1%	N	N
	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
E/W XY	N/S A to Community Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N
	Commerce Center Parkway to Village Pkwy.	4	0.3%	289	17	14	1620	1%	1%	N	N

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic NB/EB	Project Traffic SB/WB	Service Volume	Impact NB/EB	Impact SB/WB	Significant Impact NB/EB	Significant Impact SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Cashmere Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Port St. Lucie Blvd.	Martin Hwy. to Becker Rd.	4	1.8%	1,731	82	102	1860	4%	5%	N	Y
	Becker Rd. to Paar Dr.	2	1.7%	1,635	96	77	890	11%	9%	Y	Y
	Paar Dr. to Darwin Blvd.	2	4.9%	4,713	276	223	890	31%	25%	Y	Y
	Darwin Blvd. to Gatlin Blvd.	4	4.0%	3,848	226	182	1860	12%	10%	Y	Y
	Gatlin Blvd. to Del Rio Blvd.	6	5.2%	5,002	293	236	2790	11%	8%	Y	Y
	Del Rio Blvd. to Bayshore Blvd.	6	4.5%	4,328	254	204	2790	9%	7%	Y	Y
	Bayshore Blvd. to Airoso Blvd.	6	3.7%	3,559	209	168	2790	7%	6%	Y	Y
	Airoso Blvd. to Southbend Blvd./Floresta Dr.	6	2.9%	2,789	164	132	2790	6%	5%	Y	N
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	2.4%	2,309	135	109	2790	5%	4%	N	N
	Midport Rd. to US-1	6	1.4%	1,347	79	64	2790	3%	2%	N	N
	US-1 to Lennard Rd.	4	0.5%	481	28	23	1860	2%	1%	N	N
Darwin Blvd.	Becker Rd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Turnpike	Martin Hwy. to Becker Rd.	4	1.0%	962	45	56	2940	2%	2%	N	N
	Becker Rd. to Port St. Lucie Blvd.	4	0.0%	0	0	0	2940	0%	0%	N	N
	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N
Bayshore Blvd.	Oakridge Blvd. to Port. St. Lucie Blvd.	4	0.3%	289	14	17	1860	1%	1%	N	N
	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.2%	192	11	9	1860	1%	0%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.4%	385	23	18	1860	1%	1%	N	N
	Prima Vista Blvd. to Selvitz Rd.	2	0.4%	385	23	18	760	3%	2%	N	N
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
Selvitz Rd.	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N
	E/W 5 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N
St. James Dr.	Bayshore Blvd. to E/W 5	4	0.3%	289	17	14	1860	1%	1%	N	N
	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N
25 th Street	N. of Midway	4	0.1%	96	6	5	1860	0%	0%	N	N
Airoso Blvd.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.5%	481	28	23	1860	2%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.9%	866	51	41	1860	3%	2%	N	N
	Prima Vista Blvd. to Floresta Dr.	4	0.3%	289	17	14	1860	1%	1%	N	N
	Floresta Dr. to St. James Blvd.	4	0.3%	289	17	14	1860	1%	1%	N	N
Southbend Blvd.	Becker Rd. to Oakridge Blvd.	2	0.8%	770	45	36	760	6%	5%	Y	N
	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Floresta Dr.	Port. St. Lucie Blvd. to West Virginia Dr.	4	0.3%	289	17	14	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.1%	96	6	5	1860	0%	0%	N	N
	Prima Vista Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
Oleander Ave.	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Midport Rd.	Port St. Lucie Blvd. to Lyngate Dr.	4	0.6%	577	34	27	1860	2%	1%	N	N
	Lyngate Dr. to West Virginia Dr.	4	0.1%	96	6	5	1860	0%	0%	N	N
High Meadows Ave.	CR 714 to Martin Downs Blvd.	2	0.3%	289	14	17	760	2%	2%	N	N
	Martin Downs Blvd. to Mapp Rd/Murphy Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Gilson Rd.	Mapp Rd/Murphy Rd. to Becker Rd.	2	0.8%	770	36	45	760	5%	6%	N	Y

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	5.9%	5,675	268	333	810	33%	41%	Y	Y
	Becker Rd. to E/W 4 (Paar Dr.)	2	1.2%	1,154	68	55	810	8%	7%	Y	Y
	E/W 4 (Paar Dr.) to E/W 3	2	1.9%	1,828	86	107	810	11%	13%	Y	Y
	E/W 3 to E/W 1	2	2.5%	2,405	141	114	810	17%	14%	Y	Y
	E/W 1 to Gatlin Blvd.	2	1.9%	1,828	107	86	810	13%	11%	Y	Y
	Gatlin Blvd. to West Virginia Blvd.	2	1.2%	1,154	68	55	810	8%	7%	Y	Y
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.0%	962	56	45	810	7%	6%	Y	Y
Glades Cut-Off Rd.	Range Line / CR 609 to N/S A	2	0.4%	385	23	18	760	3%	2%	N	N
	N/S A to Commerce Center Pkwy.	2	2.2%	2,116	124	100	760	16%	13%	Y	Y
	Commerce Center Pkwy to Midway Rd.	2	0.3%	289	17	14	760	2%	2%	N	N
	N. of Midway Rd.	2	0.3%	289	17	14	760	2%	2%	N	N
N/S A	Gatlin Blvd. to E/W XY	4	7.2%	6,926	406	327	1860	22%	18%	Y	Y
	E/W XY to West Virginia Blvd.	4	7.0%	6,733	395	318	1860	21%	17%	Y	Y
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.8%	1,731	102	82	860	12%	10%	Y	Y
Community Blvd.	Gatlin Blvd. to E/W XY	2	1.5%	1,443	85	68	860	10%	8%	Y	Y
Commerce Center Pkwy.	West Virginia Blvd. to St. Lucie West Blvd.	4	0.4%	385	23	18	1860	1%	1%	N	N
	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.1%	96	6	5	860	1%	1%	N	N
Village Pkwy.	Gatlin Blvd. to E/W XY	6	1.7%	1,635	96	77	2790	3%	3%	N	N
	E/W XY to West Virginia Blvd.	4	0.5%	481	28	23	1860	2%	1%	N	N
I-95	Martin Hwy. to Becker Rd.	6	5.7%	5,483	259	321	5410	5%	6%	N	Y
	Becker Rd. to E/W 3	6	1.7%	1,635	96	77	5410	2%	1%	N	N
	E/W 3 to Gatlin Blvd.	6	5.7%	5,483	321	259	5410	6%	5%	Y	N
	Gatlin Blvd. to West Virginia Blvd.	6	6.4%	6,156	361	291	5410	7%	5%	Y	Y
	West Virginia Blvd. to St. Lucie West Blvd.	6	6.1%	5,867	344	277	5410	6%	5%	Y	Y
	St. Lucie West Blvd. to Midway Rd.	6	4.0%	3,848	226	182	5410	4%	3%	N	N
NW Peacock Blvd. Loop	St. Lucie West Blvd. to California Blvd.	2	1.1%	1,058	62	50	760	8%	7%	Y	Y
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Rosser Blvd.	Becker Rd. to Paar Dr.	4	2.9%	2,789	164	132	1620	10%	8%	Y	Y
	Paar Dr. to E/W 3	4	1.7%	1,635	96	77	1620	6%	5%	Y	N
	E/W 3 to Gatlin Blvd.	4	2.4%	2,309	135	109	1620	8%	7%	Y	Y
W. Torino Pkwy.	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N
E Torino Pkwy.	NW Peacock Blvd. to Midway Rd.	2	0.1%	96	6	5	760	1%	1%	N	N
S Torino Pkwy.	California Blvd. to Cashmere Blvd.	2	0.2%	192	11	9	760	1%	1%	N	N
California Blvd.	Del Rio Blvd. to Savonna Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Savonna Blvd. to Del Rio Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	4	0.7%	673	39	32	1620	2%	2%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.2%	192	11	9	760	1%	1%	N	N
Savona Blvd.	Becker Rd. to Paar Dr.	2	0.1%	96	6	5	760	1%	1%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.5%	481	28	23	760	4%	3%	N	N
	Gatlin Blvd. to California Blvd.	2	0.6%	577	34	27	760	4%	4%	N	N
Cashmere Blvd.	Del Rio Blvd. to West Virginia Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.2%	192	11	9	760	1%	1%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N

TABLE 1
VILLAGE OF SUNSET LAKES
TRIP GENERATION

Land Use	Intensity	Daily Trips	PM Peak Hour		
			Total	In	Out
Proposed Site Traffic					
Single-Family Residential	63 DU	680	69	43	26
Apartments	314 DU	2,026	190	124	66
Townhomes	342 DU	1,875	165	111	54
Specialty Retail	2,000 SF	89	5	2	3
Subtotal		4,670	429	280	149
Internal Capture					
Residential to Specialty Retail	5%	234	22	11	11
Pass-By Trip Reduction					
Specialty Retail	34%	29	2	1	1
Net New External Trips		**4,407**	**405**	**268**	**137**
Driveway Trips		4,436	407	269	138

Note: Trips were calculated using the following rates and/or equations found in the Institute of Transportation Engineers' (ITE) Trip Generation Report, 8th Edition:

Daily Traffic Generation

Single-Family Residential	[ITE 210]	=	Ln(T) = 0.92*Ln(X) + 2.71
Apartments	[ITE 220]	=	T = 6.06*(X) + 123.56
Townhomes	[ITE 230]	=	Ln(T) = 0.87*Ln(X) + 2.46
Specialty Retail	[ITE 814]	=	T = 44.32*(X/1000)

PM Peak Hour Traffic Generation

Single-Family Residential	[ITE 210]	=	Ln(T) = 0.90*Ln(X) + 0.51; (63% in, 37% out)
Apartments	[ITE 220]	=	T = 0.55*(X) + 17.65; (65% in, 35% out)
Townhomes	[ITE 230]	=	Ln(T) = 0.82*Ln(X) + 0.32; (67% in, 33% out)
Specialty Retail	[ITE 814]	=	T = 2.71*(X/1000); (44% in, 56% out)

Average Pass-By Trip Percentage for Retail Development = 34%

k:\wpb_tpto\1443\86000\traffic\2009-03\calcs\[2009-03-12.xls]trip gen

March 12, 2009

Kimley-Horn and Associates, Inc.

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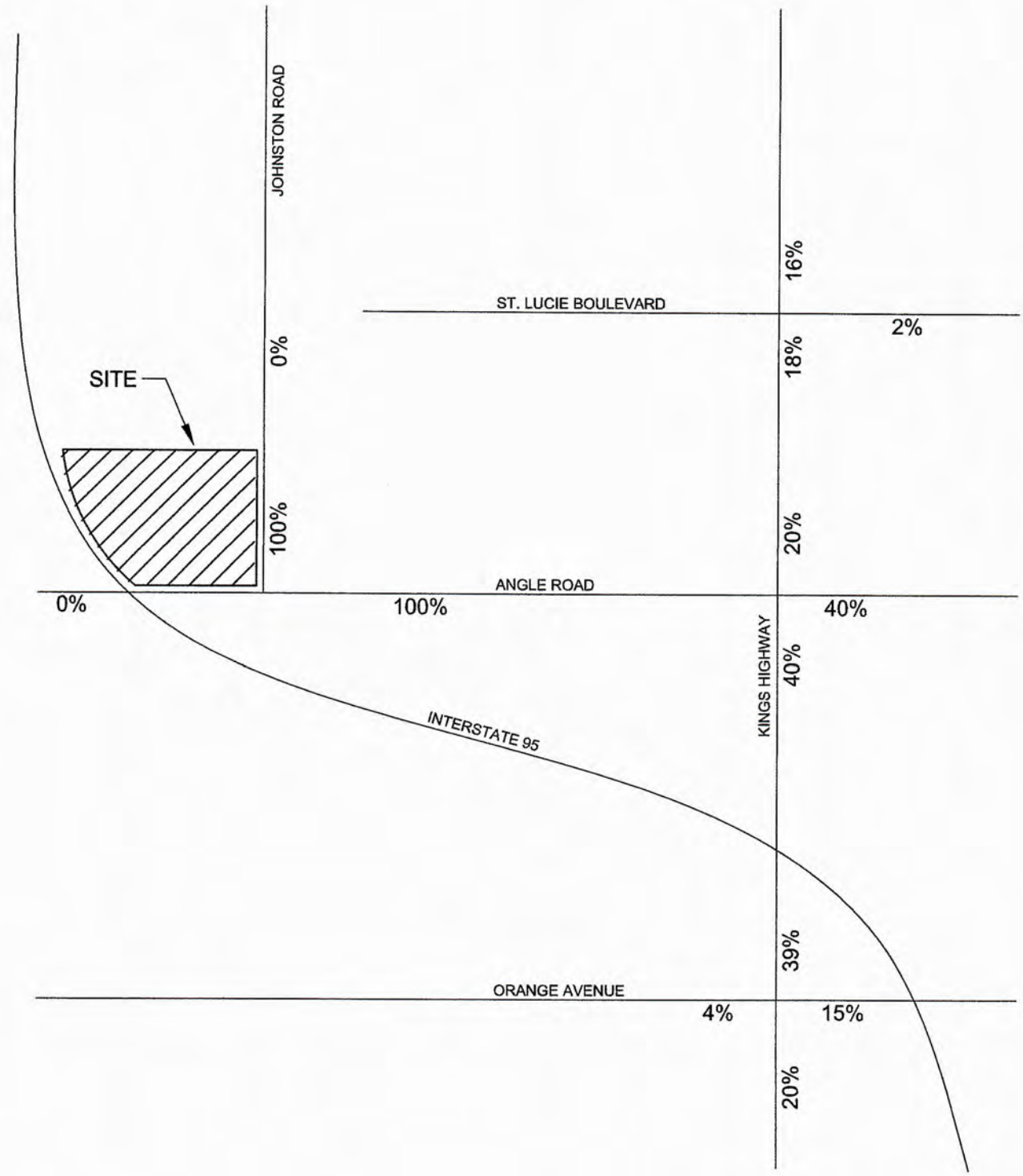


NORTH

NOT TO SCALE

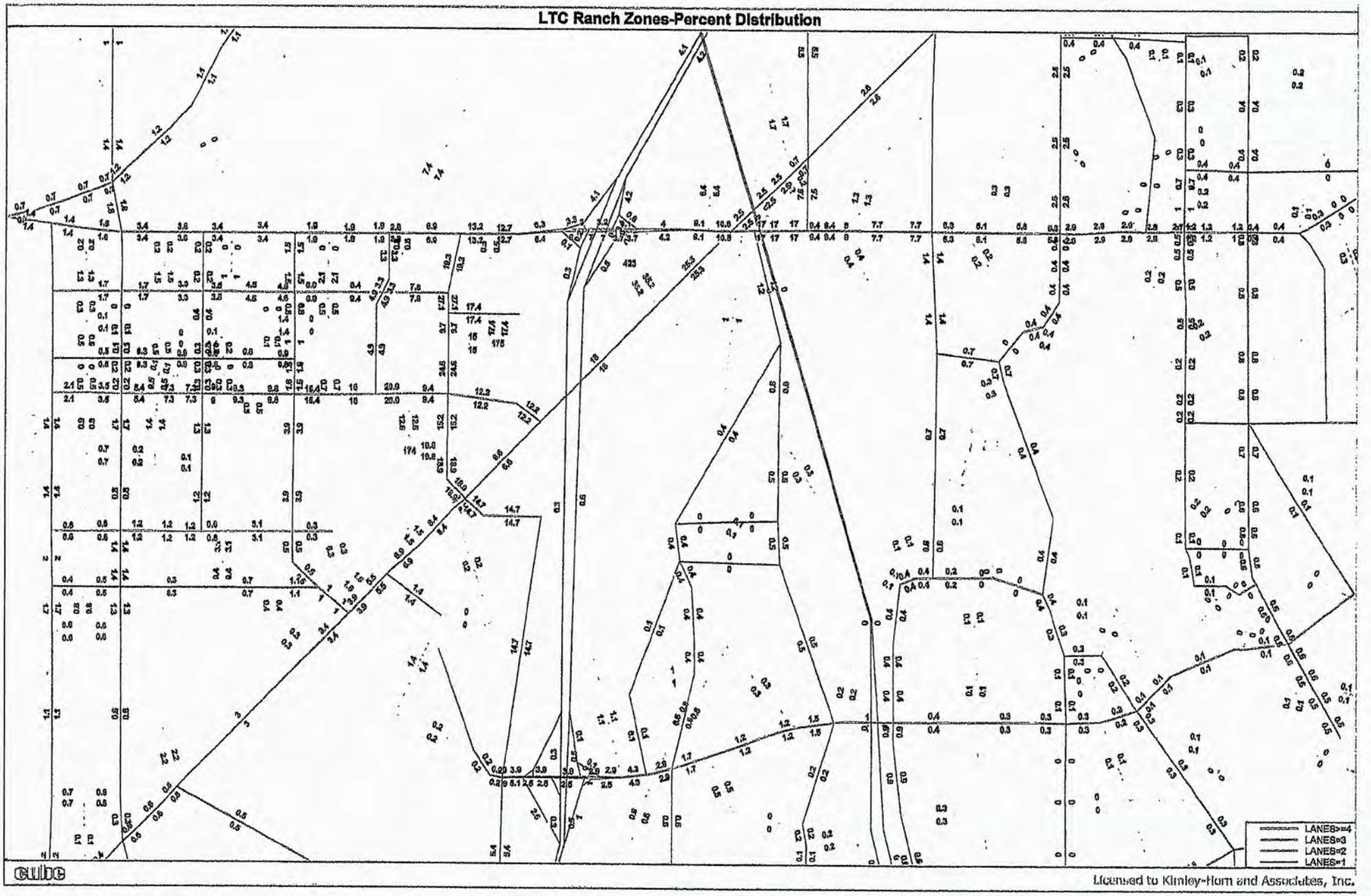
LEGEND

XX% Project Traffic Distribution

FIGURE 2
PROJECT TRAFFIC DISTRIBUTION
VILLAGE OF SUNSET LAKES

Kimley-Horn and Associates, Inc.

PROJECT # 144386000


LTC Ranch Zones-Percent Distribution
LANES>=4
LANES=3
LANES=2
LANES=1
cube
Licensed to Kimley-Horn and Associates, Inc.

Trip Generation: LTC Ranch

Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internal Trips				Net External Trips			Pass-by Trips		Net New Trips			Resultant Trips			Resultant Rates to be Used for Trip Tracking			Factored to Allowable Trip			
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	Total	%	In	Out	Total	In	Out	Total	In	Out	Total	West Side Trips	East Side Trips	West Side Trips	East Side Trips
Single Family Detached	210	3,350	DU	Ln(T)=0.92Ln(X)+2.71	50%	50%	13,151	13,150	26,301	3,481	3,613	7,094	27.0%	9,670	9,537	19,207	-	0.0%	9,670	9,537	19,207	2.89	2.85	5.73	19,207		20,940	-			
Multi-Family Housing	220	650	DU	T=7.56(X) - 40.86	50%	50%	2,437	2,436	4,873	645	669	1,314	27.0%	1,792	1,767	3,559	-	0.0%	1,792	1,767	3,559	2.76	2.72	5.48	3,559		3,880	-			
General Office	710	1,508,500	Sft	Ln(T)=0.97Ln(X)+2.50	50%	50%	7,378	7,377	14,755	1,550	3,525	5,075	34.4%	5,828	3,852	9,680	-	0.0%	5,828	3,852	9,680	3.86	2.55	6.41		9,680	-	10,553			
Industrial Park	130	1,000,000	Sft	T=3.37(X)	50%	50%	1,685	1,685	3,370	354	741	1,095	32.5%	1,331	944	2,275	-	0.0%	1,331	944	2,275	1.33	0.94	2.27		2,275	-	2,480			
Warehousing	150	960,000	Sft	T=1.58(X)+45.54	50%	50%	781	781	1,562	164	344	508	32.5%	617	437	1,054	-	0.0%	617	437	1,054	0.64	0.46	1.10		1,054	-	1,149			
Shopping Center	820	725,000	Sft	Ln(T)=0.68Ln(X)+5.57	50%	50%	11,562	11,561	23,123	5,659	3,241	8,900	38.5%	5,903	8,320	14,223	4,836	34.0%	3,485	5,902	9,387	4.81	8.14	12.95	9,387		10,234	-			
TOTALS							**36,994**	**36,990**	**73,984**	**11,853**	**12,133**	**23,986**	**32.4%**	**25,141**	**24,857**	**49,998**	**4,836**	**9.7%**	**22,723**	**22,439**	**45,162**				**32,153**	**13,009**	**35,054**	**14,182**		

Source: ITE 10th Edition Trip Generation Rates

45,162 49,236

AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internal Trips				Net External Trips			Pass-by Trips		Net New Trips			Resultant Rates to be Used for Trip Tracking			Factored to Allowable Trip			
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	Total	%	In	Out	Total	In	Out	Total	West Side Tips	East Side Tips	West Side Trips	East Side Trips		
Single Family Detached	210	3,350	DU	T=0.71(X)+4.80	25%	75%	596	1,787	2,383	41	603	644	27.0%	555	1,184	1,739	-	0.0%	555	1,184	1,739	0.17	0.35	0.52	1,739		1,739	-			
Multi-Family Housing	220	650	DU	Ln(T)=0.95Ln(X)-0.51	23%	77%	65	217	282	5	71	76	27.0%	60	146	206	-	0.0%	60	146	206	0.09	0.22	0.32	206		206	-			
General Office	710	1,508,500	Sft	T=0.94(X)+26.49	86%	14%	1,242	202	1,444	409	86	495	34.3%	833	116	949	-	0.0%	833	116	949	0.55	0.08	0.63		949	-	951			
Industrial Park	130	1,000,000	Sft	T=0.40(X)	81%	19%	324	76	400	113	24	137	34.3%	211	52	263	-	0.0%	211	52	263	0.21	0.05	0.26		263	-	263			
Warehousing	150	960,000	Sft	T=0.17(X)	77%	23%	126	37	163	46	10	56	34.4%	80	27	107	-	0.0%	80	27	107	0.08	0.03	0.11		107	-	107			
Shopping Center	820	725,000	Sft	T=0.94(X)	62%	38%	423	259	682	293	114	407	59.7%	130	145	275	94	34.0%	83	98	181	0.11	0.14	0.25	181		181	-			
TOTALS							**2,776**	**2,578**	**5,354**	**907**	**908**	**1,815**	**33.9%**	**1,869**	**1,670**	**3,539**	**94**	**2.7%**	**1,822**	**1,623**	**3,445**				**2,126**	**1,319**	**2,126**	**1,321**		

Source: ITE 10th Edition Trip Generation Rates

3,445 3,447

PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internal Trips				Net External Trips			Pass-by Trips		Net New Trips			Resultant Rates to be Used for Trip Tracking			Factored to Allowable Trip			
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	Total	%	In	Out	Total	In	Out	Total	West Side Tips	East Side Tips	West Side Trips	East Side Trips		
Single Family Detached	210	3,350	DU	Ln(T)=0.96Ln(X)+0.20	63%	37%	1,863	1,094	2,957	244	567	811	27.4%	1,619	527	2,146	-	0.0%	1,619	527	2,146	0.48	0.16	0.64	2,146		2,416	-			
Multi-Family Housing	220	650	DU	Ln(T)=0.89Ln(X)-0.02	63%	37%	197	115	312	26	60	86	27.6%	171	55	226	-	0.0%	171	55	226	0.26	0.08	0.34	226		254	-			
General Office	710	1,508,500	Sft	Ln(T)=0.95Ln(X)+0.36	16%	84%	240	1,260	1,500	169	258	427	28.5%	71	1,002	1,073	-	0.0%	71	1,002	1,073	0.05	0.66	0.71		1,073	-	1,208			
Industrial Park	130	1,000,000	Sft	T=0.40(X)	21%	79%	84	316	400	45	69	114	28.5%	39	247	286	-	0.0%	39	247	286	0.04	0.25	0.29		286	-	322			
Warehousing	150	960,000	Sft	T=0.19(X)	27%	73%	49	133	182	21	31	52	28.6%	28	102	130	-	0.0%	28	102	130	0.03	0.11	0.14		130	-	146			
Shopping Center	820	725,000	Sft	Ln(T)=0.74Ln(X)+2.89	48%	52%	1,130	1,224	2,354	781	301	1,082	46.0%	349	923	1,272	432	34.0%	134	706	840	0.18	0.97	1.15	840		945	-			
TOTALS							**3,563**	**4,142**	**7,705**	**1,286**	**1,286**	**2,572**	**33.4%**	**2,277**	**2,856**	**5,133**	**432**	**8.4%**	**2,062**	**2,639**	**4,701**				**3,212**	**1,489**	**3,615**	**1,676**		

Source: ITE 10th Edition Trip Generation Rates

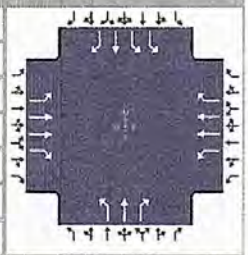
4,701 5,291

APPENDIX E

DRIVEWAY ANALYSIS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - 7.22.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	56	502	126	241	453	748	112	225	214	478	124	23

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.2	7.8	37.6	9.7	4.3	19.5	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	11.2	43.6	24.9	57.3	15.7	25.5	26.0	35.8
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2
Queue Clearance Time (g_s), s	5.9		18.5		9.7	18.3	18.7	8.7
Green Extension Time (g_e), s	0.1	0.0	0.5	0.0	0.2	1.2	1.2	1.2
Phase Call Probability	0.86		1.00		0.98	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	59	528	133	254	477	787	118	237	225	503	131	24
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610	1757	1900	1610
Queue Service Time (g_s), s	3.9	12.7	6.5	16.5	8.2	46.6	7.7	14.3	16.3	16.7	6.7	1.4
Cycle Queue Clearance Time (g_c), s	3.9	12.7	6.5	16.5	8.2	46.6	7.7	14.3	16.3	16.7	6.7	1.4
Green Ratio (*g/C*)	0.04	0.31	0.39	0.16	0.43	0.59	0.08	0.16	0.16	0.17	0.25	0.25
Capacity (*c*), veh/h	78	1133	634	285	1548	957	146	309	262	585	472	400
Volume-to-Capacity Ratio (*X*)	0.758	0.467	0.209	0.889	0.308	0.823	0.806	0.766	0.859	0.861	0.277	0.061
Back of Queue (*Q*), ft/ln (95 th percentile)	84.3	226.1	117	305	147.8	628.3	163.4	278.2	274.5	295.5	139.2	24.4
Back of Queue (*Q*), veh/ln (95 th percentile)	3.4	9.0	4.7	12.2	5.9	25.1	6.5	11.1	11.0	11.8	5.6	1.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	56.8	27.7	24.0	49.5	16.5	19.3	54.2	48.0	48.9	48.7	36.4	34.4
Incremental Delay (d_2), s/veh	5.5	1.4	0.7	3.8	0.5	8.0	3.9	1.5	3.2	1.5	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	62.3	29.1	24.8	53.3	17.0	27.3	58.1	49.5	52.1	50.2	36.5	34.4
Level of Service (LOS)	E	C	C	D	B	C	E	D	D	D	D	C
Approach Delay, s/veh / LOS	31.0	C		28.4	C		52.3	D		46.9	D	
Intersection Delay, s/veh / LOS	36.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.28	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.08	A	1.74	B	1.44	A	1.57	B

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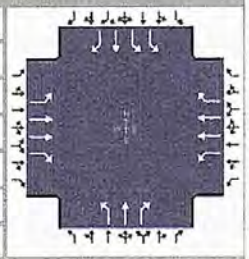
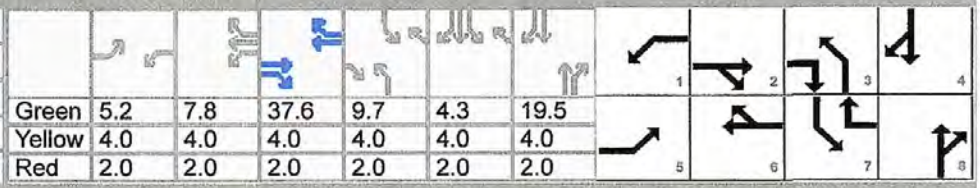
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - 7.22.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	56	502	126	241	453	748	112	225	214	478	124	23

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	5.2	7.8		37.6	9.7	4.3	19.5					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	56	502	126	241	453	748	112	225	214	478	124	23
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	20.0	20.0	20.0	60.0	20.0	60.0	20.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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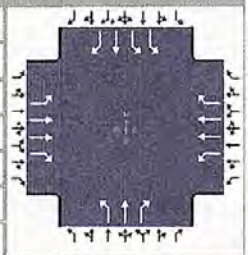
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - 7.22.20.xus		
Project Description	Willow Lakes				

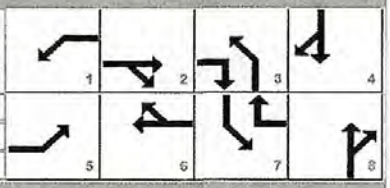


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	544	160	306	626	580	205	120	392	731	299	67

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.2	16.8	25.6	18.8	9.0	29.6
Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Red	2.0	2.0	2.0	2.0	2.0	2.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.2	31.6	33.0	54.3	24.8	35.6	39.8	50.6
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2
Queue Clearance Time (g_s), s	4.4		26.5		18.4	28.1	31.8	20.9
Green Extension Time (g_e), s	0.0	0.0	0.6	0.0	0.4	1.7	2.0	1.7
Phase Call Probability	0.71		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	32	573	168	322	659	611	216	126	307	769	315	71
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610	1757	1900	1610
Queue Service Time (g_s), s	2.4	21.2	11.2	24.5	18.2	35.3	16.4	7.9	26.1	29.8	18.9	4.4
Cycle Queue Clearance Time (g_c), s	2.4	21.2	11.2	24.5	18.2	35.3	16.4	7.9	26.1	29.8	18.9	4.4
Green Ratio (*g/C*)	0.03	0.18	0.32	0.19	0.35	0.59	0.13	0.21	0.21	0.24	0.32	0.32
Capacity (*c*), veh/h	55	664	512	348	1250	945	243	401	340	849	605	513
Volume-to-Capacity Ratio (*X*)	0.576	0.862	0.329	0.926	0.527	0.646	0.888	0.315	0.904	0.907	0.520	0.138
Back of Queue (*Q*), ft/ln (95 th percentile)	52.5	393.2	204.5	438.5	302.8	491.6	308.6	168.7	405.3	478.5	344	77.9
Back of Queue (*Q*), veh/ln (95 th percentile)	2.1	15.7	8.2	17.5	12.1	19.7	12.3	6.7	16.2	19.1	13.8	3.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	67.0	51.2	36.4	55.6	29.6	19.2	59.6	46.7	53.8	51.6	39.0	34.0
Incremental Delay (d_2), s/veh	3.5	13.9	1.7	8.3	1.6	3.4	4.3	0.2	3.7	1.6	0.3	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	70.5	65.0	38.1	63.8	31.2	22.6	63.9	46.8	57.5	53.2	39.2	34.1
Level of Service (LOS)	E	E	D	E	C	C	E	D	E	D	D	C
Approach Delay, s/veh / LOS	59.4	E		34.5	C		57.6	E		48.2	D	
Intersection Delay, s/veh / LOS	46.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.29	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.13	A	1.80	B	1.56	B	2.39	B

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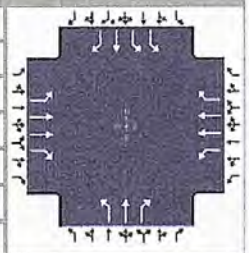
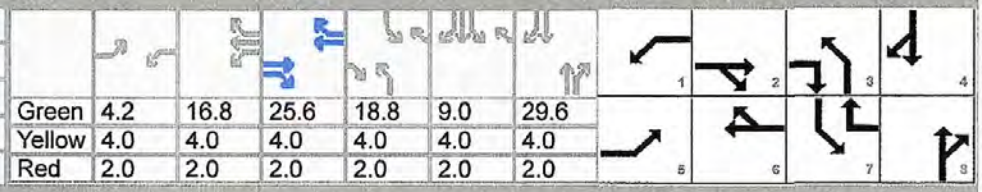
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - 7.22.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	30	544	160	306	626	580	205	120	392	731	299	67

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.2	16.8	25.6	18.8	9.0	29.6	
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Red	2.0	2.0	2.0	2.0	2.0	2.0	

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	544	160	306	626	580	205	120	392	731	299	67
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_0), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	100	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	19.0	13.0	18.0	12.0	89.0	15.0	94.0	20.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*lt*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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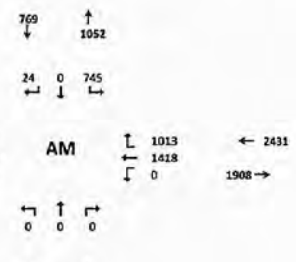
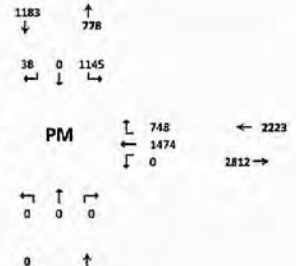
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Pier Ave
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	63	0	0	49	0	112	456
7:15-7:30	0	0	0	0	0	0	0	57	0	0	50	0	107	457
7:30-7:45	0	0	0	0	0	0	0	83	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	63	0	0	66	0	129	446
8:00-8:15	0	0	0	0	0	0	0	55	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	41	0	0	58	0	99	
8:30-8:45	0	0	0	0	0	0	0	44	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	67	0	0	35	0	102	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	0	0	0	0	0	256	0	0	241	0	497	
Season Factor	0	0	0	0	0	0	0	256	0	0	241	0	497	
Growth	0	0	0	0	0	0	0	275	0	0	260	0	536	
In/Out	-	-	-	OUT	OUT	OUT	IN	IN/OUT		-	IN/OUT	IN		
Percentage	0%	0%	0%	31%	0%	1%	1%	1%/20%		0%	20%/1%	23%		
PROJECT	0	0	0	518	0	17	20	354	0	0	409	451	1768	
Midway %				30%		1%	1%	2%/19%			19%/2%	30%		
Village at Midway				227		8	10	182			371	562	1369	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								214			241		455	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			42		84	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			30		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			45		89	
Western Grove %								0.8%			0.8%			
Western Grove								17			17		34	
Ravinia %								5.0%			5.0%			
Ravinia								3			3		7	
Total	0	0	0	745	0	24	38	1163	0	0	1418	1013	4402	



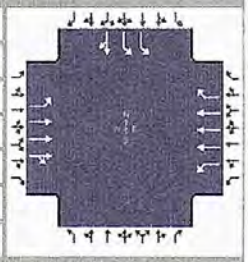
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	54	0	0	71	0	125	537
4:15-4:30	0	0	0	0	0	0	0	51	0	0	77	0	128	572
4:30-4:45	0	0	0	0	0	0	0	75	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	60	0	0	76	0	136	564
5:00-5:15	0	0	0	0	0	0	0	88	0	0	72	0	160	545
5:15-5:30	0	0	0	0	0	0	0	57	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	65	0	0	65	0	130	
5:45-6:00	0	0	0	0	0	0	0	61	0	0	56	0	117	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	0	0	0	0	0	0	0	280	0	0	302	0	582	
Season Factor	0	0	0	0	0	0	0	280	0	0	302	0	582	
Growth	0	0	0	0	0	0	0	302	0	0	325	0	627	
In/Out	-	-	-	OUT	OUT	OUT	IN	IN/OUT	0	-	IN/OUT	IN		
Percentage	0%	0%	0%	31%	0%	1%	1%	1%/20%	0%	0%	20%/1%	23%		
PROJECT	0	0	0	475	0	15	19	328	0	0	405	448	1688	
Midway %				30.0%		1.0%	1.0%	2%/19%			19%/2%	30.0%		
Village at Midway				670		22	10	445			235	301	1683	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								392			306		698	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			81		161	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								45			45		90	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								58			58		116	
Western Grove %								0.8%			0.8%			
Western Grove								16			16		33	
Ravinia %								5.0%			5.0%			
Ravinia								7			2		4	
Total	0	0	0	1145	0	38	29	1667	0	0	1474	748	5102	



E-5

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - 7.21.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	38	1163	0	0	1418	1013				745	0	24

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	0.0	4.4	67.6	30.0	0.0	0.0	5	6	7	8	
Yellow	4.0	4.0	4.0	4.0	0.0	0.0					
Red	0.0	2.0	2.0	2.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6				4
Case Number	2.0	4.0	2.0	3.0				10.0
Phase Duration, s	10.4	84.0	0.0	73.6				36.0
Change Period, (*Y+R c*), s	6.0	6.0	4.0	6.0				6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0				3.1
Queue Clearance Time (*g s*), s	4.6							27.9
Green Extension Time (*g e*), s	0.1	0.0	0.0	0.0				2.1
Phase Call Probability	0.74							1.00
Max Out Probability	0.00							0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	40	1224	0	0	1493	751				784	25	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (*g s*), s	2.6	4.8	0.0	0.0	14.0	45.8				25.9	1.4	
Cycle Queue Clearance Time (*g c*), s	2.6	4.8	0.0	0.0	14.0	45.8				25.9	1.4	
Green Ratio (*g/C*)	0.04	0.65			0.56	0.56				0.25	0.25	
Capacity (*c*), veh/h	67	3705		2	2915	907				878	402	
Volume-to-Capacity Ratio (*X*)	0.600	0.330	0.000	0.000	0.512	0.828				0.893	0.063	
Back of Queue (*Q*), ft/ln (95 th percentile)	56	68.8	0	0	183	632.2				417.8	25.4	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.2	2.8	0.0	0.0	7.3	25.3				16.7	1.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (*d 1*), s/veh	56.9	3.1		0.0	8.3	21.4				43.4	34.3	
Incremental Delay (*d 2*), s/veh	3.2	0.2	0.0	0.0	0.6	8.6				1.3	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (*d*), s/veh	60.1	3.4		0.0	8.9	30.0				44.8	34.3	
Level of Service (LOS)	E	A			A	C				D	C	
Approach Delay, s/veh / LOS	5.2	A		16.0	B		0.0			44.5	D	
Intersection Delay, s/veh / LOS	18.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.36	A	2.09	B	3.18	C	2.62	C
Bicycle LOS Score / LOS	1.18	A	1.72	B			1.82	B

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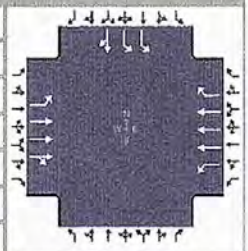
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - 7.21.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	38	1163	0	0	1418	1013				745	0	24

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	4.4	67.6	30.0	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	0.0	2.0	2.0	2.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	38	1163	0	0	1418	1013				745	0	24
Initial Queue (Q_b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	300	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3				3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0				12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0				0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35				35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	18.0	26.0	15.0	23.0				79.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R_c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G_{min}), s	6	6	6	6				6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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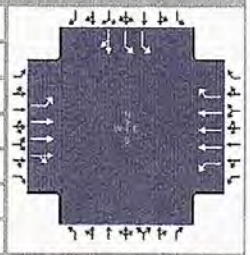
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - 7.21.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	29	1667	0	0	1474	745				1145	0	38

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	4.2		66.6	51.3	0.0	0.0					
Yellow	4.0	4.0		4.0	4.0	0.0	0.0					
Red	0.0	2.0		2.0	2.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6				4
Case Number	2.0	4.0	2.0	3.0				10.0
Phase Duration, s	10.2	82.7	0.0	72.6				57.3
Change Period, (*Y+R c*), s	6.0	6.0	4.0	6.0				6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0				3.1
Queue Clearance Time (*g s*), s	4.3							48.3
Green Extension Time (*g e*), s	0.0	0.0	0.0	0.0				2.9
Phase Call Probability	0.69							1.00
Max Out Probability	0.00							0.12

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	31	1755	0	0	1552	468				1205	40	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (*g s*), s	2.3	19.7	0.0	0.0	25.6	30.1				46.3	2.3	
Cycle Queue Clearance Time (*g c*), s	2.3	19.7	0.0	0.0	25.6	30.1				46.3	2.3	
Green Ratio (*g/C*)	0.03	0.55			0.48	0.48				0.37	0.37	
Capacity (*c*), veh/h	54	3125		1	2461	766				1287	590	
Volume-to-Capacity Ratio (*X*)	0.566	0.562	0.000	0.000	0.630	0.612				0.937	0.068	
Back of Queue (*Q*), ft/ln (95 th percentile)	50.7	266	0	0	347.1	448.1				729.7	39.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.0	10.6	0.0	0.0	13.9	17.9				29.2	1.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (*d 1*), s/veh	67.0	11.2		0.0	18.1	27.2				42.8	28.8	
Incremental Delay (*d 2*), s/veh	3.4	0.7	0.0	0.0	1.2	3.6				10.1	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (*d*), s/veh	70.5	11.9		0.0	19.4	30.8				52.9	28.9	
Level of Service (LOS)	E	B			B	C				D	C	
Approach Delay, s/veh / LOS	12.9	B		22.0	C		0.0			52.1	D	
Intersection Delay, s/veh / LOS	26.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.39	A	2.11	B	3.18	C	2.63	C
Bicycle LOS Score / LOS	1.47	A	1.60	B			2.54	C

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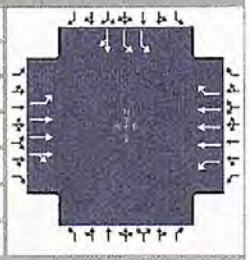
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - 7.21.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	29	1667	0	0	1474	745				1145	0	38

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	4.2	66.6	51.3	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	5	6	7	8		
Red	0.0	2.0	2.0	2.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	29	1667	0	0	1474	745				1145	0	38
Initial Queue (Q_b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	300	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3				3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0				12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0				0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35				35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	62.0	13.0	62.0				65.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R_c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G_{min}), s	6	6	6	6				6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

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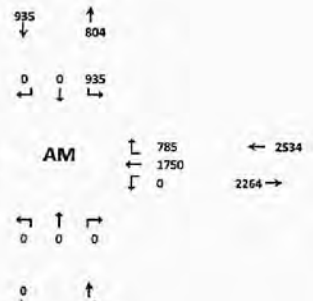
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Gordy Rd
EW STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

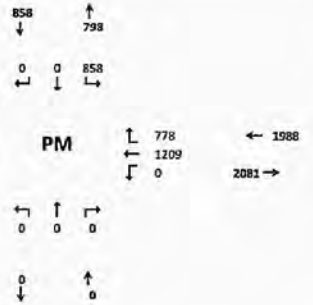
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	63	0	0	49	0	112	496
7:15-7:30	0	0	0	0	0	0	0	57	0	0	50	0	107	497
7:30-7:45	0	0	0	0	0	0	0	81	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	63	0	0	66	0	129	446
8:00-8:15	0	0	0	0	0	0	0	55	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	41	0	0	58	0	99	
8:30-8:45	0	0	0	0	0	0	0	44	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	67	0	0	35	0	102	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	0	0	0	0	0	256	0	0	241	0	497	
Season Factor	0	0	0	0	0	0	0	256	0	0	241	0	497	
Growth	0	0	0	0	0	0	0	275	0	0	260	0	536	
In/Out	-	-	-	OUT	OUT	OUT	IN	OUT		-	IN	IN		
Percentage	0%	0%	0%	56%	0%	0%	1%	42%		0%	57%	40%		
PROJECT	0	0	0	935	0	0	20	701	0	0	1118	785	3559	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								214			241		455	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			31		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Ravinia %								5.0%			5.0%			
Ravinia								3			1		5	
Total	0	0	0	935	0	0	20	1329	0	0	1250	785	4818	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,962	1,670
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	54	0	0	71	0	125	537
4:15-4:30	0	0	0	0	0	0	0	51	0	0	77	0	128	572
4:30-4:45	0	0	0	0	0	0	0	75	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	80	0	0	76	0	156	564
5:00-5:15	0	0	0	0	0	0	0	88	0	0	72	0	160	545
5:15-5:30	0	0	0	0	0	0	0	57	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	65	0	0	65	0	130	
5:45-6:00	0	0	0	0	0	0	0	61	0	0	56	0	117	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	0	0	0	0	0	0	0	280	0	0	302	0	582	
Season Factor	0	0	0	0	0	0	0	280	0	0	302	0	582	
Growth	0	0	0	0	0	0	0	302	0	0	325	0	627	
In/Out	-	-	-	OUT	OUT	OUT	IN	OUT	0	-	IN	IN		
Percentage	0%	0%	0%	56%	0%	0%	1%	42%	0%	0%	57%	40%		
PROJECT	0	0	0	858	0	0	19	326	0	0	405	778	2387	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								392			306		698	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			55		136	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								45			36		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								58			57		115	
Western Grove %								0.8%			0.8%			
Western Grove								16			20		37	
Ravinia %								5.0%			5.0%			
Ravinia								2			4		6	
Total	0	0	0	858	0	0	19	1222	0	0	1209	778	4088	

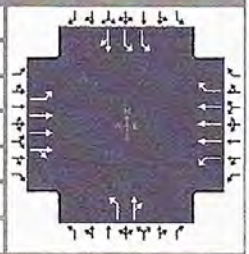


Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,946	1,533
LTC Ranch	2,320	2,070
Southern Grove	6,900	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,005	7,277
Western Grove	2,510	2,061
Ravinia	77	44

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - 7.21.20...		
Project Description	Willow Lakes				

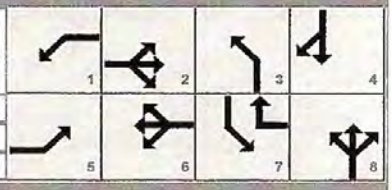


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	57	1851	0	0	2845	1207	0	0	0	1002	0	15

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.2	63.8	33.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		10.0		10.0
Phase Duration, s	11.2	81.0	0.0	69.8		0.0		39.0
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (*g s*), s	3.7							35.0
Green Extension Time (*g e*), s	0.1	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.86							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	60	1948	0	0	2995	771	0	0		1055	16	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1900	1610	1810	1610		1810	1610	
Queue Service Time (*g s*), s	1.7	12.6	0.0	0.0	61.3	21.3	0.0	0.0		33.0	0.9	
Cycle Queue Clearance Time (*g c*), s	1.7	12.6	0.0	0.0	61.3	21.3	0.0	0.0		33.0	0.9	
Green Ratio (*g/C*)	0.59	0.62		0.48	0.53	0.81		0.32		0.28	0.28	
Capacity (*c*), veh/h	140	3562		177	3031	1299	2			995	443	
Volume-to-Capacity Ratio (*X*)	0.429	0.547	0.000	0.000	0.988	0.593	0.000	0.000		1.060	0.036	
Back of Queue (*Q*), ft/ln (95 th percentile)	42.4	153	0	0	752.6	238.4	0	0		731.9	15.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.7	6.1	0.0	0.0	30.1	9.5	0.0	0.0		29.3	0.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (*d 1*), s/veh	28.4	4.8		0.0	17.1	4.3	0.0			43.5	31.9	
Incremental Delay (*d 2*), s/veh	0.8	0.6	0.0	0.0	13.8	2.0	0.0	0.0		45.8	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	29.1	5.4		0.0	30.9	6.3	0.0			89.3	31.9	
Level of Service (LOS)	C	A			C	A				F	C	
Approach Delay, s/veh / LOS	6.1	A		25.8	C		0.0			88.4	F	
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	2.09	B	3.43	C	2.62	C
Bicycle LOS Score / LOS	1.59	B	2.56	C	0.49	A	2.25	B

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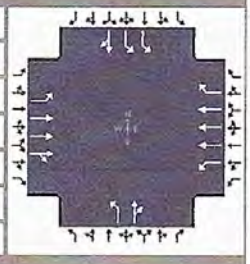
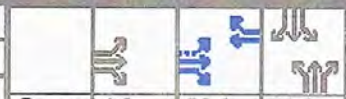
HCS7 Signalized Intersection Results Summary

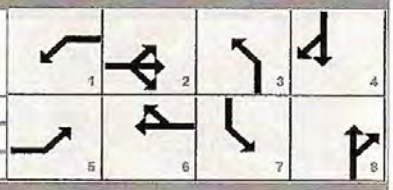
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - PM Peak Hour - 7.21.20...		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	2317	0	0	1701	915	0	0	0	1427	0	45

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



										
							1	2	3	4
Green	4.8	58.2	59.0	0.0	0.0	0.0				
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	2.0	2.0	2.0	0.0	0.0	0.0				
							5	6	7	8

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	3.0		10.0		10.0
Phase Duration, s	10.8	75.0	0.0	64.2		0.0		65.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (g_s), s	3.8							59.5
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.81							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	42	2439	0	0	1791	542	0	0		1502	47	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1900	1610	1810	1610		1810	1610	
Queue Service Time (g_s), s	1.8	47.8	0.0	0.0	33.8	41.5	0.0	0.0		57.5	2.5	
Cycle Queue Clearance Time (g_c), s	1.8	47.8	0.0	0.0	33.8	41.5	0.0	0.0		57.5	2.5	
Green Ratio (*g/C*)	0.46	0.49			0.42	0.42		0.42		0.42	0.42	
Capacity (*c*), veh/h	161	2809		1	2368	669	1			1525	679	
Volume-to-Capacity Ratio (*X*)	0.262	0.868	0.000	0.000	0.756	0.810	0.000	0.000		0.985	0.070	
Back of Queue (*Q*), ft/ln (95 th percentile)	35	637.3	0	0	505.6	622	0	0		945.8	42.7	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.4	25.5	0.0	0.0	20.2	24.9	0.0	0.0		37.8	1.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	26.0	20.4		0.0	25.8	36.1	0.0			40.1	24.1	
Incremental Delay (d_2), s/veh	0.3	4.0	0.0	0.0	2.3	10.3	0.0	0.0		19.4	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	26.3	24.3		0.0	28.1	46.3	0.0			59.5	24.2	
Level of Service (LOS)	C	C			C	D				E	C	
Approach Delay, s/veh / LOS	24.4	C		32.3	C		0.0			58.4	E	
Intersection Delay, s/veh / LOS	35.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.12	B	3.33	C	2.62	C
Bicycle LOS Score / LOS	1.85	B	1.77	B	0.49	A	3.04	C

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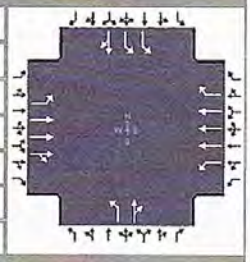
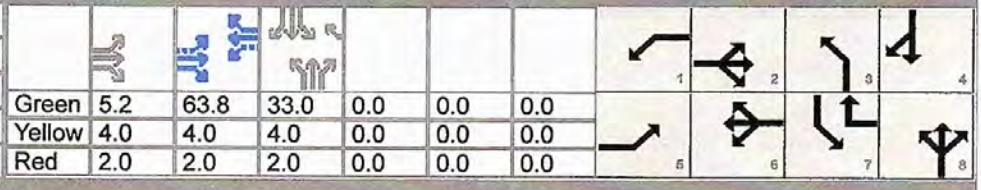
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - 7.21.20...		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	57	1851	0	0	2845	1207	0	0	0	1002	0	15

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.2	63.8	33.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	57	1851	0	0	2845	1207	0	0	0	1002	0	15
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0		0	0	475	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	12.0	57.0	12.0	57.0	12.0	12.0	39.0	39.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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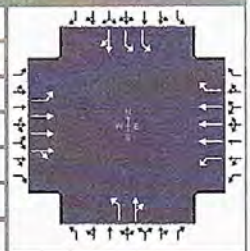
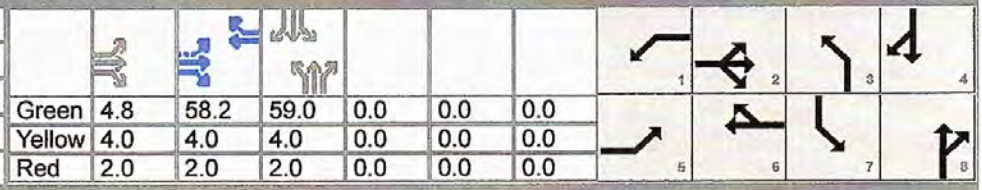
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - PM Peak Hour - 7.21.20...		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	40	2317	0	0	1701	915	0	0	0	1427	0	45

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.8	58.2	59.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	2317	0	0	1701	915	0	0	0	1427	0	45
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0		0	0	400	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	17.0	51.0	12.0	46.0	23.0	12.0	65.0	65.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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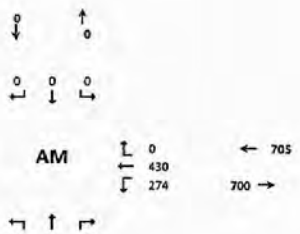
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Arterial A
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

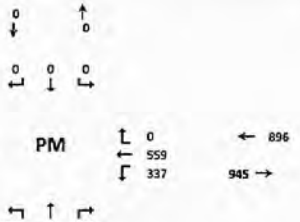
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	63	0	0	49	0	112	496
7:15-7:30	0	0	0	0	0	0	0	57	0	0	50	0	107	497
7:30-7:45	0	0	0	0	0	0	0	81	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	63	0	0	66	0	129	446
8:00-8:15	0	0	0	0	0	0	0	55	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	41	0	0	58	0	99	
8:30-8:45	0	0	0	0	0	0	0	44	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	67	0	0	35	0	102	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	0	0	0	0	0	256	0	0	241	0	497	
Season Factor	0	0	0	0	0	0	0	256	0	0	241	0	497	
Growth	0	0	0	0	0	0	0	276	0	0	260	0	536	
In/Out	-	-	IN	OUT	OUT	OUT	-	IN	OUT	OUT	OUT	IN		
Percentage	0%	0%	2%	0%	0%	0%	0%	2%	0%	2%	2%	0%		
PROJECT	0	0	39	0	0	0	0	39	0	33	33	0	145	
LTC Ranch %	6.9%		13.2%						6.9%	13.2%				
LTC Ranch Volume	112		214						126	241			693	
Southern Grove %								0.8%			0.8%			
Southern Grove								50			42		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								31			30		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								38			45		83	
Western Grove %								0.8%			0.8%			
Western Grove								11			17		28	
Ravinia %								5.0%			5.0%			
Ravinia								1			3		5	
Total	112	0	254	0	0	0	0	446	126	274	430	0	1642	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,962	1,670
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	54	0	0	71	0	125	537
4:15-4:30	0	0	0	0	0	0	0	51	0	0	77	0	128	572
4:30-4:45	0	0	0	0	0	0	0	75	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	60	0	0	76	0	136	564
5:00-5:15	0	0	0	0	0	0	0	88	0	0	72	0	160	545
5:15-5:30	0	0	0	0	0	0	0	57	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	65	0	0	65	0	130	
5:45-6:00	0	0	0	0	0	0	0	61	0	0	56	0	117	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	0	0	0	0	0	0	0	280	0	0	302	0	582	
Season Factor	0	0	0	0	0	0	0	280	0	0	302	0	582	
Growth	0	0	0	0	0	0	0	302	0	0	325	0	627	
In/Out	-	-	IN	OUT	OUT	OUT	-	IN	OUT	OUT	OUT	IN		
Percentage	0%	0%	2%	0%	0%	0%	0%	2%	0%	2%	2%	0%		
PROJECT	0	0	39	0	0	0	0	39	0	33	33	0	139	
LTC Ranch %	6.9%		13.2%						6.9%	13.2%				
LTC Ranch Volume	205		392						160	306			1063	
Southern Grove %								0.8%			0.8%			
Southern Grove								56			81		136	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								36			45		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								57			58		115	
Western Grove %								0.8%			0.8%			
Western Grove								20			16		37	
Ravinia %								5.0%			5.0%			
Ravinia								4			2		6	
Total	205	0	431	0	0	0	0	514	160	337	559	0	2205	

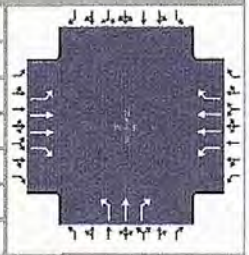


Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,946	1,533
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	3,061
Ravinia	77	44

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	446	126	274	430	0	112	0	254			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	21.1	59.1	21.8	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		
Case Number	2.0	3.0	2.0	3.0		9.0		
Phase Duration, s	0.0	65.1	27.1	92.2		27.8		
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		
Max Allow Headway (*MAH*), s	0.0	0.0	3.1	0.0		3.3		
Queue Clearance Time (g_s), s			20.7			21.6		
Green Extension Time (g_e), s	0.0	0.0	0.4	0.0		0.2		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.01			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18			
Adjusted Flow Rate (*v*), veh/h	0	469	133	288	453	0	118	0	267			
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610			
Queue Service Time (g_s), s	0.0	6.5	3.5	18.7	0.8	0.0	6.8	0.0	19.6			
Cycle Queue Clearance Time (g_c), s	0.0	6.5	3.5	18.7	0.8	0.0	6.8	0.0	19.6			
Green Ratio (*g/C*)		0.49	0.67	0.18	0.72	0.72	0.18	0.18	0.18			
Capacity (*c*), veh/h	2	1780	1085	319	2599	1157	329	345	293			
Volume-to-Capacity Ratio (*X*)	0.000	0.264	0.122	0.905	0.174	0.000	0.359	0.000	0.914			
Back of Queue (*Q*), ft/ln (95 th percentile)	0	112.3	53.5	365	12.2	0	138.1	0	376.8			
Back of Queue (*Q*), veh/ln (95 th percentile)	0.0	4.5	2.1	14.6	0.5	0.0	5.5	0.0	15.1			
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d_1), s/veh	0.0	11.6	7.0	48.4	0.7	0.0	43.0	0.0	48.2			
Incremental Delay (d_2), s/veh	0.0	0.4	0.2	13.3	0.1	0.0	0.2	0.0	26.6			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (*d*), s/veh	0.0	11.9	7.2	61.8	0.9	0.0	43.2	0.0	74.8			
Level of Service (LOS)		B	A	E	A		D		E			
Approach Delay, s/veh / LOS	10.9	B		24.6	C		65.2	E		0.0		
Intersection Delay, s/veh / LOS	28.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.34	A	2.48	B	2.48	B
Bicycle LOS Score / LOS	0.98	A	1.10	A	1.12	A		

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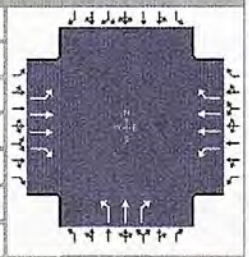
HCS7 Signalized Intersection Input Data

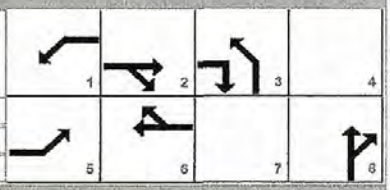
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	446	126	274	430	0	112	0	254			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	21.1	59.1	21.8	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	2.0	2.0	2.0	2.0	0.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	446	126	274	430	0	112	0	254			
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0			
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0	0	0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3			
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0			
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0			
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	56.0	34.0	77.0	30.0	30.0		
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0		
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0		
Minimum Green (G_{min}), s	6	6	6	6	6	6		
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0		
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0		
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Off	Min	Off	Off		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0		
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

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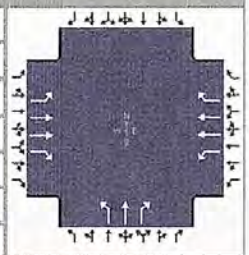
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	514	160	337	559	0	205	0	431			

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	29.6	59.6	32.8	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		
Case Number	2.0	3.0	2.0	3.0		9.0		
Phase Duration, s	0.0	65.6	35.6	101.2		38.8		
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		
Max Allow Headway (*MAH*), s	0.0	0.0	3.1	0.0		3.3		
Queue Clearance Time (g_s), s			28.9			31.6		
Green Extension Time (g_e), s	0.0	0.0	0.7	0.0		1.2		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.00			0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18			
Adjusted Flow Rate (*v*), veh/h	0	541	168	355	588	0	216	0	348			
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610			
Queue Service Time (g_s), s	0.0	11.3	5.6	26.9	2.7	0.0	14.5	0.0	29.6			
Cycle Queue Clearance Time (g_c), s	0.0	11.3	5.6	26.9	2.7	0.0	14.5	0.0	29.6			
Green Ratio (*g/C*)		0.43	0.66	0.21	0.68	0.68	0.23	0.23	0.23			
Capacity (*c*), veh/h	1	1539	1063	383	2459	1095	424	446	378			
Volume-to-Capacity Ratio (*X*)	0.000	0.352	0.158	0.927	0.239	0.000	0.509	0.000	0.923			
Back of Queue (*Q*), ft/ln (95 th percentile)	0	201.2	89.7	460.6	41.5	0	269.3	0	450.8			
Back of Queue (*Q*), veh/ln (95 th percentile)	0.0	8.0	3.6	18.4	1.7	0.0	10.8	0.0	18.0			
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d_1), s/veh	0.0	19.9	9.0	54.1	2.2	0.0	46.6	0.0	52.3			
Incremental Delay (d_2), s/veh	0.0	0.6	0.3	4.2	0.2	0.0	0.4	0.0	4.1			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (*d*), s/veh	0.0	20.5	9.4	58.4	2.5	0.0	46.9	0.0	56.4			
Level of Service (LOS)		C	A	E	A		D		E			
Approach Delay, s/veh / LOS	17.8	B		23.5	C		52.8	D		0.0		
Intersection Delay, s/veh / LOS	29.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	1.36	A	2.48	B	2.48	B
Bicycle LOS Score / LOS	1.07	A	1.27	A	1.42	A		

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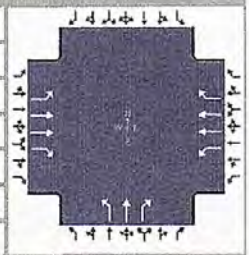
HCS7 Signalized Intersection Input Data

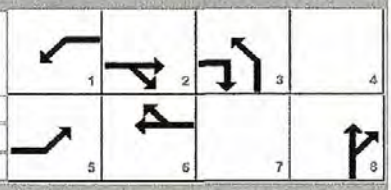
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	514	160	337	559	0	205	0	431			

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	29.6	59.6	32.8	0.0	0.0	
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	
Red	2.0	2.0	2.0	2.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	514	160	337	559	0	205	0	431			
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0			
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0	100	0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4	3	3	4	3	3	3	3			
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0			
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0			
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	13.0	30.0	30.0	97.0	97.0		
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0		
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0		
Minimum Green (G_{min}), s	6	6	6	6	6	6		
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0		
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Off	Min	Off	Off		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

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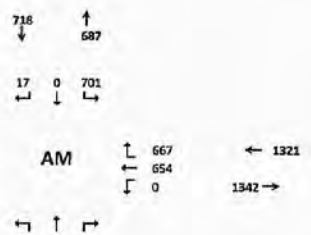
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Pier Ave
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

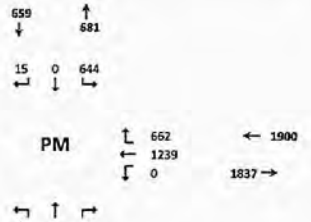
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	63	0	0	49	0	112	496
7:15-7:30	0	0	0	0	0	0	0	57	0	0	50	0	107	497
7:30-7:45	0	0	0	0	0	0	0	81	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	63	0	0	66	0	129	446
8:00-8:15	0	0	0	0	0	0	0	55	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	41	0	0	58	0	99	
8:30-8:45	0	0	0	0	0	0	0	44	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	67	0	0	35	0	102	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	0	0	0	0	0	256	0	0	241	0	497	
Season Factor	0	0	0	0	0	0	0	256	0	0	241	0	497	
Growth	0	0	0	0	0	0	0	278	0	0	260	0	538	
In/Out	-	-	-	OUT	OUT	OUT	IN	IN	-	-	OUT	IN		
Percentage	0%	0%	0%	42%	0%	1%	1%	1%		0%	1%	34%		
PROJECT	0	0	0	701	0	17	20	20	0	0	17	667	1441	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								214			241		455	
Southern Grove %								0.8%			0.8%			
Southern Grove								50			42		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								31			30		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								38			45		83	
Western Grove %								0.8%			0.8%			
Western Grove								11			17		28	
Ravinia %								5.0%			5.0%			
Ravinia								1			3		5	
Total	0	0	0	701	0	17	20	641	0	0	654	667	2700	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,962	1,670
LTC Ranch	1,803	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	58

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	54	0	0	71	0	125	537
4:15-4:30	0	0	0	0	0	0	0	51	0	0	77	0	128	572
4:30-4:45	0	0	0	0	0	0	0	75	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	60	0	0	76	0	136	564
5:00-5:15	0	0	0	0	0	0	0	88	0	0	72	0	160	545
5:15-5:30	0	0	0	0	0	0	0	57	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	65	0	0	65	0	130	
5:45-6:00	0	0	0	0	0	0	0	61	0	0	56	0	117	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	0	0	0	0	0	0	0	280	0	0	302	0	582	
Season Factor	0	0	0	0	0	0	0	280	0	0	302	0	582	
Growth	0	0	0	0	0	0	0	302	0	0	325	0	627	
In/Out	-	-	-	OUT	OUT	OUT	IN	IN	0	-	OUT	IN		
Percentage	0%	0%	0%	42%	0%	1%	1%	1%	0%	0%	1%	34%		
PROJECT	0	0	0	644	0	15	19	316	0	0	405	662	2071	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								392			306		698	
Southern Grove %								0.8%			0.8%			
Southern Grove								55			81		136	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								36			45		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								57			58		115	
Western Grove %								0.8%			0.8%			
Western Grove								20			16		37	
Ravinia %								5.0%			5.0%			
Ravinia								4			2		6	
Total	0	0	0	644	0	15	19	1193	0	0	1239	662	3772	

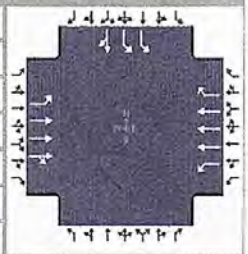


Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,946	1,533
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,530	2,061
Ravinia	77	44

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	641	0	0	654	667				701	0	17

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	7.0	36.0	59.0	0.0	0.0	1	2	3	4	
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	5	6	7	8	
Red	0.0	2.0	2.0	2.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6				4
Case Number	2.0	4.0	2.0	3.0				10.0
Phase Duration, s	13.0	55.0	0.0	42.0				65.0
Change Period, (*Y+R c*), s	6.0	6.0	4.0	6.0				6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0				3.1
Queue Clearance Time (*g s*), s	3.3							18.2
Green Extension Time (*g e*), s	0.0	0.0	0.0	0.0				2.0
Phase Call Probability	1.00							1.00
Max Out Probability	0.32							0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	21	675	0	0	688	492				738	18	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (*g s*), s	1.3	7.7	0.0	0.0	11.6	36.0				16.2	0.7	
Cycle Queue Clearance Time (*g c*), s	1.3	7.7	0.0	0.0	11.6	36.0				16.2	0.7	
Green Ratio (*g/C*)	0.06	0.41			0.30	0.30				0.49	0.49	
Capacity (*c*), veh/h	106	2327		2	1553	483				1728	792	
Volume-to-Capacity Ratio (*X*)	0.199	0.290	0.000	0.000	0.443	1.018				0.427	0.023	
Back of Queue (*Q*), ft/ln (95 th percentile)	27.5	145.7	0	0	203.6	692.9				266.1	11.3	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.1	5.8	0.0	0.0	8.1	27.7				10.6	0.5	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (*d 1*), s/veh	53.8	17.9		0.0	28.7	42.0				19.6	15.7	
Incremental Delay (*d 2*), s/veh	0.3	0.3	0.0	0.0	0.9	45.5				0.1	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (*d*), s/veh	54.2	18.2		0.0	29.6	87.5				19.7	15.7	
Level of Service (LOS)	D	B			C	F				B	B	
Approach Delay, s/veh / LOS	19.3	B		53.7	D		0.0			19.6	B	
Intersection Delay, s/veh / LOS	34.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	2.12	B	3.03	C	2.62	C
Bicycle LOS Score / LOS	0.87	A	1.14	A			1.73	B

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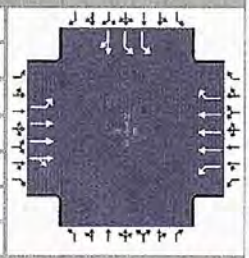
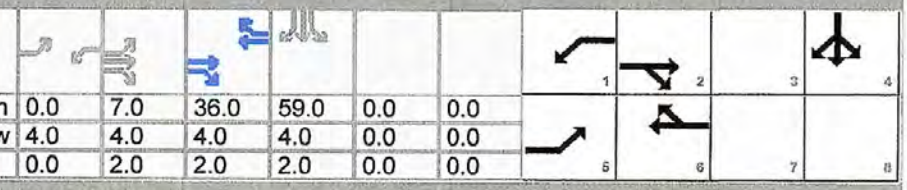
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	641	0	0	654	667				701	0	17

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	0.0	7.0		36.0	59.0	0.0	0.0					
Yellow	4.0	4.0		4.0	4.0	0.0	0.0					
Red	0.0	2.0		2.0	2.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	641	0	0	654	667				701	0	17
Initial Queue (Q_b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	200	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3				3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0				12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0				0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35				35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	42.0	13.0	42.0				65.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R_c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G_{min}), s	6	6	6	6				6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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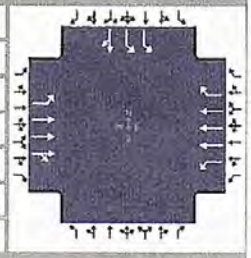
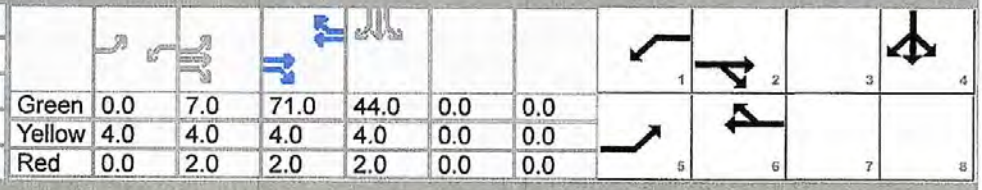
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1193	0	0	1239	662				644	0	15

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	0.0	7.0		71.0	44.0	0.0	0.0					
Yellow	4.0	4.0		4.0	4.0	0.0	0.0					
Red	0.0	2.0		2.0	2.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1193	0	0	1239	662				644	0	15
Initial Queue (Q_b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	200	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3				3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0				12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0				0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35				35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	77.0	13.0	77.0				50.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R_c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G_{min}), s	6	6	6	6				6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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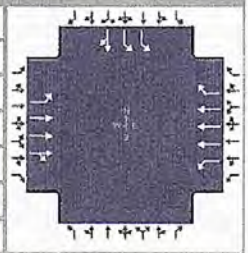
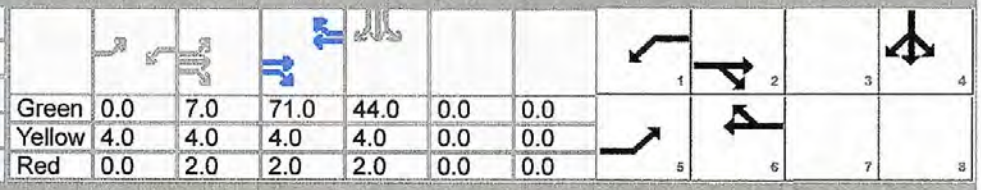
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1193	0	0	1239	662				644	0	15

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	0.0	7.0		71.0	44.0	0.0	0.0					
Yellow	4.0	4.0		4.0	4.0	0.0	0.0					
Red	0.0	2.0		2.0	2.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6				4
Case Number	2.0	4.0	2.0	3.0				10.0
Phase Duration, s	13.0	90.0	0.0	77.0				50.0
Change Period, (*Y+R c*), s	6.0	6.0	4.0	6.0				6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0				3.1
Queue Clearance Time (*g s*), s	3.5							24.9
Green Extension Time (*g e*), s	0.0	0.0	0.0	0.0				1.7
Phase Call Probability	1.00							1.00
Max Out Probability	0.44							0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	20	1256	0	0	1304	486				678	16	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (*g s*), s	1.5	8.7	0.0	0.0	17.2	29.9				22.9	1.0	
Cycle Queue Clearance Time (*g c*), s	1.5	8.7	0.0	0.0	17.2	29.9				22.9	1.0	
Green Ratio (*g/C*)	0.05	0.60			0.51	0.51				0.31	0.31	
Capacity (*c*), veh/h	90	3420		1	2625	817				1104	506	
Volume-to-Capacity Ratio (*X*)	0.221	0.367	0.000	0.000	0.497	0.596				0.614	0.031	
Back of Queue (*Q*), ft/ln (95 th percentile)	31.3	136.2	0	0	239.9	439.2				379.7	17	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	5.4	0.0	0.0	9.6	17.6				15.2	0.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (*d 1*), s/veh	63.9	6.5		0.0	14.0	24.4				40.8	33.2	
Incremental Delay (*d 2*), s/veh	0.5	0.3	0.0	0.0	0.7	3.2				0.7	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (*d*), s/veh	64.3	6.8		0.0	14.6	27.6				41.5	33.3	
Level of Service (LOS)	E	A			B	C				D	C	
Approach Delay, s/veh / LOS	7.7	A		18.1	B		0.0			41.3	D	
Intersection Delay, s/veh / LOS	18.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.38	A	2.10	B	3.04	C	2.63	C
Bicycle LOS Score / LOS	1.19	A	1.47	A			1.63	B

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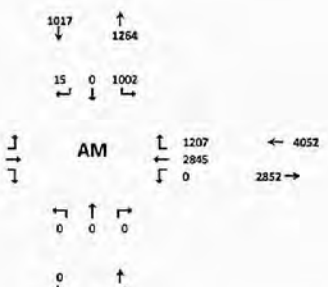
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Gordy Rd
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: Signalized

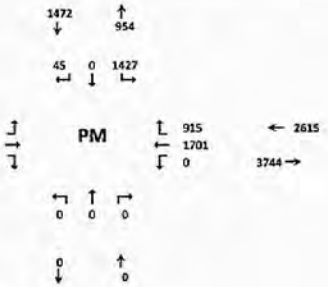
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	63	0	0	49	0	112	496
7:15-7:30	0	0	0	0	0	0	0	57	0	0	50	0	107	497
7:30-7:45	0	0	0	0	0	0	0	81	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	63	0	0	66	0	129	446
8:00-8:15	0	0	0	0	0	0	0	55	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	41	0	0	58	0	99	
8:30-8:45	0	0	0	0	0	0	0	44	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	67	0	0	35	0	102	
AM PEAK HOUR IS FROM:				7:15AM TO 8:15AM										
Volumes	0	0	0	0	0	0	0	256	0	0	241	0	497	
Season Factor	0	0	0	0	0	0	0	256	0	0	241	0	497	
Growth	0	0	0	0	0	0	0	276	0	0	260	0	536	
In/Out	-	-	-	OUT	OUT	OUT	IN	OUT		-	IN	IN		
Percentage	0%	0%	0%	45%	0%	0%	1%	51%		0%	66%	30%		
PROJECT	0	0	0	752	0	0	20	852	0	0	1295	589	3506	
Midway %				33%		2%	2%	49%			49%	33%		
Village at Midway				250		15	37	371			918	618	2211	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								214			241		455	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			31		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Ravinia %								5.0%			5.0%			
Ravinia								3			1		5	
Total	0	0	0	1002	0	15	57	1851	0	0	2845	1207	6976	



	Seasonal Factor	Growth Rate	Years Grown
	1	1.005	15

	Trips In	Trips Out
Willow Lakes	1,962	1,630
Village at Midway	1,874	758
LTC Ranch	1,823	1,614
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,607
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
Lanes														
4:00-4:15	0	0	0	0	0	0	0	54	0	0	71	0	125	537
4:15-4:30	0	0	0	0	0	0	0	51	0	0	77	0	128	572
4:30-4:45	0	0	0	0	0	0	0	75	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	60	0	0	76	0	136	564
5:00-5:15	0	0	0	0	0	0	0	88	0	0	72	0	160	545
5:15-5:30	0	0	0	0	0	0	0	57	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	65	0	0	65	0	130	
5:45-6:00	0	0	0	0	0	0	0	61	0	0	56	0	117	
PM PEAK HOUR IS FROM:				4:30 PM TO 5:30PM										
Volumes	0	0	0	0	0	0	0	280	0	0	302	0	582	
Season Factor	0	0	0	0	0	0	0	280	0	0	302	0	582	
Growth	0	0	0	0	0	0	0	302	0	0	325	0	627	
In/Out	-	-	-	OUT	OUT	OUT	IN	OUT	0	-	IN	IN		
Percentage	0%	0%	0%	45%	0%	0%	1%	51%	0%	0%	66%	30%		
PROJECT	0	0	0	690	0	0	19	376	0	0	405	584	2074	
Midway %				33.0%		2.0%	2.0%	49.0%			49.0%	33.0%		
Village at Midway				737		45	20	1095			491	331	2719	
LTC Ranch %								13.2%			13.2%			
LTC Ranch Volume								392			306		698	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			55		135	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								45			36		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								58			57		115	
Western Grove %								0.8%			0.8%			
Western Grove								15			20		37	
Ravinia %								5.0%			5.0%			
Ravinia								2			4		6	
Total	0	0	0	1427	0	45	40	2317	0	0	1701	915	6444	

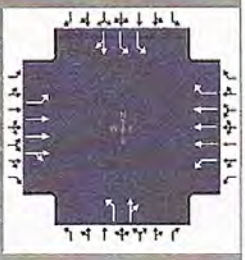


	Seasonal Factor	Growth Rate	Years Grown
	1	1.005	15

	Trips In	Trips Out
Willow Lakes	1,946	1,513
Village at Midway	1,001	2,224
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,541	5,679
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - w.o. Art...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	20	1329	0	0	1750	785	0	0	0	935	0	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	3.0	65.0	34.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	2.0	2.0	2.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	3.0		10.0		10.0
Phase Duration, s	9.0	80.0	0.0	71.0		0.0		40.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (MAH), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (g_s), s	2.6							34.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.50							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	21	1399	0	0	1842	511	0	0		984	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1725	1610	1810	0		1792	0	
Queue Service Time (g_s), s	0.6	7.8	0.0	0.0	22.6	25.5	0.0	0.0		32.6	0.0	
Cycle Queue Clearance Time (g_c), s	0.6	7.8	0.0	0.0	22.6	25.5	0.0	0.0		32.6	0.0	
Green Ratio (g/C)	0.58	0.62			0.54	0.54				0.28		
Capacity (c), veh/h	196	3515		2	2802	872	2			1016		
Volume-to-Capacity Ratio (X)	0.108	0.398	0.000	0.000	0.657	0.586	0.000	0.000		0.969	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	10.5	111.2	0	0	260.8	373	0	0		595.4	0	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	4.4	0.0	0.0	10.4	14.9	0.0	0.0		23.8	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	13.3	4.8		0.0	10.8	18.5	0.0			42.5		
Incremental Delay (d_2), s/veh	0.1	0.3	0.0	0.0	1.2	2.9	0.0	0.0		20.9	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	13.4	5.1		0.0	12.0	21.3	0.0			63.4		
Level of Service (LOS)	B	A			B	C				E		
Approach Delay, s/veh / LOS	5.2	A		14.0	B		0.0			63.4	E	
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	2.09	B	3.18	C	2.62	C
Bicycle LOS Score / LOS	1.27	A	1.78	B	0.49	A	2.11	B

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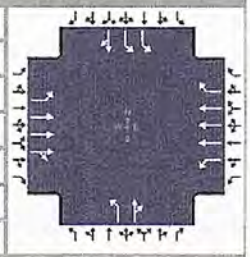
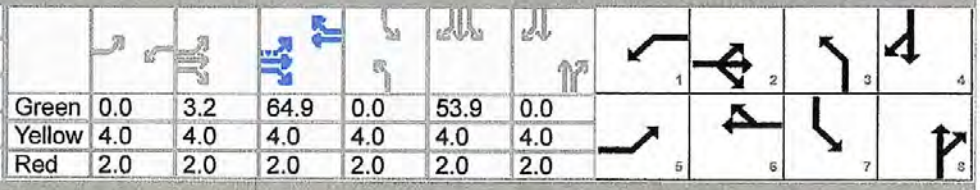
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd Gordy Rd - PM Peak Hour - w.o. Arte...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1222	0	0	1209	778	0	0	0	858	0	0

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On



Green	0.0	3.2	64.9	0.0	53.9	0.0		
Yellow	4.0	4.0	4.0	4.0	4.0	4.0		
Red	2.0	2.0	2.0	2.0	2.0	2.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	2.0	3.0	2.0	4.0	2.0	4.0
Phase Duration, s	9.2	80.1	0.0	70.9	0.0	0.0	59.9	59.9
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Queue Clearance Time (g_s), s	2.8						53.8	
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Phase Call Probability	0.54						1.00	
Max Out Probability	0.00						1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	20	1286	0	0	1273	503	0	0		903	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	0	1810	1725	1610	1810	0		1202	0	
Queue Service Time (g_s), s	0.8	13.3	0.0	0.0	19.6	34.2	0.0	0.0		51.8	0.0	
Cycle Queue Clearance Time (g_c), s	0.8	13.3	0.0	0.0	19.6	34.2	0.0	0.0		51.8	0.0	
Green Ratio (*g/C*)	0.50	0.53			0.46	0.46				0.38		
Capacity (*c*), veh/h	236	3017		1	2398	746	1			925		
Volume-to-Capacity Ratio (*X*)	0.085	0.426	0.000	0.000	0.531	0.675	0.000	0.000		0.976	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)	15	211.9	0	0	282	503.2	0	0		627.1	0	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	8.5	0.0	0.0	11.3	20.1	0.0	0.0		25.1	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	19.4	11.7		0.0	18.1	29.3	0.0			42.4		
Incremental Delay (d_2), s/veh	0.1	0.4	0.0	0.0	0.8	4.8	0.0	0.0		23.7	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	19.4	12.1		0.0	19.0	34.2	0.0			66.1		
Level of Service (LOS)	B	B			B	C				E		
Approach Delay, s/veh / LOS	12.2	B		23.3	C		0.0			66.1	E	
Intersection Delay, s/veh / LOS	29.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.11	B	3.18	C	2.58	C
Bicycle LOS Score / LOS	1.21	A	1.46	A	0.49	A	1.98	B

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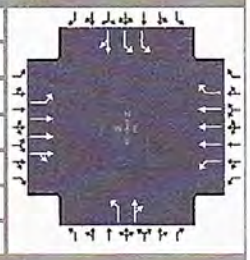
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - w.o. Art...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	20	1329	0	0	1750	785	0	0	0	935	0	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.0	65.0	34.0	0.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	5	6	7	8		
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	1329	0	0	1750	785	0	0	0	935	0	0
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0		0	0	300	0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	55.0	13.0	55.0	12.0	12.0	40.0	40.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*lt*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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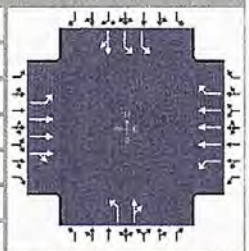
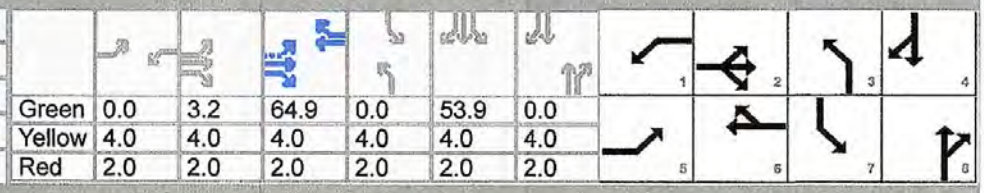
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Gordy Rd	File Name	Midway Rd Gordy Rd - PM Peak Hour - w.o. Arte...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1222	0	0	1209	778	0	0	0	858	0	0

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On



Green	0.0	3.2		64.9	0.0	53.9	0.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	1222	0	0	1209	778	0	0	0	858	0	0
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0		0	0	300	0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	17.0	51.0	14.0	48.0	23.0	15.0	60.0	52.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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APPENDIX F

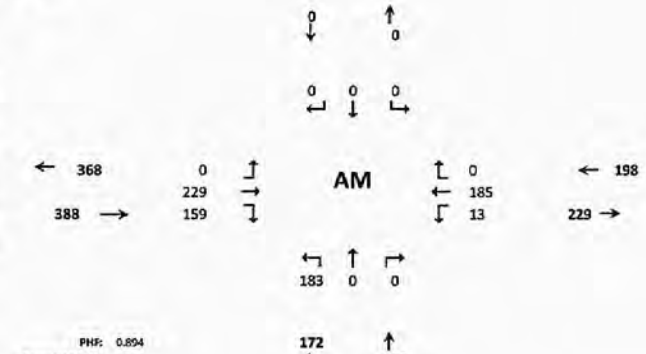
2035 Intersection Data

2035 Intersection Worksheet
HCS
Timing Sheets

TURNING MOVEMENT VOLUME COUNTS

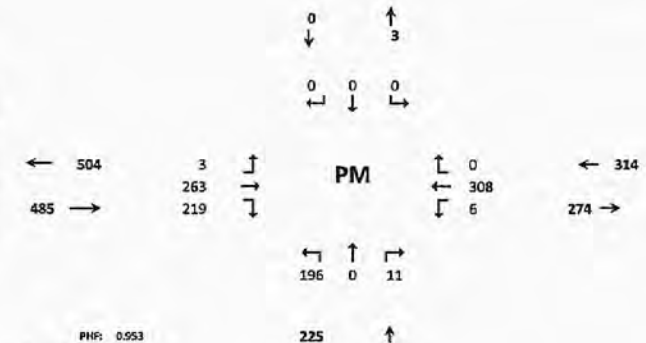
N/S STREET: Midway Rd
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
REPORT DATE:
DAY: Thursday
ANALYSIS YEAR: 2020
E/W STREET: Okeechobee Rd
CITY: St Lucie
CONTROL: TWSC

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NST	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	27	0	2	0	0	0	0	49	40	3	47	0	168	768
7:15-7:30	34	0	1	0	0	0	0	51	42	0	58	0	186	767
7:30-7:45	48	0	0	0	0	0	0	65	55	2	45	0	215	769
7:45-8:00	47	0	0	0	0	0	0	55	39	5	53	0	199	737
8:00-8:15	38	0	0	0	0	0	0	55	31	5	38	0	167	715
8:15-8:30	50	0	0	0	0	0	0	54	34	1	49	0	188	
8:30-8:45	46	0	0	0	0	0	0	59	30	2	46	0	183	
8:45-9:00	26	0	0	0	0	0	0	64	44	4	39	0	177	
AM PEAK HOUR IS FROM:	7:30 AM TO 8:30AM													
Volumes	183	0	0	0	0	0	0	229	159	13	185	0	769	
Season Factor	183	0	0	0	0	0	0	229	159	13	185	0	769	
Growth	183	0	0	0	0	0	0	229	159	13	185	0	769	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	183	0	0	0	0	0	0	229	159	13	185	0	769	



	Trips In	Trips Out
Willow Lakes	1,327	1,052

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NST	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	42	0	2	0	0	0	0	67	44	0	81	0	236	979
4:15-4:30	45	0	2	0	0	0	0	67	51	0	67	0	232	988
4:30-4:45	45	0	2	0	0	0	0	73	40	0	87	0	247	997
4:45-5:00	59	0	1	0	0	0	1	74	44	1	84	0	264	1006
5:00-5:15	48	0	6	0	0	0	0	59	52	1	79	0	245	941
5:15-5:30	49	0	0	0	0	0	0	69	48	2	73	0	241	
5:30-5:45	40	0	4	0	0	0	2	61	75	2	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	70	46	1	47	0	199	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Season Factor	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Growth	196	0	11	0	0	0	3	263	219	6	308	0	1006	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	0.0%								0.0%					
Village at Midway	0								0				0	
LTC Ranch %	0.0%		0.0%						0.0%	0.0%				
LTC Ranch Volume	0		0						0	0			0	
Shinn Road 251 %								0.0%			0.0%			
Shinn Road 251								0			0		0	
Shinn Road Equestrian Estates %								0.0%			0.0%			
Shinn Road Equestrian Estates								0			0		0	
Total	196	0	11	0	0	0	3	263	219	6	308	0	1006	



	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	726	1,824
LTC Ranch	2,457	3,776
Shinn Road 251	351	341
Shinn Road Equestrian Estates	71	42

F-1

HCS7 Two-Way Stop-Control Report

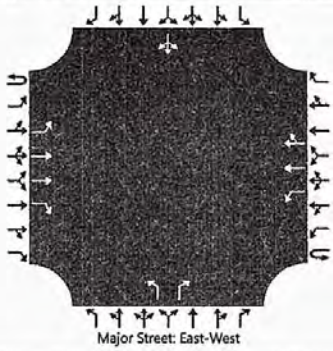
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2020
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	0	0	229	159	0	13	185	0		183		0		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				14				193		0			0	
Capacity, c (veh/h)		1368				1140				611		905				
v/c Ratio		0.00				0.01				0.32		0.00				
95% Queue Length, Q_{95} (veh)		0.0				0.0				1.3		0.0				
Control Delay (s/veh)		7.6				8.2				13.6		9.0				
Level of Service (LOS)		A				A				B		A				
Approach Delay (s/veh)		0.0				0.5				13.6						
Approach LOS										B						

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HCS7 Two-Way Stop-Control Report

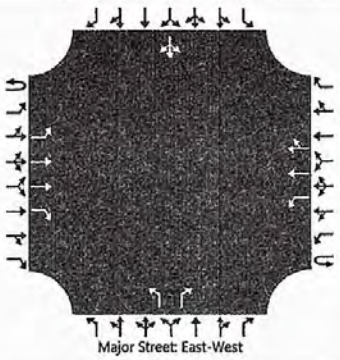
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	0	3	263	219	0	6	308	0		196		11		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3				6				206		12			0	
Capacity, c (veh/h)		1225				1047				556		881				
v/c Ratio		0.00				0.01				0.37		0.01				
95% Queue Length, Q_{95} (veh)		0.0				0.0				1.7		0.0				
Control Delay (s/veh)		7.9				8.5				15.2		9.1				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				0.2				14.9						
Approach LOS										B						

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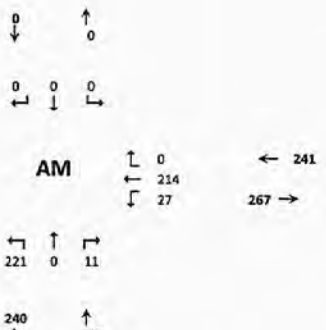
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Midway Rd
E/W STREET: Okeechobee Rd
CONTROL: TWSC
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
DAY: Thursday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

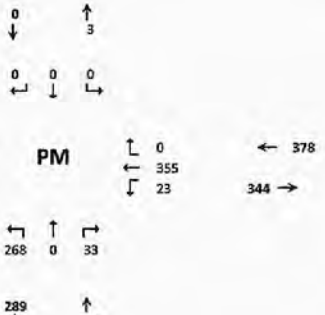
15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	27	0	2	0	0	0	0	49	40	3	47	0	168	768
7:15-7:30	34	0	1	0	0	0	0	51	42	0	58	0	186	767
7:30-7:45	48	0	0	0	0	0	0	65	55	2	45	0	215	769
7:45-8:00	47	0	0	0	0	0	0	55	39	5	53	0	199	737
8:00-8:15	38	0	0	0	0	0	0	55	31	5	38	0	167	715
8:15-8:30	50	0	0	0	0	0	0	54	34	1	49	0	188	
8:30-8:45	46	0	0	0	0	0	0	59	30	2	46	0	183	
8:45-9:00	26	0	0	0	0	0	0	64	44	4	39	0	177	
AM PEAK HOUR IS FROM:	7:30 AM TO 8:30AM													
Volumes	183	0	0	0	0	0	0	229	159	13	185	0	769	
Season Factor	183	0	0	0	0	0	0	229	159	13	185	0	769	
Growth	197	0	0	0	0	0	0	247	171	14	199	0	829	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	2%								2%					
Village at Midway	12								29				41	
LTC Ranch %	0.7%		0.7%						0.7%	0.7%				
LTC Ranch Volume	11		11						13	13			48	
Shinn Road 251 %								5.0%			5.0%			
Shinn Road 251								6			5		11	
Shinn Road Equestrian Estates %								15.0%			15.0%			
Shinn Road Equestrian Estates								3			9		13	
Total	221	0	11	0	0	0	0	256	213	27	214	0	942	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Shinn Road 251	113	109
Shinn Road Equestrian Estates	21	63

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	42	0	2	0	0	0	0	67	44	0	81	0	236	979
4:15-4:30	45	0	2	0	0	0	0	67	51	0	67	0	232	988
4:30-4:45	45	0	2	0	0	0	0	73	40	0	87	0	247	997
4:45-5:00	59	0	1	0	0	0	1	74	44	1	84	0	264	1006
5:00-5:15	48	0	6	0	0	0	0	59	52	1	79	0	245	941
5:15-5:30	49	0	0	0	0	0	0	69	48	2	73	0	241	
5:30-5:45	40	0	4	0	0	0	2	61	75	2	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	70	46	1	47	0	199	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Season Factor	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Growth	211	0	12	0	0	0	3	283	236	6	332	0	1084	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	2.0%								2.0%					
Village at Midway	36								15				51	
LTC Ranch %	0.7%		0.7%						0.7%	0.7%				
LTC Ranch Volume	21		21						16	16			74	
Shinn Road 251 %								5.0%			5.0%			
Shinn Road 251								18			17		35	
Shinn Road Equestrian Estates %								15.0%			15.0%			
Shinn Road Equestrian Estates								11			6		17	
Total	268	0	33	0	0	0	3	312	267	23	355	0	1261	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	726	1,824
LTC Ranch	2,320	2,970
Shinn Road 251	351	341
Shinn Road Equestrian Estates	71	42

E-4

F-4

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HCS7 Two-Way Stop-Control Report

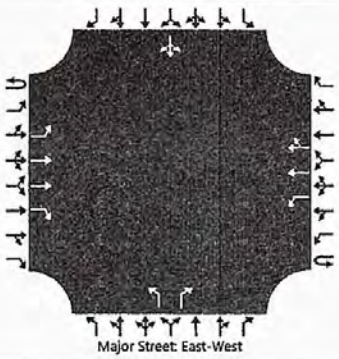
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	0	0	256	240	0	27	214	0		242		11		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				28				255		12			0	
Capacity, c (veh/h)		1333				1034				563		886				
v/c Ratio		0.00				0.03				0.45		0.01				
95% Queue Length, Q_{95} (veh)		0.0				0.1				2.3		0.0				
Control Delay (s/veh)		7.7				8.6				16.6		9.1				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				1.0				16.3						
Approach LOS										C						

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HCS7 Two-Way Stop-Control Report

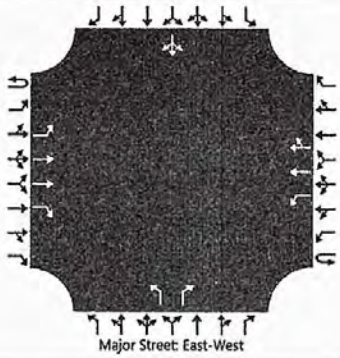
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	without Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	3	0	312	267	0	23	355	0		268		33		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)	6.46	4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)	2.5	2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)	2.53	2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3				24				282		35			0	
Capacity, c (veh/h)		827				958				490		848				
v/c Ratio		0.00				0.03				0.58		0.04				
95% Queue Length, Q_{95} (veh)		0.0				0.1				3.6		0.1				
Control Delay (s/veh)		9.4				8.9				21.9		9.4				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				0.5				20.5						
Approach LOS										C						

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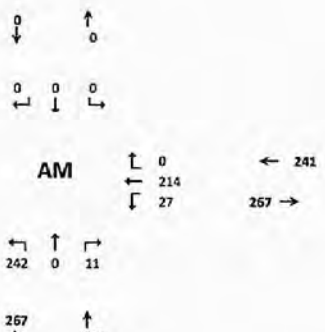
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Midway Rd
E/W STREET: Okeechobee Rd
CONTROL: TWSC
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
DAY: Thursday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

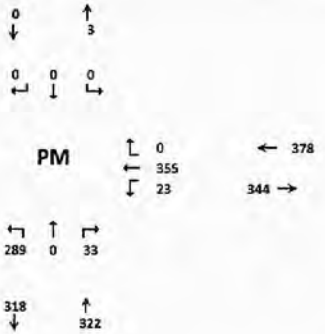
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	27	0	2	0	0	0	0	49	40	3	47	0	168	768
7:15-7:30	34	0	1	0	0	0	0	51	42	0	58	0	186	767
7:30-7:45	48	0	0	0	0	0	0	65	55	2	45	0	215	769
7:45-8:00	47	0	0	0	0	0	0	55	39	5	53	0	199	737
8:00-8:15	38	0	0	0	0	0	0	55	31	5	38	0	167	715
8:15-8:30	50	0	0	0	0	0	0	54	34	1	49	0	188	
8:30-8:45	46	0	0	0	0	0	0	59	30	2	46	0	183	
8:45-9:00	26	0	0	0	0	0	0	64	44	4	39	0	177	
AM PEAK HOUR IS FROM:	7:30 AM TO 8:30AM													
Volumes	183	0	0	0	0	0	0	229	159	13	185	0	769	
Season Factor	183	0	0	0	0	0	0	229	159	13	185	0	769	
Growth	197	0	0	0	0	0	0	247	171	14	199	0	829	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%		
PROJECT	21	0	0	0	0	0	0	0	27	0	0	0	48	
Midway %	2%								2%					
Village at Midway	12								19				41	
LTC Ranch %	0.7%		0.7%						0.7%	0.7%				
LTC Ranch Volume	11		11						13	13			48	
Shinn Road 251 %								5.0%			5.0%			
Shinn Road 251								6			5		11	
Shinn Road Equestrian Estates %								15.0%			15.0%			
Shinn Road Equestrian Estates								3			9		13	
Total	242	0	11	0	0	0	0	256	240	27	214	0	900	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,355	1,065
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Shinn Road 251	113	109
Shinn Road Equestrian Estates	21	63

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	42	0	2	0	0	0	0	67	44	0	81	0	236	979
4:15-4:30	45	0	2	0	0	0	0	67	51	0	67	0	232	988
4:30-4:45	45	0	2	0	0	0	0	73	40	0	87	0	247	997
4:45-5:00	59	0	1	0	0	0	1	74	44	1	84	0	264	1006
5:00-5:15	48	0	6	0	0	0	0	59	52	1	79	0	245	941
5:15-5:30	49	0	0	0	0	0	0	69	48	2	73	0	241	
5:30-5:45	40	0	4	0	0	0	2	61	75	2	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	70	46	1	47	0	199	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Season Factor	196	0	11	0	0	0	3	263	219	6	308	0	1006	
Growth	211	0	12	0	0	0	3	283	236	6	332	0	1084	
In/Out	OUT	-	OUT	-	-	-	-	-	IN	IN	-	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%		
PROJECT	21	0	0	0	0	0	0	0	29	0	0	0	50	
Midway %	2.0%								2.0%					
Village at Midway	36								15				51	
LTC Ranch %	0.7%		0.7%						0.7%	0.7%				
LTC Ranch Volume	21		21						16	16			74	
Shinn Road 251 %								5.0%			5.0%			
Shinn Road 251								18			17		35	
Shinn Road Equestrian Estates %								15.0%			15.0%			
Shinn Road Equestrian Estates								11			6		17	
Total	289	0	33	0	0	0	3	312	296	23	355	0	1310	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,450	1,036
Village at Midway	726	1,824
LTC Ranch	2,320	2,970
Shinn Road 251	351	341
Shinn Road Equestrian Estates	71	42

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HCS7 Two-Way Stop-Control Report

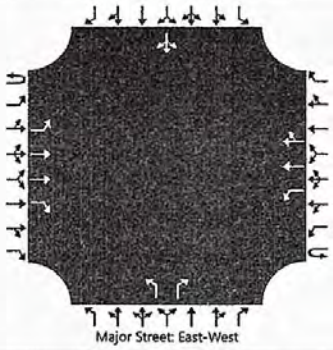
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	0	0	267	252	0	40	225	0		253		23		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				42				266		24			0	
Capacity, c (veh/h)		1320				1012				534		879				
v/c Ratio		0.00				0.04				0.50		0.03				
95% Queue Length, Q_{95} (veh)		0.0				0.1				2.8		0.1				
Control Delay (s/veh)		7.7				8.7				18.3		9.2				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				1.3				17.5						
Approach LOS										C						

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HCS7 Two-Way Stop-Control Report

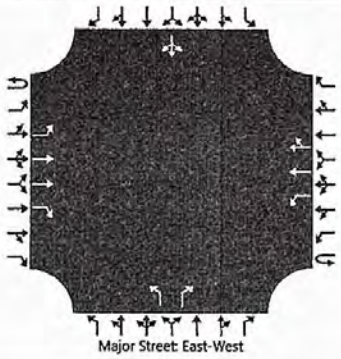
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	1	0	1	2	0		1	0	1		0	1	0
Configuration		L	T	R		L	T	TR		L		R			LTR	
Volume (veh/h)	3	0	312	296	0	23	355	0		289		33		0	0	0
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No								No						
Median Type | Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)	6.46	4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)	2.5	2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)	2.53	2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3				24				304		35			0	
Capacity, c (veh/h)		827				933				490		848				
v/c Ratio		0.00				0.03				0.62		0.04				
95% Queue Length, Q_{95} (veh)		0.0				0.1				4.2		0.1				
Control Delay (s/veh)		9.4				9.0				23.7		9.4				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				0.5				22.2						
Approach LOS										C						

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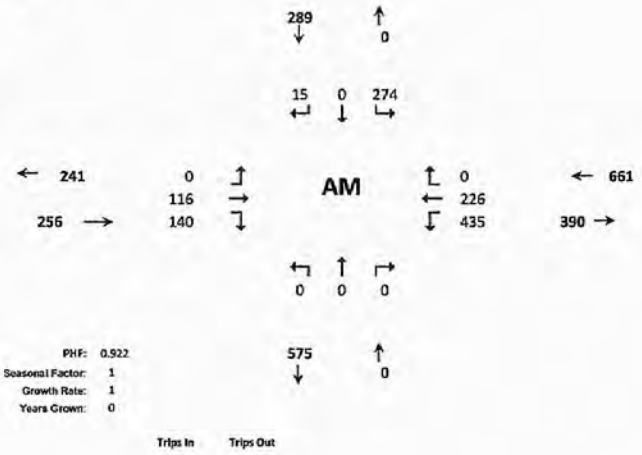
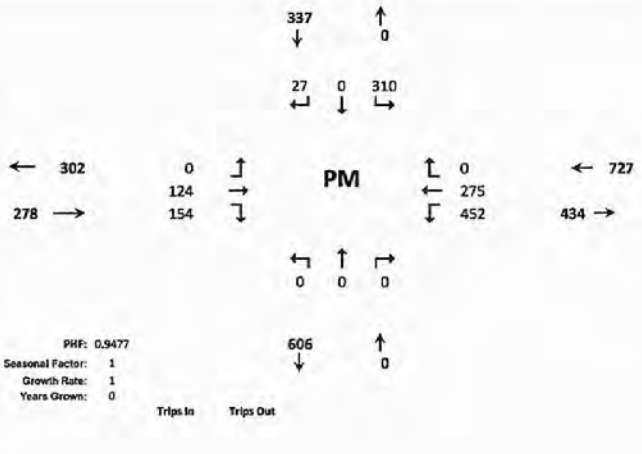
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I95 SB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	0	0	0	53	0	5	0	23	40	101	44	0	266	1203
7:15-7:30	0	0	0	75	0	1	0	24	33	126	49	0	308	1206
7:30-7:45	0	0	0	71	0	5	0	38	43	108	62	0	327	1159
7:45-8:00	0	0	0	71	0	5	0	31	32	102	61	0	302	1067
8:00-8:15	0	0	0	57	0	4	0	23	32	99	54	0	269	984
8:15-8:30	0	0	0	72	0	6	0	19	22	90	52	0	261	
8:30-8:45	0	0	0	51	0	9	0	25	19	79	52	0	235	
8:45-9:00	0	0	0	44	0	5	0	32	30	78	30	0	219	
AM PEAK HOUR IS FROM:	7:15AM TO 8:15AM													
Volumes	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Season Factor	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Growth	0	0	0	274	0	15	0	116	140	435	226	0	1206	
In/Out	-	-	-	-	-	-	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	274	0	15	0	116	140	435	226	0	1206	



15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	0	0	0	71	0	3	0	21	33	111	68	0	307	1274
4:15-4:30	0	0	0	68	0	6	0	32	25	125	71	0	327	1321
4:30-4:45	0	0	0	62	0	11	0	37	38	115	62	0	325	1342
4:45-5:00	0	0	0	74	0	4	0	29	31	105	72	0	315	1310
5:00-5:15	0	0	0	89	0	5	0	40	48	105	67	0	354	1272
5:15-5:30	0	0	0	85	0	7	0	18	37	127	74	0	348	
5:30-5:45	0	0	0	66	0	4	0	32	33	97	61	0	293	
5:45-6:00	0	0	0	75	0	7	0	30	31	85	49	0	277	
PM PEAK HOUR IS FROM:	4:30 PM TO 5:30PM													
Volumes	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Season Factor	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Growth	0	0	0	310	0	27	0	124	154	452	275	0	1342	
In/Out	-	-	-	-	-	-	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	310	0	27	0	124	154	452	275	0	1342	



F-10

#2 E

#2

ECONOLITE

St. Lucie County

00024 - MIDWAY RD @ I-95 SB RAMP - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

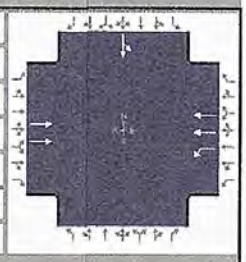
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	WB-T	E-L	W-T	WB-L	EB-T	W-L	SB	N	N	N	N	N	N	N	N
Min Green	0	8	0	0	7	8	0	6	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	3.0	0.0	0.0	5.0	3.0	0.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	30	45	0	25	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	5.0	0.0	0.0	5.0	5.0	0.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Q in use

#2

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - Existing.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		116		435	226					274	0	

Signal Information			
Cycle, s	56.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4		
Green	14.4	8.0	11.4	0.0	0.0	0.0	5	6	7	8		
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				12.0
Phase Duration, s		16.0	22.4	38.4				18.4
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		2.9	3.0	2.9				3.0
Queue Clearance Time (g_s), s		3.8	13.5	3.9				11.0
Green Extension Time (g_e), s		0.8	0.9	0.8				0.5
Phase Call Probability		1.00	1.00	1.00				0.99
Max Out Probability		0.00	0.00	0.00				0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		126		473	246						298	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809		1810	1809						1810	
Queue Service Time (g_s), s		1.8		11.5	1.9						9.0	
Cycle Queue Clearance Time (g_c), s		1.8		11.5	1.9						9.0	
Green Ratio (*g/C*)		0.14		0.43	0.54						0.20	
Capacity (*c*), veh/h		509		726	1936						364	
Volume-to-Capacity Ratio (*X*)		0.248		0.651	0.127						0.819	
Back of Queue (*Q*), ft/ln (95 th percentile)		29.7		160	22.4						153.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		1.2		6.4	0.9						6.1	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00						0.00	
Uniform Delay (d_1), s/veh		21.8		12.7	6.6						21.7	
Incremental Delay (d_2), s/veh		0.1		0.4	0.0						1.8	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0						0.0	
Control Delay (*d*), s/veh		21.8		13.1	6.6						23.5	
Level of Service (LOS)		C		B	A						C	
Approach Delay, s/veh / LOS	21.8	C		10.9	B		0.0			23.5	C	
Intersection Delay, s/veh / LOS	15.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.35	A	2.30	B	2.13	B
Bicycle LOS Score / LOS	0.59	A	1.08	A			0.98	A

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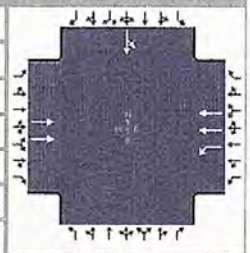
HCS7 Signalized Intersection Input Data

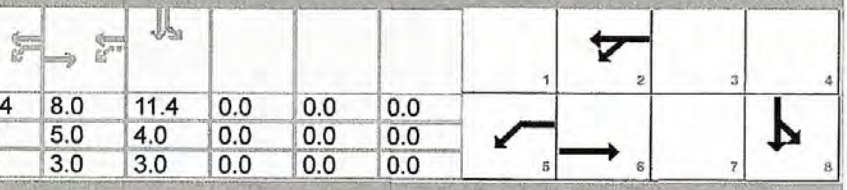
#2 EAM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - Existing - 6.2....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		116		435	226					274	0	

Signal Information			
Cycle, s	56.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	14.4	8.0		11.4	0.0	0.0	0.0					
Yellow	5.0	5.0		4.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		116		435	226					274	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0						0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)		3		3	3					3	3	
Upstream Filtering (I)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0						12.0	
Turn Bay Length, ft		0		0	0						0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		40.0	40.0	40.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (l_1), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (e), s		2.0	2.0	2.0			2.0	2.0
Passage (PT), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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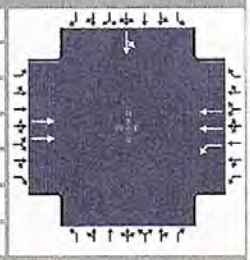
HCS7 Signalized Intersection Results Summary

#2 AM PM

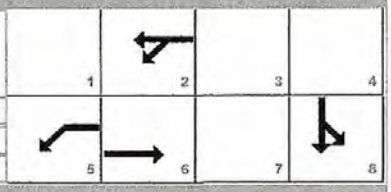
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - Existing - 6.2.2...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		124		452	275					310	0	

Signal Information			
Cycle, s	58.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	14.9	8.0	12.7	0.0	0.0	0.0	
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				12.0
Phase Duration, s		16.0	22.9	38.9				19.7
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		2.9	3.0	2.9				3.0
Queue Clearance Time (g_s), s		3.9	14.0	4.4				12.1
Green Extension Time (g_e), s		0.9	0.9	0.9				0.6
Phase Call Probability		1.00	1.00	1.00				1.00
Max Out Probability		0.00	0.00	0.00				0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		131		476	289						326	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809		1810	1809						1810	
Queue Service Time (g_s), s		1.9		12.0	2.4						10.1	
Cycle Queue Clearance Time (g_c), s		1.9		12.0	2.4						10.1	
Green Ratio (*g/C*)		0.14		0.43	0.53						0.22	
Capacity (*c*), veh/h		493		717	1910						392	
Volume-to-Capacity Ratio (*X*)		0.265		0.663	0.152						0.833	
Back of Queue (Q), ft/ln (95 th percentile)		32.4		171.9	29.5						174	
Back of Queue (Q), veh/ln (95 th percentile)		1.3		6.9	1.2						7.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00						0.00	
Uniform Delay (d_1), s/veh		22.7		13.3	7.1						22.0	
Incremental Delay (d_2), s/veh		0.1		0.4	0.0						1.8	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0						0.0	
Control Delay (*d*), s/veh		22.8		13.7	7.1						23.8	
Level of Service (LOS)		C		B	A						C	
Approach Delay, s/veh / LOS	22.8	C		11.2	B		0.0			23.8	C	
Intersection Delay, s/veh / LOS	15.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.36	A	2.30	B	2.13	B
Bicycle LOS Score / LOS	0.60	A	1.12	A			1.03	A

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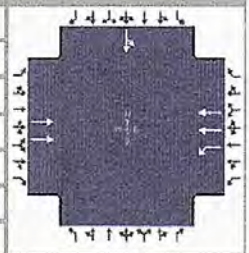
HCS7 Signalized Intersection Input Data

#2EPM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - Existing - 6.2....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		124		452	275					310	0	

Signal Information			
Cycle, s	58.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4		
Green	14.9	8.0	12.7	0.0	0.0	0.0	5	6	7	8		
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		124		452	275					310	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0						0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		3		3	3					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0						12.0	
Turn Bay Length, ft		0		0	0						0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		40.0	40.0	40.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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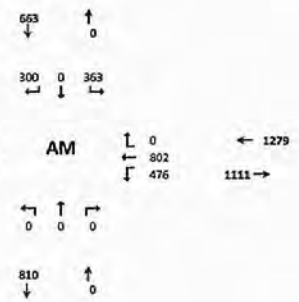
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I95 SB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 1/28/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035 w/o Project

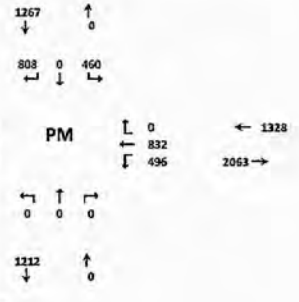
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	53	0	5	0	21	40	101	44	0	266	1203
7:15-7:30	0	0	0	75	0	1	0	24	33	126	49	0	308	1206
7:30-7:45	0	0	0	71	0	5	0	18	41	108	62	0	327	1159
7:45-8:00	0	0	0	71	0	5	0	31	31	102	61	0	302	1067
8:00-8:15	0	0	0	57	0	4	0	23	31	99	54	0	269	984
8:15-8:30	0	0	0	72	0	6	0	19	22	90	52	0	261	
8:30-8:45	0	0	0	51	0	9	0	25	19	79	52	0	235	
8:45-9:00	0	0	0	44	0	5	0	32	30	78	30	0	219	
AM PEAK HOUR IS FROM:				7:15AM TO 8:15AM										
Volumes	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Season Factor	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Growth	0	0	0	295	0	16	0	125	151	469	244	0	1300	
In/Out	-	-	-	-	-	-	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %						36%		57%	30%		16%			
Village at Midway						217		334	181		232		944	
LTC Ranch %				4.1%		4.1%		10.8%	0.1%	0.2%	10.8%			
LTC Ranch Volume				67		67		175	2	3	197		510	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			31		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Ravinia %				5.0%						6.0%				
Ravinia				1						4			5	
Total	0	0	0	353	0	300	0	748	333	476	802	0	3023	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	601
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,558
Western Grove	1,352	2,135
Ravinia	22	68

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	71	0	3	0	21	31	111	68	0	307	1274
4:15-4:30	0	0	0	68	0	6	0	32	25	125	71	0	327	1321
4:30-4:45	0	0	0	82	0	11	0	37	38	115	62	0	325	1342
4:45-5:00	0	0	0	74	0	4	0	29	31	105	72	0	315	1310
5:00-5:15	0	0	0	89	0	5	0	40	48	105	67	0	354	1272
5:15-5:30	0	0	0	85	0	7	0	18	37	127	74	0	348	
5:30-5:45	0	0	0	66	0	4	0	32	31	97	61	0	293	
5:45-6:00	0	0	0	75	0	7	0	30	31	85	49	0	277	
PM PEAK HOUR IS FROM:				4:30 PM TO 5:30PM										
Volumes	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Season Factor	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Growth	0	0	0	334	0	29	0	134	166	487	296	0	1446	
In/Out	-	-	-	-	-	-	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %						36.0%		57.0%	30.0%		16.0%			
Village at Midway						657		948	547		116		2268	
LTC Ranch %				4.1%		4.1%		10.8%	0.1%	0.2%	10.8%			
LTC Ranch Volume				122		122		321	3	6	251		824	
Southern Grove %								0.8%		0.0%	0.8%			
Southern Grove								81		0	55		136	
Wilson Groves %								0.8%		0.0%	0.8%			
Wilson Groves								45		0	36		81	
Riverland/Kennedy %								0.8%		0.0%	0.8%			
Riverland/Kennedy								58		0	57		115	
Western Grove %								0.8%		0.0%	0.8%			
Western Grove								15		0	20		37	
Ravinia %				5.0%						6.0%				
Ravinia				6						1			6	
Total	0	0	0	460	0	808	0	1503	716	496	832	0	4914	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	726	1,824
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44

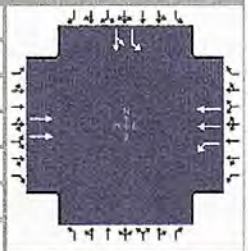
F-16

2 w/o/p

HCS7 Signalized Intersection Results Summary

#2 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 w.o. Proje...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		748		476	802					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4		
Green	17.0	52.0	28.0	0.0	0.0	0.0	5	6	7	8		
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	25.0	85.0				35.0
Change Period, (*Y+R c*), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		0.0	3.0	0.0				3.0
Queue Clearance Time (*g s*), s			19.0					27.6
Green Extension Time (*g e*), s		0.0	0.0	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					0.18

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		813		517	872					395	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (*g s*), s		16.3		17.0	6.2					25.6	0.0	
Cycle Queue Clearance Time (*g c*), s		16.3		17.0	6.2					25.6	0.0	
Green Ratio (*g/C*)		0.43		0.59	0.64					0.23	0.23	
Capacity (*c*), veh/h		1568		519	2320					423	444	
Volume-to-Capacity Ratio (*X*)		0.519		0.997	0.376					0.933	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		245		467.8	80.3					491.2	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		9.8		18.7	3.2					19.6	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh		17.8		22.1	3.6					45.1	0.0	
Incremental Delay (*d 2*), s/veh		1.2		38.7	0.5					21.4	0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (*d*), s/veh		19.0		60.8	4.0					66.5	0.0	
Level of Service (LOS)		B		E	A					E		
Approach Delay, s/veh / LOS	19.0	B		25.2	C		0.0			66.5	E	
Intersection Delay, s/veh / LOS	29.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.65	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.16	A	1.63	B			1.14	A

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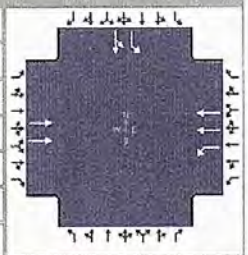
HCS7 Signalized Intersection Input Data

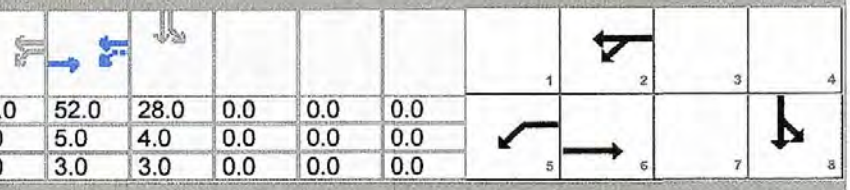
#2 W/O AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	17.0	52.0		28.0	0.0	0.0	0.0					
Yellow	5.0	5.0		4.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)		4		3	4					3	3	
Upstream Filtering (I)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	20.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (l_1), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (e), s		2.0	2.0	2.0			2.0	2.0
Passage (PT), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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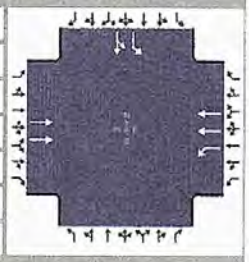
HCS7 Signalized Intersection Results Summary

#2 w/o PM

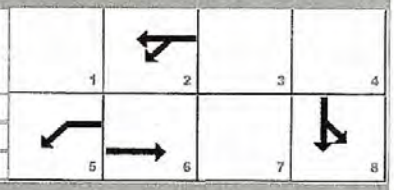
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 w.o. Proje...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1603		496	832					460	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.0	52.0	33.0	0.0	0.0	0.0	
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	20.0	80.0				40.0
Change Period, (*Y+R c*), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		0.0	3.0	0.0				3.0
Queue Clearance Time (*g s*), s			14.0					35.0
Green Extension Time (*g e*), s		0.0	0.0	0.0				0.0
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		1742		539	904					500	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (*g s*), s		52.0		12.0	9.0					33.0	0.0	
Cycle Queue Clearance Time (*g c*), s		52.0		12.0	9.0					33.0	0.0	
Green Ratio (*g/C*)		0.43		0.55	0.60					0.28	0.28	
Capacity (*c*), veh/h		1568		241	2171					498	523	
Volume-to-Capacity Ratio (*X*)		1.111		2.237	0.417					1.005	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		1060.8		1595.3	121.6					681.5	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		42.4		63.8	4.9					27.3	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh		25.3		39.1	5.7					43.5	0.0	
Incremental Delay (*d 2*), s/veh		59.8		570.1	0.6					41.5	0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (*d*), s/veh		85.1		609.1	6.3					85.0	0.0	
Level of Service (LOS)		F		F	A					F		
Approach Delay, s/veh / LOS	85.1	F		231.4	F		0.0			85.0	F	
Intersection Delay, s/veh / LOS	142.4						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.66	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.93	B	1.68	B			1.31	A

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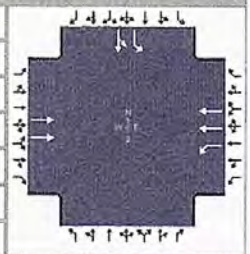
HCS7 Signalized Intersection Input Data

#2 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1603		496	832					460	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	12.0	52.0	33.0	0.0	0.0	0.0	5	6	7	8	
Yellow	5.0	5.0	4.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1603		496	832					460	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		4		3	4					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	20.0	80.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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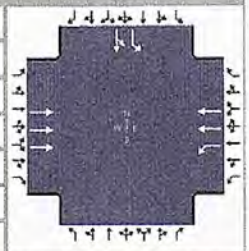
HCS7 Signalized Intersection Results Summary #2 w/o AM+Proj

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 w.o. Proje...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4		
Green	21.4	48.4	27.2	0.0	0.0	0.0	5	6	7	8		
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		56.4	29.4	85.8				34.2
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g_s), s			20.5					26.8
Green Extension Time (g_e), s		0.0	0.9	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.10

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		787		501	844					382	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (g_s), s		10.6		18.5	5.5					24.8	0.0	
Cycle Queue Clearance Time (g_c), s		10.6		18.5	5.5					24.8	0.0	
Green Ratio (g/C)		0.40		0.60	0.65					0.23	0.23	
Capacity (c), veh/h		2087		602	2344					411	431	
Volume-to-Capacity Ratio (X)		0.377		0.832	0.360					0.930	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		173.8		296.1	72.2					475.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		7.0		11.8	2.9					19.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d_1), s/veh		19.0		15.8	3.3					45.4	0.0	
Incremental Delay (d_2), s/veh		0.5		3.5	0.4					20.3	0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		19.5		19.2	3.7					65.7	0.0	
Level of Service (LOS)		B		B	A					E		
Approach Delay, s/veh / LOS	19.5	B		9.5	A		0.0			65.7	E	
Intersection Delay, s/veh / LOS	21.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.65	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	0.92	A	1.60	B			1.12	A

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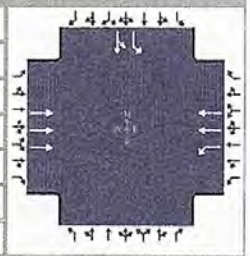
HCS7 Signalized Intersection Input Data

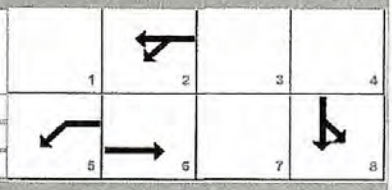
2 w/o AM+TMP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		748		476	802					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	21.4	48.4		27.2	0.0	0.0	0.0					
Yellow	5.0	5.0		4.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		748		476	802					363	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		4		3	4					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l*t), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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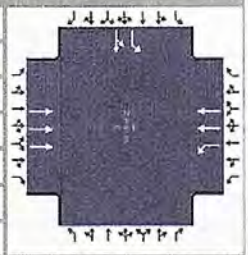
HCS7 Signalized Intersection Results Summary #2 w/o PM + imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 w.o. Proje...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1603		496	832					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB									
Green	32.0	52.0	33.0	0.0	0.0	0.0						
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	40.0	100.0				40.0
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g_s), s			34.0					35.0
Green Extension Time (g_e), s		0.0	0.0	0.0				0.0
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		1687		522	876					484	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (g_s), s		40.8		32.0	6.2					33.0	0.0	
Cycle Queue Clearance Time (g_c), s		40.8		32.0	6.2					33.0	0.0	
Green Ratio (*g/C*)		0.37		0.61	0.66					0.24	0.24	
Capacity (*c*), veh/h		1922		489	2377					427	448	
Volume-to-Capacity Ratio (*X*)		0.878		1.068	0.368					1.135	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		560.3		833.9	82.7					885.1	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		22.4		33.4	3.3					35.4	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d_1), s/veh		32.5		42.9	3.4					53.5	0.0	
Incremental Delay (d_2), s/veh		6.1		60.1	0.4					85.9	0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (*d*), s/veh		38.6		103.0	3.8					139.4	0.0	
Level of Service (LOS)		D		F	A					F		
Approach Delay, s/veh / LOS	38.6	D		40.9	D		0.0			139.4	F	
Intersection Delay, s/veh / LOS	53.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.66	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	1.42	A	1.64	B			1.29	A

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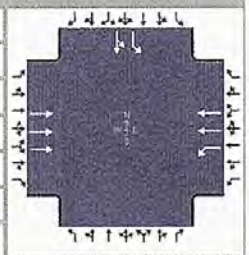
HCS7 Signalized Intersection Input Data #2 w/o PM ramp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1603		496	832					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	32.0	52.0	33.0	0.0	0.0	0.0						
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1603		496	832					460	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)		4		3	4					3	3	
Upstream Filtering (I)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (l_t), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (e), s		2.0	2.0	2.0			2.0	2.0
Passage (PT), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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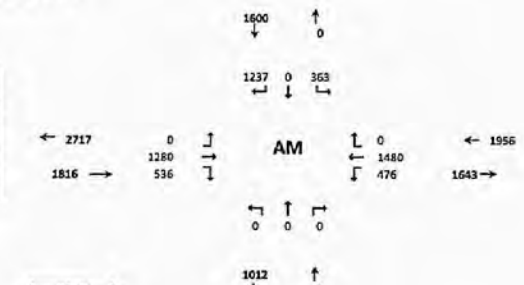
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I55 SB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

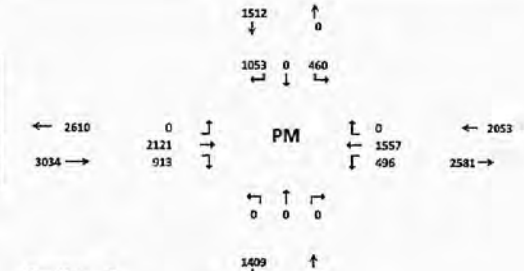
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	53	0	5	0	23	40	101	44	0	266	1203
7:15-7:30	0	0	0	75	0	1	0	24	31	126	49	0	308	1206
7:30-7:45	0	0	0	71	0	5	0	38	41	108	62	0	327	1199
7:45-8:00	0	0	0	71	0	5	0	31	32	102	61	0	302	1067
8:00-8:15	0	0	0	57	0	4	0	23	32	99	54	0	269	984
8:15-8:30	0	0	0	72	0	6	0	19	22	90	52	0	261	
8:30-8:45	0	0	0	51	0	9	0	25	19	79	53	0	235	
8:45-9:00	0	0	0	44	0	5	0	32	30	78	30	0	219	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Season Factor	0	0	0	274	0	15	0	116	140	435	226	0	1206	
Growth	0	0	0	295	0	16	0	125	151	469	244	0	1300	
In/Out	-	-	-	-	-	IN	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	46%	0%	50%	19%	0%	50%	0%		
PROJECT	0	0	0	0	0	623	0	533	202	0	678	0	2036	
Midway %						38%		52%	30%		10%			
Village at Midway						522		314	181		232		1249	
LTC Ranch %				4.1%		4.1%		10.8%	0.1%	0.2%	10.8%			
LTC Ranch Volume				67		75		175	2	3	197		518	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			31		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Raviola %				5.0%						6.0%				
Raviola				1						4			5	
Total	0	0	0	163	0	1237	0	1280	536	476	1480	0	5372	



	Trips In	Trips Out
Willow Lakes	1,355	1,066
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,238	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,115
Raviola	22	68

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	71	0	3	0	21	33	111	68	0	307	1224
4:15-4:30	0	0	0	68	0	6	0	32	25	125	71	0	327	1321
4:30-4:45	0	0	0	62	0	11	0	37	38	115	62	0	325	1342
4:45-5:00	0	0	0	74	0	4	0	29	31	105	72	0	315	1310
5:00-5:15	0	0	0	89	0	5	0	40	48	105	67	0	354	1272
5:15-5:30	0	0	0	85	0	7	0	18	37	137	74	0	348	
5:30-5:45	0	0	0	66	0	4	0	32	33	97	61	0	293	
5:45-6:00	0	0	0	75	0	7	0	30	31	85	48	0	277	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Season Factor	0	0	0	310	0	27	0	124	154	452	275	0	1342	
Growth	0	0	0	334	0	29	0	134	166	487	296	0	1446	
In/Out	-	-	-	-	-	IN	-	Out	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	46%	0%	50%	19%	0%	50%	0%		
PROJECT	0	0	0	0	0	667	0	518	197	0	725	0	2107	
Midway %						38.0%		52.0%	30.0%		16.0%			
Village at Midway						261		948	547		116		1873	
LTC Ranch %				4.1%		4.1%		10.8%	0.1%	0.2%	10.8%			
LTC Ranch Volume				122		95		321	3	6	251		797	
Southern Grove %								0.8%		0.0%	0.8%			
Southern Grove								81		0	58		135	
Wilson Groves %								0.8%		0.0%	0.8%			
Wilson Groves								45		0	36		81	
Riverland/Kennedy %								0.8%		0.0%	0.8%			
Riverland/Kennedy								58		0	57		115	
Western Grove %								0.8%		0.0%	0.8%			
Western Grove								16		0	20		37	
Ravinia %				5.0%						6.0%				
Ravinia				4						3			6	
Total	0	0	0	460	0	1053	0	2121	913	496	1557	0	6599	



	Trips In	Trips Out
Willow Lakes	1,450	1,036
Village at Midway	715	1,834
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Raviola	77	44

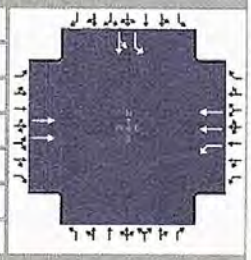
Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

#2 w/p

HCS7 Signalized Intersection Results Summary

#2 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	31.2	38.6	27.2	0.0	0.0	0.0						
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0		5	6	7	8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		46.6	39.2	85.8				34.2
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g_s), s			30.5					26.8
Green Extension Time (g_e), s		0.0	0.7	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.08					0.10

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		1347		501	1558					382	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (g_s), s		38.6		28.5	16.5					24.8	0.0	
Cycle Queue Clearance Time (g_c), s		38.6		28.5	16.5					24.8	0.0	
Green Ratio (g/C)		0.32		0.60	0.65					0.23	0.23	
Capacity (c), veh/h		1163		530	2344					411	431	
Volume-to-Capacity Ratio (X)		1.159		0.945	0.665					0.930	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		995.3		589.4	154.6					475.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		39.8		23.6	6.2					19.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d_1), s/veh		34.3		35.9	4.0					45.4	0.0	
Incremental Delay (d_2), s/veh		81.3		20.2	1.5					20.3	0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		115.6		56.1	5.5					65.7	0.0	
Level of Service (LOS)		F		E	A					E		
Approach Delay, s/veh / LOS	115.6	F		17.8	B		0.0			65.7	E	
Intersection Delay, s/veh / LOS	57.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.65	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.60	B	2.19	B			1.12	A

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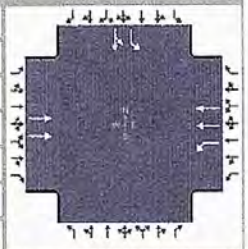
HCS7 Signalized Intersection Input Data

#2 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	31.2	38.6	27.2	0.0	0.0	0.0	5	6	7	8	
Yellow	5.0	5.0	4.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1280		476	1480					363	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)		4		3	4					3	3	
Upstream Filtering (I)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (l_1), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (e), s		2.0	2.0	2.0			2.0	2.0
Passage (PT), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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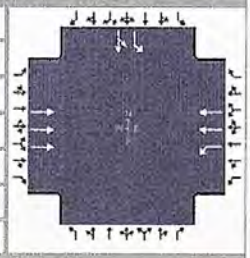
HCS7 Signalized Intersection Results Summary #2 w/PM tmp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 with Proje...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1280		476	1480					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	27.4	42.3	27.2	0.0	0.0	0.0						
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		50.3	35.4	85.8				34.2
Change Period, (*Y+R c*), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		0.0	3.0	0.0				3.0
Queue Clearance Time (*g s*), s			26.6					26.8
Green Extension Time (*g e*), s		0.0	0.8	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.01					0.10

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		1347		501	1558					382	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (*g s*), s		25.3		24.6	16.5					24.8	0.0	
Cycle Queue Clearance Time (*g c*), s		25.3		24.6	16.5					24.8	0.0	
Green Ratio (*g/C*)		0.35		0.60	0.65					0.23	0.23	
Capacity (*c*), veh/h		1826		532	2344					411	431	
Volume-to-Capacity Ratio (*X*)		0.738		0.942	0.665					0.930	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		358.5		574.1	154.6					475.2	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		14.3		23.0	6.2					19.0	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh		27.3		29.9	4.0					45.4	0.0	
Incremental Delay (*d 2*), s/veh		2.7		16.8	1.5					20.3	0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (*d*), s/veh		30.0		46.8	5.5					65.7	0.0	
Level of Service (LOS)		C		D	A					E		
Approach Delay, s/veh / LOS	30.0	C		15.6	B		0.0			65.7	E	
Intersection Delay, s/veh / LOS	25.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.65	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	1.23	A	2.19	B			1.12	A

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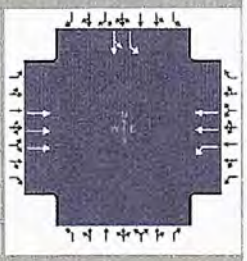
HCS7 Signalized Intersection Input Data

#2 w/P AM+Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1280		476	1480					363	0	

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	27.4	42.3		27.2	0.0	0.0	0.0					
Yellow	5.0	5.0		4.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1280		476	1480					363	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		4		3	4					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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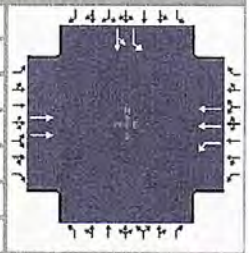
HCS7 Signalized Intersection Results Summary #2 w/P PM

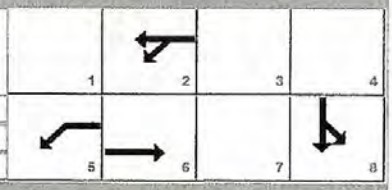
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		2121		496	1557					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	38.3	57.9	20.8	0.0	0.0	0.0	
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		65.9	46.3	112.2				27.8
Change Period, (*Y+R c*), s		8.0	8.0	8.0				7.0
Max Allow Headway (*MAH*), s		0.0	3.0	0.0				3.0
Queue Clearance Time (*g s*), s			37.6					20.4
Green Extension Time (*g e*), s		0.0	0.7	0.0				0.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.12					0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (*v*), veh/h		2233		522	1639					242	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (*g s*), s		57.9		35.6	1.1					18.4	0.0	
Cycle Queue Clearance Time (*g c*), s		57.9		35.6	1.1					18.4	0.0	
Green Ratio (*g/C*)		0.41		0.70	0.74					0.15	0.15	
Capacity (*c*), veh/h		1497		547	2694					268	282	
Volume-to-Capacity Ratio (*X*)		1.491		0.955	0.608					0.903	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		2571.9		706.3	24					348.8	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		102.9		28.3	1.0					14.0	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (*d 1*), s/veh		31.4		44.0	0.1					58.6	0.0	
Incremental Delay (*d 2*), s/veh		224.7		23.0	1.0					10.3	0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (*d*), s/veh		256.1		67.0	1.2					68.9	0.0	
Level of Service (LOS)		F		E	A					E		
Approach Delay, s/veh / LOS	256.1	F		17.1	B		0.0			68.9	E	
Intersection Delay, s/veh / LOS	134.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.63	B	2.33	B	2.16	B
Bicycle LOS Score / LOS	2.33	B	2.27	B			1.29	A

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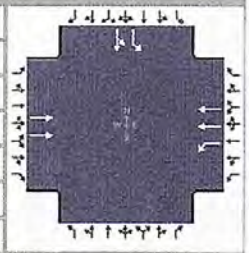
HCS7 Signalized Intersection Input Data

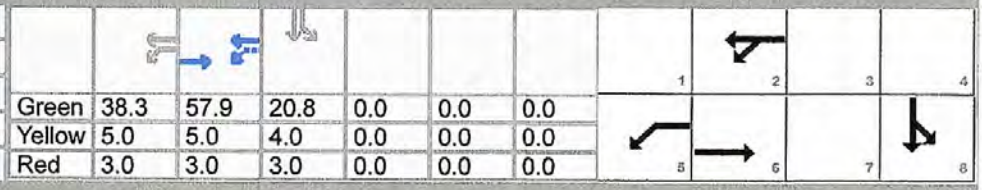
#2 w/ P PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		2121		496	1557					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	38.3	57.9		20.8	0.0	0.0	0.0					
Yellow	5.0	5.0		4.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		2121		496	1557					460	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		4		3	4					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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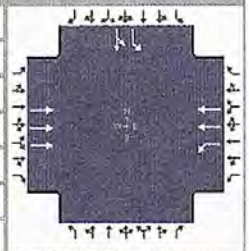
HCS7 Signalized Intersection Results Summary

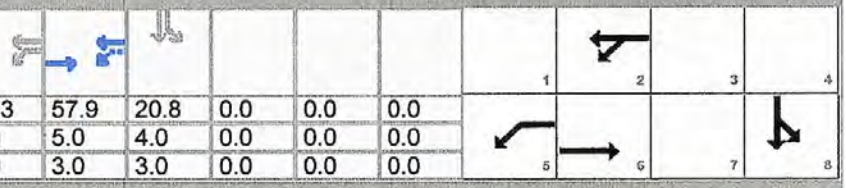
#2 w/P PM+imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 with Proje...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		2121		496	1557					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			NB			SB		
Green	38.3	57.9	20.8	0.0	0.0	0.0					
Yellow	5.0	5.0	4.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		65.9	46.3	112.2				27.8
Change Period, ($Y+R_c$), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g_s), s			37.6					20.4
Green Extension Time (g_e), s		0.0	0.7	0.0				0.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.12					0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		2233		522	1639					242	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (g_s), s		57.9		35.6	1.1					18.4	0.0	
Cycle Queue Clearance Time (g_c), s		57.9		35.6	1.1					18.4	0.0	
Green Ratio (g/C)		0.41		0.70	0.74					0.15	0.15	
Capacity (c), veh/h		2142		547	2694					268	282	
Volume-to-Capacity Ratio (X)		1.042		0.955	0.608					0.903	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		899.8		706.4	24					348.8	0	
Back of Queue (Q), veh/ln (95 th percentile)		36.0		28.3	1.0					14.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d_1), s/veh		31.4		44.0	0.1					58.6	0.0	
Incremental Delay (d_2), s/veh		31.6		23.0	1.0					10.3	0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		62.9		67.0	1.2					68.9	0.0	
Level of Service (LOS)		F		E	A					E		
Approach Delay, s/veh / LOS	62.9	E		17.1	B		0.0			68.9	E	
Intersection Delay, s/veh / LOS	41.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.63	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	1.72	B	2.27	B			1.29	A

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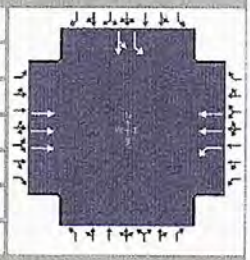
HCS7 Signalized Intersection Input Data

2 w/P PM temp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		2121		496	1557					460	0	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	38.3	57.9	20.8	0.0	0.0	0.0						
Yellow	5.0	5.0	4.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8		

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		2121		496	1557					460	0	
Initial Queue (Q_b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s_o), veh/h		1900		1900	1900					1900	1900	
Parking (N_m), man/h		None			None						None	
Heavy Vehicles (P_{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (*AT*)		4		3	4					3	3	
Upstream Filtering (*I*)		1.00		1.00	1.00					1.00	1.00	
Lane Width (*W*), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (*Y*), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R_c), s		3.0	3.0	3.0				3.0
Minimum Green (G_{min}), s		8	7	8				6
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0			2.0	2.0
Extension of Effective Green (*e*), s		2.0	2.0	2.0			2.0	2.0
Passage (*PT*), s		2.0	2.0	2.0				2.0
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (*Walk*), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

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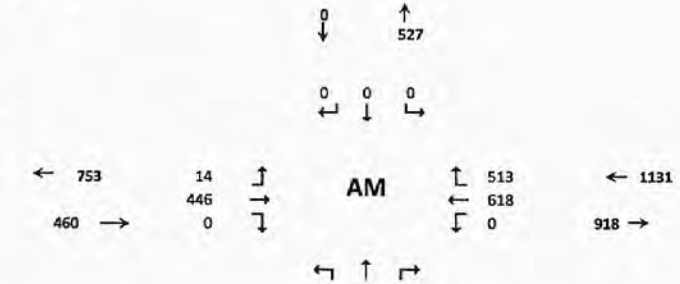
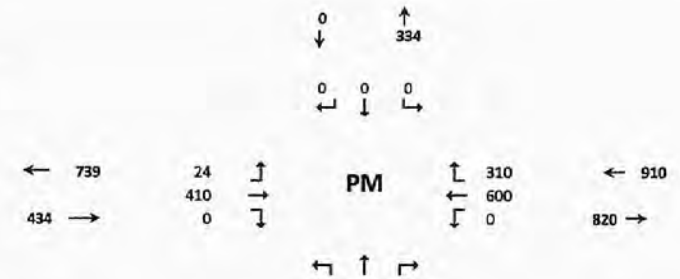
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I95 NB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	35	0	99	0	0	0	1	82	0	0	125	88	430	2147
7:15-7:30	31	0	115	0	0	0	4	102	0	0	169	145	566	2198
7:30-7:45	40	0	122	0	0	0	4	140	0	0	172	150	628	2074
7:45-8:00	32	0	125	0	0	0	2	119	0	0	140	105	523	1865
8:00-8:15	32	0	110	0	0	0	4	85	0	0	137	113	481	1681
8:15-8:30	31	0	114	0	0	0	3	75	0	0	119	100	442	
8:30-8:45	28	0	111	0	0	0	3	86	0	0	100	91	419	
8:45-9:00	21	0	82	0	0	0	7	73	0	0	90	66	339	
AM PEAK HOUR IS FROM:	7:15AM TO 8:15AM													
Volumes	135	0	472	0	0	0	14	446	0	0	618	513	2198	
Season Factor	135	0	472	0	0	0	14	446	0	0	618	513	2198	
Growth	135	0	472	0	0	0	14	446	0	0	618	513	2198	
In/Out	-	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	135	0	472	0	0	0	14	446	0	0	618	513	2198	



15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	28	0	111	0	0	0	3	89	0	0	132	70	433	1778
4:15-4:30	26	0	105	0	0	0	7	91	0	0	165	81	475	1893
4:30-4:45	34	0	112	0	0	0	12	93	0	0	134	68	453	1836
4:45-5:00	42	0	103	0	0	0	3	97	0	0	110	62	417	1805
5:00-5:15	37	0	90	0	0	0	2	129	0	0	191	99	548	1744
5:15-5:30	41	0	108	0	0	0	1	101	0	0	111	56	418	
5:30-5:45	25	0	102	0	0	0	1	95	0	0	130	69	422	
5:45-6:00	29	0	80	0	0	0	5	93	0	0	100	49	356	
PM PEAK HOUR IS FROM:	4:15PM TO 5:15PM													
Volumes	139	0	410	0	0	0	24	410	0	0	600	310	1893	
Season Factor	139	0	410	0	0	0	24	410	0	0	600	310	1893	
Growth	139	0	410	0	0	0	24	410	0	0	600	310	1893	
In/Out	-	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	139	0	410	0	0	0	24	410	0	0	600	310	1893	



St. Lucie County

ECONOLITE

00023 - MIDWAY RD @ I-95 NB RAMP - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

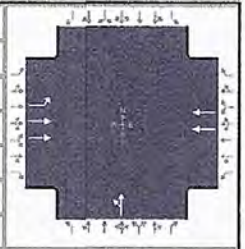
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBL	WB	N	NB	N	N	N	N	N	N	N	N	N	N	N	N
Min Green	7	15	5	7	5	15	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	18	45	0	25	0	45	0	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	28	55	0	35	0	55	0	35	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	1.0	3.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Ø inuse

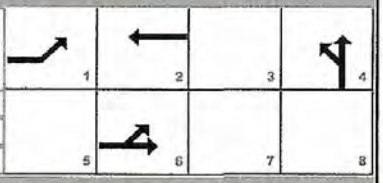
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - Existing.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	14	446			618		135	0				

Signal Information			
Cycle, s	46.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	1.2	15.0		5.9	0.0	0.0	0.0					
Yellow	5.0	5.0		5.0	0.0	0.0	0.0					
Red	3.0	3.0		3.0	0.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		12.0		
Phase Duration, s	9.2	32.2		23.0		13.9		
Change Period, ($Y+R_c$), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	2.9		2.9		3.0		
Queue Clearance Time (g_s), s	2.2	5.4		9.1		5.6		
Green Extension Time (g_e), s	0.0	2.7		2.7		0.2		
Phase Call Probability	0.18	1.00		1.00		0.85		
Max Out Probability	0.00	0.00		0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (*v*), veh/h	15	485			672			147				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809			1809			1810				
Queue Service Time (g_s), s	0.2	3.4			7.1			3.6				
Cycle Queue Clearance Time (g_c), s	0.2	3.4			7.1			3.6				
Green Ratio (*g/C*)	0.40	0.52			0.32			0.13				
Capacity (*c*), veh/h	337	1899			1175			233				
Volume-to-Capacity Ratio (*X*)	0.045	0.255			0.572			0.630				
Back of Queue (Q), ft/ln (95 th percentile)	3	32.4			95.6			57.9				
Back of Queue (Q), veh/ln (95 th percentile)	0.1	1.3			3.8			2.3				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00			0.00				
Uniform Delay (d_1), s/veh	9.4	6.0			12.9			19.1				
Incremental Delay (d_2), s/veh	0.0	0.0			0.2			1.1				
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0			0.0				
Control Delay (*d*), s/veh	9.5	6.0			13.1			20.1				
Level of Service (LOS)	A	A			B			C				
Approach Delay, s/veh / LOS	6.1	A		13.1	B		20.1	C		0.0		
Intersection Delay, s/veh / LOS	11.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.35	A	1.38	A	2.13	B	2.29	B
Bicycle LOS Score / LOS	0.90	A	1.04	A	0.73	A		

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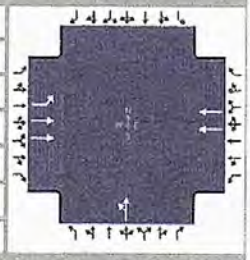
HCS7 Signalized Intersection Input Data

#3 E AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - Existing - 6.2....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	14	446			618		135	0				

Signal Information			
Cycle, s	46.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	1.3	15.0	6.0	0.0	0.0	0.0					
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8	

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	14	446			618		135	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0			0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	3			3		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0			12.0				
Turn Bay Length, ft	0	0			0			0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	28.0	55.0		55.0		35.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_1), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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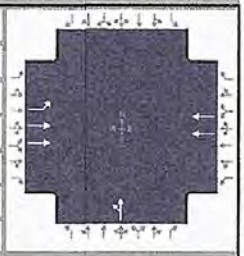
HCS7 Signalized Intersection Results Summary

#3 E PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - Existing.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	24	410			600		139	0				

Signal Information			
Cycle, s	47.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

	1	2	3	4	5	6	7	8				
Green	2.0	15.0	6.0	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		12.0		
Phase Duration, s	10.0	33.0		23.0		14.0		
Change Period, (*Y+R c*), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	2.9		2.9		3.0		
Queue Clearance Time (*g s*), s	2.4	5.1		9.1		5.7		
Green Extension Time (*g e*), s	0.0	2.5		2.5		0.2		
Phase Call Probability	0.29	1.00		1.00		0.86		
Max Out Probability	0.00	0.00		0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (*v*), veh/h	26	446			652			151				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809			1809			1810				
Queue Service Time (*g s*), s	0.4	3.1			7.1			3.7				
Cycle Queue Clearance Time (*g c*), s	0.4	3.1			7.1			3.7				
Green Ratio (*g/C*)	0.40	0.53			0.32			0.13				
Capacity (*c*), veh/h	365	1924			1153			232				
Volume-to-Capacity Ratio (*X*)	0.072	0.232			0.566			0.651				
Back of Queue (Q), ft/ln (95 th percentile)	5.1	29.7			96.8			61.5				
Back of Queue (Q), veh/ln (95 th percentile)	0.2	1.2			3.9			2.5				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00			0.00				
Uniform Delay (*d 1*), s/veh	9.4	5.9			13.3			19.5				
Incremental Delay (*d 2*), s/veh	0.0	0.0			0.2			1.2				
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0			0.0				
Control Delay (*d*), s/veh	9.4	5.9			13.5			20.7				
Level of Service (LOS)	A	A			B			C				
Approach Delay, s/veh / LOS	6.1	A		13.5	B		20.7	C		0.0		
Intersection Delay, s/veh / LOS	11.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.35	A	1.38	A	2.13	B	2.29	B
Bicycle LOS Score / LOS	0.88	A	1.03	A	0.74	A		

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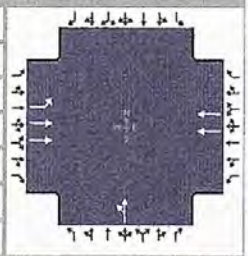
HCS7 Signalized Intersection Input Data

#3 PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.86
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - Existing - 6.2....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	24	410			600		139	0				

Signal Information			
Cycle, s	47.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	2.2	15.0	6.2	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0		5	6	7	8	

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	24	410			600		139	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0			0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)	3	3			3		3	3				
Upstream Filtering (*I*)	1.00	1.00			1.00		1.00	1.00				
Lane Width (*W*), ft	12.0	12.0			12.0			12.0				
Turn Bay Length, ft	0	0			0			0				
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	28.0	55.0		55.0		35.0		
Yellow Change Interval (*Y*), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (*l1*), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (*e*), s	2.0	2.0		2.0	2.0	2.0		
Passage (*PT*), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (*Walk*), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (*PC*), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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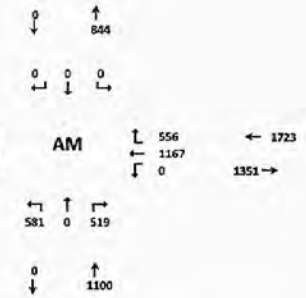
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I95 NB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

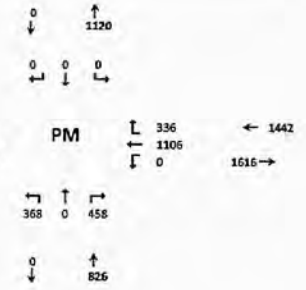
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	35	0	99	0	0	0	1	82	0	0	125	88	430	2147
7:15-7:30	31	0	115	0	0	0	4	102	0	0	169	145	566	2198
7:30-7:45	48	0	122	0	0	0	4	140	0	0	172	150	624	2074
7:45-8:00	32	0	125	0	0	0	2	119	0	0	140	105	523	1865
8:00-8:15	32	0	110	0	0	0	4	85	0	0	137	113	481	1681
8:15-8:30	31	0	114	0	0	0	3	75	0	0	119	100	442	
8:30-8:45	28	0	111	0	0	0	3	86	0	0	100	91	419	
8:45-9:00	21	0	82	0	0	0	7	73	0	0	90	66	339	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	135	0	472	0	0	0	14	446	0	0	618	513	2198	
Season Factor	1.35	0	472	0	0	0	14	446	0	0	618	513	2198	
Growth	1.45	0	509	0	0	0	15	481	0	0	666	553	2369	
In/Out	IN	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	30%						30%	15%			15%			
Village at Midway	435						217	96			232		981	
LTC Ranch %			0.5%				3.4%	7.4%			7.4%			
LTC Ranch Volume			9				55	120			135		319	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								30			31		61	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Ravinia %			5.0%					5.0%			5.0%	5.0%		
Ravinia			1					1			4	3	10	
Total	581	0	519	0	0	0	287	832	0	0	1167	556	3943	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,727	1,052
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	66

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	28	0	111	0	0	0	3	89	0	0	132	70	433	1775
4:15-4:30	16	0	105	0	0	0	7	91	0	0	165	81	475	1893
4:30-4:45	34	0	112	0	0	0	12	93	0	0	134	68	453	1836
4:45-5:00	42	0	103	0	0	0	3	97	0	0	110	62	417	1805
5:00-5:15	37	0	90	0	0	0	2	129	0	0	191	99	548	1744
5:15-5:30	41	0	108	0	0	0	1	101	0	0	111	56	418	
5:30-5:45	25	0	102	0	0	0	1	95	0	0	130	69	422	
5:45-6:00	29	0	80	0	0	0	5	93	0	0	103	49	356	
PM PEAK HOUR IS FROM:			4:15PM TO 5:15PM											
Volumes	135	0	410	0	0	0	24	419	0	0	600	318	1893	
Season Factor	1.35	0	410	0	0	0	24	410	0	0	600	318	1893	
Growth	1.50	0	442	0	0	0	25	442	0	0	647	334	2040	
In/Out	IN	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	30.0%						30.0%	15.0%			15.0%			
Village at Midway	218						657	292			116		1292	
LTC Ranch %			0.5%				3.4%	7.4%			7.4%			
LTC Ranch Volume			12				101	220			122		504	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			56		136	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								45			36		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								58			57		115	
Western Grove %								0.8%			0.8%			
Western Grove								15			20		37	
Ravinia %			6.0%					5.0%			5.0%	5.0%		
Ravinia			5					4			3	2	15	
Total	368	0	458	0	0	0	783	1158	0	0	1196	336	4309	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	726	1,814
LTC Ranch	2,328	2,910
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,619
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44

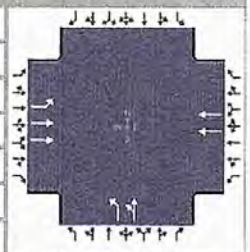
F-40

3 w/o Project

HCS7 Signalized Intersection Results Summary

#3 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	287	832			1167		581	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	17.0	37.0	42.0	0.0	0.0	0.0					
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	25.0	70.0		45.0		50.0		
Change Period, (*Y+R c*), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (*g s*), s	18.6					43.8		
Green Extension Time (*g e*), s	0.0	0.0		0.0		0.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (*v*), veh/h	312	904			1268		632	0				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (*g s*), s	16.6	14.0			37.0		41.8	0.0				
Cycle Queue Clearance Time (*g c*), s	16.6	14.0			37.0		41.8	0.0				
Green Ratio (*g/C*)	0.47	0.52			0.31		0.35	0.35				
Capacity (*c*), veh/h	316	1869			1115		633	665				
Volume-to-Capacity Ratio (*X*)	0.986	0.484			1.137		0.997	0.000				
Back of Queue (*Q*), ft/ln (95 th percentile)	476.6	202.4			911.2		792	0				
Back of Queue (*Q*), veh/ln (95 th percentile)	19.1	8.1			36.4		31.7	0.0				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh	37.4	11.2			35.3		38.9	0.0				
Incremental Delay (*d 2*), s/veh	46.6	0.9			73.1		35.0	0.0				
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (*d*), s/veh	84.0	12.1			108.4		73.9	0.0				
Level of Service (LOS)	F	B			F		E					
Approach Delay, s/veh / LOS	30.5	C		108.4	F		73.9	E		0.0		
Intersection Delay, s/veh / LOS	71.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.42	A	2.16	B	2.32	B
Bicycle LOS Score / LOS	1.49	A	1.53	B	1.53	B		

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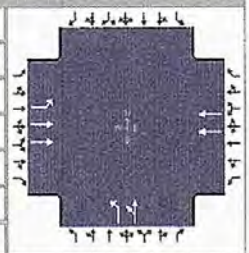
HCS7 Signalized Intersection Input Data

#3 w/o AM

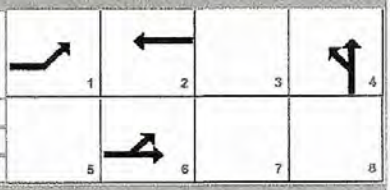
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	287	832			1167		581	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	17.0	37.0	42.0	0.0	0.0	0.0	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	287	832			1167		581	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	70.0		45.0		50.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_1), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk ($Walk$), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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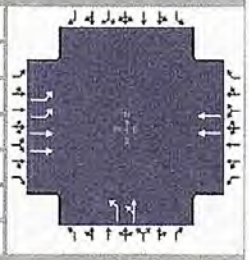
HCS7 Signalized Intersection Results Summary

#3 w/o AM+ Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	287	832			1167		581	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	8.5	44.9	42.6	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0		5	6	7	8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	16.5	69.4		52.9		50.6		
Change Period, (Y+R c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g s), s	8.1					41.5		
Green Extension Time (g e), s	0.5	0.0		0.0		1.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	0.00					0.02		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	302	876			1228		612	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809			1809		1810	1900				
Queue Service Time (g s), s	6.1	13.6			37.3		39.5	0.0				
Cycle Queue Clearance Time (g c), s	6.1	13.6			37.3		39.5	0.0				
Green Ratio (g/C)	0.46	0.51			0.37		0.35	0.35				
Capacity (c), veh/h	429	1852			1354		642	674				
Volume-to-Capacity Ratio (X)	0.705	0.473			0.907		0.953	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	108.6	199.8			544.9		678.3	0				
Back of Queue (Q), veh/ln (95 th percentile)	4.3	8.0			21.8		27.1	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d 1), s/veh	27.4	11.4			28.2		37.8	0.0				
Incremental Delay (d 2), s/veh	0.8	0.9			10.4		18.2	0.0				
Initial Queue Delay (d 3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	28.2	12.3			38.6		56.0	0.0				
Level of Service (LOS)	C	B			D		E					
Approach Delay, s/veh / LOS	16.4	B		38.6	D		56.0	E		0.0		
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.70	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	1.46	A	1.50	B	1.50	A		

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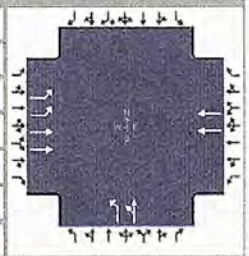
HCS7 Signalized Intersection Input Data

#3 w/o AM+ mp

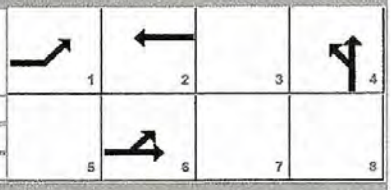
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	287	832			1167		581	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.5	44.9	42.6	0.0	0.0	0.0	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	287	832			1167		581	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)	3	4			4		3	3				
Upstream Filtering (*I*)	1.00	1.00			1.00		1.00	1.00				
Lane Width (*W*), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	16.0	60.0		44.0		60.0		
Yellow Change Interval (*Y*), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (*l1*), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (*e*), s	2.0	2.0		2.0	2.0	2.0		
Passage (*PT*), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (*Walk*), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (*PC*), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

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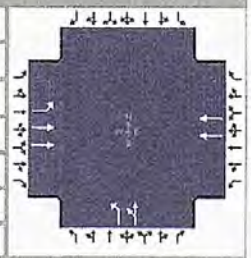
HCS7 Signalized Intersection Results Summary

3 w/o PM

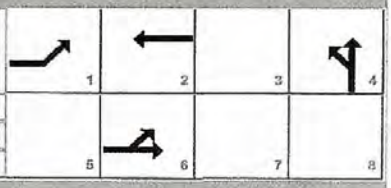
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	783	1158			1106		368	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	35.4	32.0	28.6	0.0	0.0	0.0	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	43.4	83.4		40.0		36.6		
Change Period, ($Y+R_c$), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g_s), s	37.4					27.9		
Green Extension Time (g_e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (*v*), veh/h	851	1259			1202		400	0				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (g_s), s	35.4	12.6			32.0		25.9	0.0				
Cycle Queue Clearance Time (g_c), s	35.4	12.6			32.0		25.9	0.0				
Green Ratio (*g/C*)	0.58	0.63			0.27		0.24	0.24				
Capacity (*c*), veh/h	593	2273			966		431	453				
Volume-to-Capacity Ratio (*X*)	1.434	0.554			1.244		0.928	0.000				
Back of Queue (*Q*), ft/ln (95 th percentile)	1882.2	141.9			1050.5		463.9	0				
Back of Queue (*Q*), veh/ln (95 th percentile)	75.3	5.7			42.0		18.6	0.0				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d_1), s/veh	35.4	4.6			38.6		44.7	0.0				
Incremental Delay (d_2), s/veh	205.0	1.0			118.8		12.5	0.0				
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (*d*), s/veh	240.4	5.6			157.4		57.2	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	100.3	F		157.4	F		57.2	E		0.0		
Intersection Delay, s/veh / LOS	114.2						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.42	A	2.16	B	2.32	B
Bicycle LOS Score / LOS	2.23	B	1.48	A	1.15	A		

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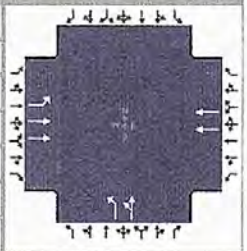
HCS7 Signalized Intersection Input Data

#3 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	783	1158			1106		368	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	35.4	32.0	28.6	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0		5	6	7	8	
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	783	1158			1106		368	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)	3	4			4		3	3				
Upstream Filtering (*I*)	1.00	1.00			1.00		1.00	1.00				
Lane Width (*W*), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	30.0	70.0		40.0		50.0		
Yellow Change Interval (*Y*), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (*l1*), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (*e*), s	2.0	2.0		2.0	2.0	2.0		
Passage (*PT*), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (*Walk*), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (*PC*), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

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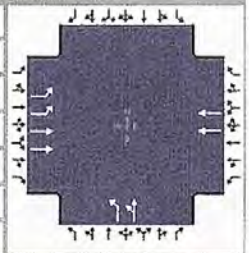
HCS7 Signalized Intersection Results Summary

#3 w/o PM+ IMP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	783	1158			1106		368	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	20.0	49.0	27.0	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	28.0	85.0		57.0		35.0		
Change Period, ($Y+R_c$), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g_s), s	20.7					27.3		
Green Extension Time (g_e), s	0.0	0.0		0.0		0.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6		7	4				
Adjusted Flow Rate (*v*), veh/h	824	1219			1164		387	0				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809			1809		1810	1900				
Queue Service Time (g_s), s	18.7	10.6			30.8		25.3	0.0				
Cycle Queue Clearance Time (g_c), s	18.7	10.6			30.8		25.3	0.0				
Green Ratio (*g/C*)	0.59	0.64			0.41		0.22	0.22				
Capacity (*c*), veh/h	854	2321			1477		407	428				
Volume-to-Capacity Ratio (*X*)	0.965	0.525			0.788		0.951	0.000				
Back of Queue (*Q*), ft/ln (95 th percentile)	374.8	119.3			426.7		521.5	0				
Back of Queue (*Q*), veh/ln (95 th percentile)	15.0	4.8			17.1		20.9	0.0				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d_1), s/veh	28.8	3.9			23.2		45.9	0.0				
Incremental Delay (d_2), s/veh	22.4	0.9			4.3		32.0	0.0				
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (*d*), s/veh	51.2	4.7			27.5		77.9	0.0				
Level of Service (LOS)	D	A			C		E					
Approach Delay, s/veh / LOS	23.5	C		27.5	C		77.9	E		0.0		
Intersection Delay, s/veh / LOS	30.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.69	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.17	B	1.45	A	1.13	A		

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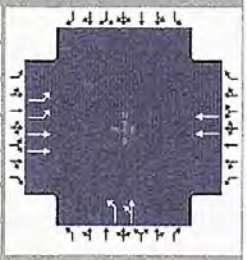
HCS7 Signalized Intersection Input Data

#3 w/o PM+ Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	783	1158			1106		368	0				

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	20.0	49.0	27.0	0.0	0.0	0.0	5	6	7	8	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	783	1158			1106		368	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	28.0	85.0		57.0		35.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_t), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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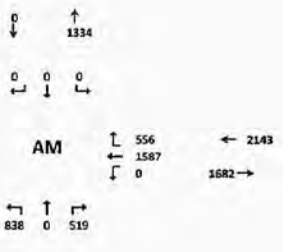
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: I95 NB Ramp
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

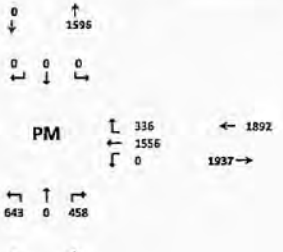
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	35	0	99	0	0	0	1	82	0	0	125	83	430	2147
7:15-7:30	31	0	115	0	0	0	4	102	0	0	169	145	566	2198
7:30-7:45	40	0	122	0	0	0	4	140	0	0	172	150	628	2074
7:45-8:00	32	0	125	0	0	0	2	119	0	0	140	105	523	1865
8:00-8:15	32	0	110	0	0	0	4	85	0	0	137	113	481	1681
8:15-8:30	31	0	114	0	0	0	3	75	0	0	119	100	442	
8:30-8:45	28	0	111	0	0	0	3	86	0	0	100	91	419	
8:45-9:00	21	0	82	0	0	0	7	73	0	0	90	66	339	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	135	0	472	0	0	0	14	446	0	0	618	513	2198	
Season Factor	135	0	472	0	0	0	14	446	0	0	618	513	2198	
Growth	145	0	509	0	0	0	15	481	0	0	666	553	2369	
In/Out	IN	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	19%	0%	0%	0%	0%	0%	46%	31%	0%	0%	31%	0%		
PROJECT	257	0	0	0	0	0	490	330	0	0	420	0	1498	
Midway %	30%						50%	10%			16%			
Village at Midway	435						217	96			232		981	
LTC Ranch %			0.5%				3.4%	7.4%			7.4%			
LTC Ranch Volume			9				55	120			135		319	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								33			31		64	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								45			38		83	
Western Grove %								0.8%			0.8%			
Western Grove								17			11		28	
Ravinia %			6.0%					5.0%			6.0%	5.0%		
Ravinia			3					1			4	3	10	
Total	838	0	519	0	0	0	777	1162	0	0	1587	556	5440	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,355	1,065
Village at Midway	1,455	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,701	5,568
Western Grove	1,352	2,135
Ravinia	22	68

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	28	0	111	0	0	0	3	89	0	0	132	70	433	1778
4:15-4:30	26	0	106	0	0	0	7	91	0	0	165	81	475	1893
4:30-4:45	34	0	112	0	0	0	12	93	0	0	136	68	453	1836
4:45-5:00	42	0	103	0	0	0	3	97	0	0	110	62	417	1805
5:00-5:15	37	0	90	0	0	0	2	129	0	0	191	99	548	1744
5:15-5:30	41	0	108	0	0	0	1	101	0	0	111	56	418	
5:30-5:45	25	0	103	0	0	0	1	95	0	0	130	69	422	
5:45-6:00	29	0	80	0	0	0	5	93	0	0	100	49	356	
PM PEAK HOUR IS FROM:			4:15PM TO 5:15PM											
Volumes	139	0	410	0	0	0	24	410	0	0	600	310	1893	
Season Factor	139	0	410	0	0	0	24	410	0	0	600	310	1893	
Growth	150	0	442	0	0	0	26	442	0	0	647	334	2040	
In/Out	IN	-	IN	-	-	-	OUT	OUT	-	-	IN	-		
Percentage	19%	0%	0%	0%	0%	0%	46%	31%	0%	0%	31%	0%		
PROJECT	226	0	0	0	0	0	477	321	0	0	450	0	1523	
Midway %	30.0%						30.0%	10.0%			10.0%			
Village at Midway	218						657	292			136		1282	
LTC Ranch %			0.5%				3.4%	7.4%			7.4%			
LTC Ranch Volume			12				101	220			172		504	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			56		136	
Wilson Groves %								0.8%			0.8%			
Wilson Groves								45			36		81	
Riverland/Kennedy %								0.8%			0.8%			
Riverland/Kennedy								58			57		115	
Western Grove %								0.8%			0.8%			
Western Grove								16			20		37	
Ravinia %			6.0%					5.0%			6.0%	5.0%		
Ravinia			5					4			3	2	13	
Total	643	0	458	0	0	0	1260	1479	0	0	1556	336	5732	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

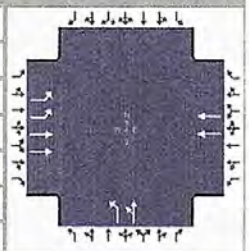
	Trips In	Trips Out
Willow Lakes	1,450	1,035
Village at Midway	726	1,824
LTC Ranch	2,320	3,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44

#2 w/ Project

HCS7 Signalized Intersection Results Summary

#3 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	777	1162			1587		838	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	15.9	64.0	36.1	0.0	0.0	0.0				
Yellow	5.0	5.0	5.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	23.9	95.9		72.0		44.1		
Change Period, ($Y+R_c$), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g_s), s	17.9					35.5		
Green Extension Time (g_e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.01		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (*v*), veh/h	818	1223			1671		441	0				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809			1809		1810	1900				
Queue Service Time (g_s), s	15.9	14.1			64.0		33.5	0.0				
Cycle Queue Clearance Time (g_c), s	15.9	14.1			64.0		33.5	0.0				
Green Ratio (*g/C*)	0.58	0.63			0.46		0.26	0.26				
Capacity (*c*), veh/h	501	2271			1654		467	490				
Volume-to-Capacity Ratio (*X*)	1.631	0.539			1.010		0.945	0.000				
Back of Queue (*Q*), ft/ln (95 th percentile)	1120.7	167.4			916.9		605.2	0				
Back of Queue (*Q*), veh/ln (95 th percentile)	44.8	6.7			36.7		24.2	0.0				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d_1), s/veh	48.5	5.4			27.3		51.0	0.0				
Incremental Delay (d_2), s/veh	292.9	0.9			24.6		20.2	0.0				
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (*d*), s/veh	341.4	6.3			51.9		71.2	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	140.6	F		51.9	D		71.2	E		0.0		
Intersection Delay, s/veh / LOS	97.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.69	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.17	B	1.87	B	1.94	B		

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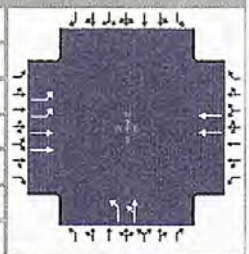
HCS7 Signalized Intersection Input Data

#3 W/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information					EB		WB			NB			
Cycle, s	140.0	Reference Phase	2								1	2	3	4
Offset, s	0	Reference Point	End	Green	15.9	64.0	36.1	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	15.0	87.0		72.0		53.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_1), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk ($Walk$), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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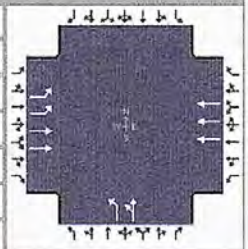
HCS7 Signalized Intersection Results Summary

#3 w/PM imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	15.9	64.0	36.1	0.0	0.0	0.0					
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	23.9	95.9		72.0		44.1		
Change Period, (Y+R c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g s), s	17.9					35.5		
Green Extension Time (g e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.01		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	818	1223			1671		441	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809			1725		1810	1900				
Queue Service Time (g s), s	15.9	14.1			31.0		33.5	0.0				
Cycle Queue Clearance Time (g c), s	15.9	14.1			31.0		33.5	0.0				
Green Ratio (g/C)	0.58	0.63			0.46		0.26	0.26				
Capacity (c), veh/h	644	2271			2366		467	490				
Volume-to-Capacity Ratio (X)	1.270	0.539			0.706		0.945	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	695.1	167.4			398.2		605.2	0				
Back of Queue (Q), veh/ln (95 th percentile)	27.8	6.7			15.9		24.2	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d 1), s/veh	33.2	5.4			20.9		51.0	0.0				
Incremental Delay (d 2), s/veh	133.5	0.9			1.8		20.2	0.0				
Initial Queue Delay (d 3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	166.7	6.3			22.7		71.2	0.0				
Level of Service (LOS)	F	A			C		E					
Approach Delay, s/veh / LOS	70.6	E		22.7	C		71.2	E		0.0		
Intersection Delay, s/veh / LOS	51.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.69	B	2.33	B	2.62	C
Bicycle LOS Score / LOS	2.17	B	1.41	A	1.94	B		

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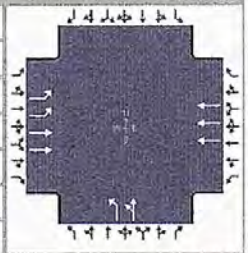
HCS7 Signalized Intersection Input Data

#3 WP AM with

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	15.9	64.0	36.1	0.0	0.0	0.0						
Yellow	5.0	5.0	5.0	0.0	0.0	0.0						
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8		

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	15.0	87.0		72.0		53.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_1), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

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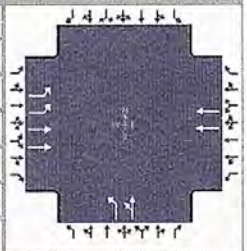
HCS7 Signalized Intersection Results Summary

#3 w/P PM

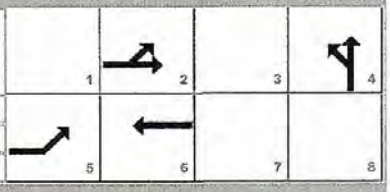
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1260	1479			1556		643	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	43.8	44.0	28.2	0.0	0.0	0.0	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	
Red	3.0	3.0	3.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	51.8	103.8		52.0		36.2		
Change Period, (*Y+R c*), s	8.0	8.0		8.0		8.0		
Max Allow Headway (*MAH*), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (*g s*), s	45.8					27.7		
Green Extension Time (*g e*), s	0.0	0.0		0.0		0.5		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6		7	4				
Adjusted Flow Rate (*v*), veh/h	1326	1557			1638		338	0				
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (*g s*), s	43.8	12.4			44.0		25.7	0.0				
Cycle Queue Clearance Time (*g c*), s	43.8	12.4			44.0		25.7	0.0				
Green Ratio (*g/C*)	0.64	0.68			0.31		0.20	0.20				
Capacity (*c*), veh/h	1234	2475			1137		365	383				
Volume-to-Capacity Ratio (*X*)	1.075	0.629			1.440		0.928	0.000				
Back of Queue (*Q*), ft/ln (95 th percentile)	990.4	115.3			1861		470.1	0				
Back of Queue (*Q*), veh/ln (95 th percentile)	39.6	4.6			74.4		18.8	0.0				
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (*d 1*), s/veh	42.1	2.5			40.7		54.9	0.0				
Incremental Delay (*d 2*), s/veh	48.3	1.2			203.1		14.6	0.0				
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (*d*), s/veh	90.4	3.7			243.8		69.5	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	43.6	D		243.8	F		69.5	E		0.0		
Intersection Delay, s/veh / LOS	112.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.71	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.87	C	1.84	B	1.60	B		

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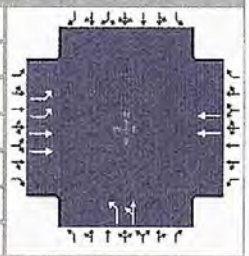
HCS7 Signalized Intersection Input Data

#3 WIP PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1260	1479			1556		643	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	43.8	44.0	28.2	0.0	0.0	0.0	1	2	3	4		
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1260	1479			1556		643	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)	3	4			4		3	3				
Upstream Filtering (*I*)	1.00	1.00			1.00		1.00	1.00				
Lane Width (*W*), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	39.0	91.0		52.0		49.0		
Yellow Change Interval (*Y*), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (*l1*), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (*e*), s	2.0	2.0		2.0	2.0	2.0		
Passage (*PT*), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (*Walk*), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (*PC*), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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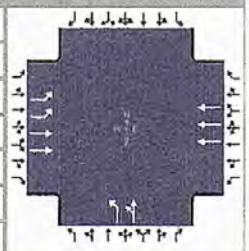
HCS7 Signalized Intersection Results Summary

#3 WP + IMP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	43.8	44.0	28.2	0.0	0.0	0.0	5	6	7	8	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	51.8	103.8		52.0		36.2		
Change Period, ($Y+R_c$), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g_s), s	45.8					27.7		
Green Extension Time (g_e), s	0.0	0.0		0.0		0.5		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6		7	4				
Adjusted Flow Rate (v), veh/h	1326	1557			1638		338	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1725		1810	1900				
Queue Service Time (g_s), s	43.8	12.4			44.0		25.7	0.0				
Cycle Queue Clearance Time (g_c), s	43.8	12.4			44.0		25.7	0.0				
Green Ratio (g/C)	0.64	0.68			0.31		0.20	0.20				
Capacity (c), veh/h	1234	2475			1627		365	383				
Volume-to-Capacity Ratio (X)	1.075	0.629			1.007		0.928	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	989.5	115.3			693.6		470.1	0				
Back of Queue (Q), veh/ln (95 th percentile)	39.6	4.6			27.7		18.8	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d_1), s/veh	42.1	2.5			40.7		54.9	0.0				
Incremental Delay (d_2), s/veh	48.2	1.2			23.9		14.6	0.0				
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	90.3	3.7			64.6		69.5	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	43.5	D		64.6	E		69.5	E		0.0		
Intersection Delay, s/veh / LOS	52.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.71	B	2.33	B	2.62	C
Bicycle LOS Score / LOS	2.87	C	1.39	A	1.60	B		

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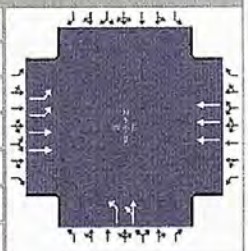
HCS7 Signalized Intersection Input Data

#3 w/p + imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	43.8	44.0	28.2	0.0	0.0	0.0	5	6	7	8	
Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1260	1479			1556		643	0				
Initial Queue (Q_b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s_o), veh/h	1900	1900			1900		1900	1900				
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	39.0	91.0		52.0		49.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R_c), s	3.0	3.0		3.0		3.0		
Minimum Green (G_{min}), s	7	15		15		7		
Start-Up Lost Time (l_1), s	2.0	2.0		2.0	2.0	2.0		
Extension of Effective Green (e), s	2.0	2.0		2.0	2.0	2.0		
Passage (PT), s	2.0	2.0		2.0		2.0		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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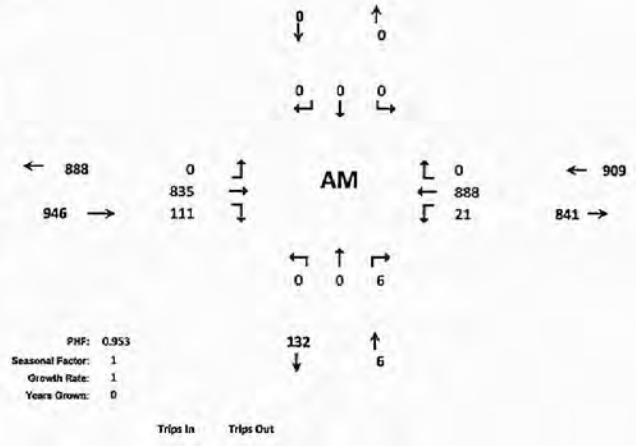
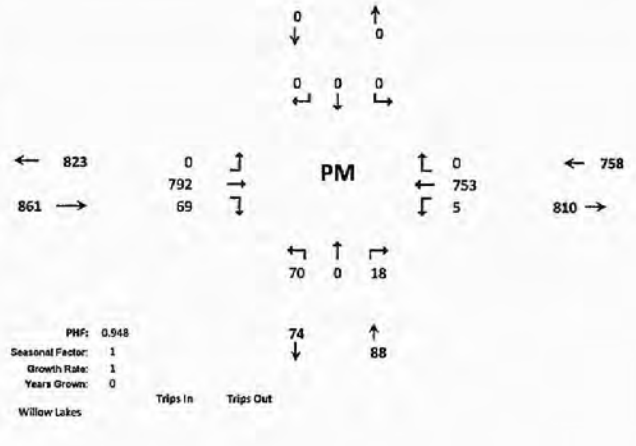
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: LTC Pkwy
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2020
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: TWSC

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	1	0	0	0	0	159	30	5	203	0	398	1804
7:15-7:30	0	0	3	0	0	0	0	158	24	7	243	0	435	1861
7:30-7:45	0	0	1	0	0	0	0	217	27	2	236	0	483	1856
7:45-8:00	0	0	2	0	0	0	0	226	30	6	224	0	488	1700
8:00-8:15	0	0	0	0	0	0	0	234	30	6	185	0	455	1513
8:15-8:30	0	0	2	0	0	0	0	223	22	2	181	0	430	
8:30-8:45	0	0	0	0	0	0	0	143	8	3	173	0	327	
8:45-9:00	0	0	0	0	0	0	0	140	13	7	141	0	301	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	6	0	0	0	0	835	111	21	888	0	1861	
Season Factor	0	0	6	0	0	0	0	835	111	21	888	0	1861	
Growth	0	0	6	0	0	0	0	835	111	21	888	0	1861	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	6	0	0	0	0	835	111	21	888	0	1861	



15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	15	0	3	0	0	0	0	185	7	2	224	0	436	1672
4:15-4:30	15	0	1	0	0	0	0	151	16	1	211	0	395	1686
4:30-4:45	15	0	3	0	0	0	0	188	16	0	194	0	416	1707
4:45-5:00	18	0	3	0	0	0	0	220	22	3	159	0	425	1677
5:00-5:15	25	0	9	0	0	0	0	175	19	1	221	0	450	1622
5:15-5:30	12	0	3	0	0	0	0	209	12	1	179	0	416	
5:30-5:45	17	0	0	0	0	0	0	182	12	0	175	0	386	
5:45-6:00	6	0	2	0	0	0	0	194	9	0	159	0	370	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Season Factor	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Growth	70	0	18	0	0	0	0	792	69	5	753	0	1707	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	70	0	18	0	0	0	0	792	69	5	753	0	1707	



F-58

#43

#4E

HCS7 Two-Way Stop-Control Report

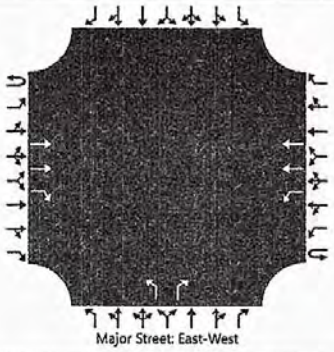
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2020
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			835	111	0	21	888			0		6				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						22				0		6				
Capacity, c (veh/h)						684				254		563				
v/c Ratio						0.03				0.00		0.01				
95% Queue Length, Q_{95} (veh)						0.1				0.0		0.0				
Control Delay (s/veh)						10.4				19.2		11.5				
Level of Service (LOS)						B				C		B				
Approach Delay (s/veh)						0.2				11.5						
Approach LOS										B						

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HCS7 Two-Way Stop-Control Report

/

General Information

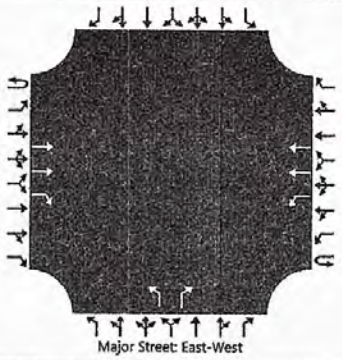
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

#4E

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			792	69	0	5	753			70		18				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5				74		19				
Capacity, c (veh/h)						740				287		582				
v/c Ratio						0.01				0.26		0.03				
95% Queue Length, Q_{95} (veh)						0.0				1.0		0.1				
Control Delay (s/veh)						9.9				21.8		11.4				
Level of Service (LOS)						A				C		B				
Approach Delay (s/veh)					0.1				19.7							
Approach LOS									C							

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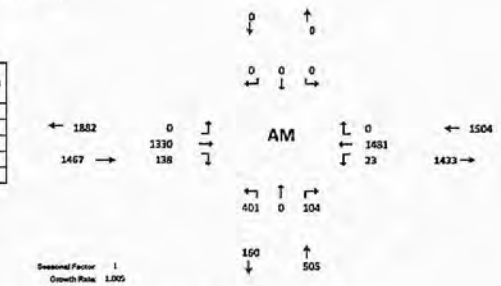
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: LTC Pkwy
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: TWSC

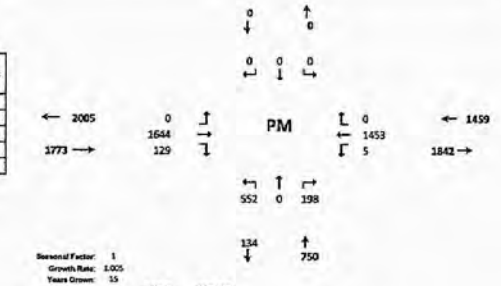
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	3	0	1	0	0	0	0	159	30	5	203	0	398	1804
7:15-7:30	0	0	3	0	0	0	0	158	24	7	243	0	435	1861
7:30-7:45	0	0	1	0	0	0	0	217	27	2	236	0	483	1856
7:45-8:00	0	0	2	0	0	0	0	226	20	6	224	0	488	1709
8:00-8:15	0	0	0	0	0	0	0	134	30	6	185	0	455	1543
8:15-8:30	0	0	2	0	0	0	0	223	22	2	181	0	430	
8:30-8:45	0	0	0	0	0	0	0	143	8	3	173	0	327	
8:45-9:00	0	0	0	0	0	0	0	140	13	7	141	0	301	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	3	0	6	0	0	0	0	835	111	21	888	0	1861	
Season Factor	0	0	6	0	0	0	0	835	111	21	888	0	1861	
Growth	0	0	6	0	0	0	0	900	120	23	957	0	2006	
In/Out	IN	-	-	-	-	-	-	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	3%							13%	3%		13%			
Village at Midway	44							78	18		189		329	
LTC Ranch %	19.6%		6.0%					8.0%			8.0%			
LTC Ranch Volume	357		97					146			130		731	
Southern Grove %								1.0%			1.0%			
Southern Grove								62			53		115	
Wilson Groves %								1.0%			1.0%			
Wilson Groves								39			38		77	
Riverland/Kennedy %								1.0%			1.0%			
Riverland/Kennedy								48			56		104	
Western Grove %								1.0%			1.0%			
Western Grove								14			21		35	
Ravina %								5.0%			5.0%			
Ravina								1			3		5	
Shinn Road 251 %								27.0%			27.0%			
Shinn Road 251								29			31		60	
Shinn Road Equestrian Estates %								20.0%			20.0%			
Shinn Road Equestrian Estates								13			4		17	
Total	403	0	104	0	0	0	0	1159	138	21	1481	0	3476	



	Seasonal Factor: 1	Growth Rate: 1.005	Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	601
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravina	32	68
Shinn Road 251	113	105
Shinn Road Equestrian Estates	21	63

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	15	0	3	0	0	0	0	835	7	1	224	0	426	1672
4:15-4:30	15	0	1	0	0	0	0	851	16	1	211	0	395	1686
4:30-4:45	15	0	3	0	0	0	0	858	16	0	194	0	416	1707
4:45-5:00	18	0	3	0	0	0	0	220	22	3	159	0	425	1677
5:00-5:15	25	0	9	0	0	0	0	175	19	1	221	0	450	1622
5:15-5:30	12	0	3	0	0	0	0	209	12	1	175	0	416	
5:30-5:45	17	0	0	0	0	0	0	182	12	0	175	0	386	
5:45-6:00	6	0	2	0	0	0	0	194	5	0	159	0	370	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Season Factor	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Growth	75	0	19	0	0	0	0	854	74	5	811	0	1840	
In/Out	IN	-	-	-	-	-	-	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	3.0%							13.0%	3.0%		13.0%			
Village at Midway	23							237	55		94		408	
LTC Ranch %	19.0%		6.0%					9.0%			8.0%			
LTC Ranch Volume	453		178					238			186		1056	
Southern Grove %								1.0%			1.0%			
Southern Grove								70			101		171	
Wilson Groves %								1.0%			1.0%			
Wilson Groves								45			56		102	
Riverland/Kennedy %								1.0%			1.0%			
Riverland/Kennedy								71			73		144	
Western Grove %								1.0%			1.0%			
Western Grove								25			21		46	
Ravina %								5.0%			5.0%			
Ravina								4			2		6	
Shinn Road 251 %								27.0%			27.0%			
Shinn Road 251								92			95		187	
Shinn Road Equestrian Estates %								20.0%			20.0%			
Shinn Road Equestrian Estates								8			14		22	
Total	552	0	198	0	0	0	0	1644	129	5	1453	0	3981	



	Seasonal Factor: 1	Growth Rate: 1.005	Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,037
Village at Midway	726	1,824
LTC Ranch	2,330	2,970
Southern Grove	6,990	13,071
Wilson Groves	4,543	5,619
Riverland/Kennedy	7,995	7,279
Western Grove	2,520	2,063
Ravina	77	44
Shinn Road 251	151	341
Shinn Road Equestrian Estates	71	43

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7/10/2020

#4 w/o AM

HCS7 Two-Way Stop-Control Report

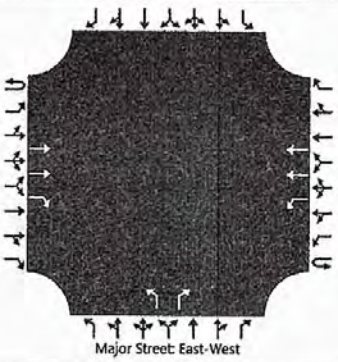
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	without Project

Site Information

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			1330	138	0	23	1481			401		104				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						24				422		109				
Capacity, c (veh/h)						421				129		379				
v/c Ratio						0.06				3.28		0.29				
95% Queue Length, Q_{95} (veh)						0.2				40.6		1.2				
Control Delay (s/veh)						14.1				1098.9		18.3				
Level of Service (LOS)						B				F		C				
Approach Delay (s/veh)						0.2				876.3						
Approach LOS										F						

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4 W/O AM

HCS7 Two-Way Stop-Control Report

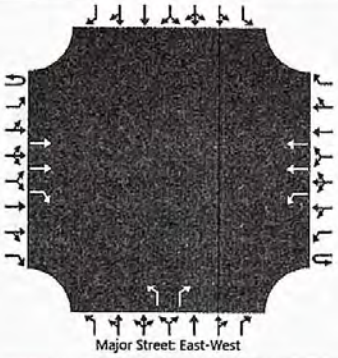
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	without Project

Site Information

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			1644	129	0	5	1453			552		198				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5				581		208				
Capacity, c (veh/h)						315				95		295				
v/c Ratio						0.02				6.09		0.71				
95% Queue Length, Q_{95} (veh)						0.1				64.1		5.0				
Control Delay (s/veh)						16.6				2378.8		42.0				
Level of Service (LOS)						C				F		E				
Approach Delay (s/veh)						0.1				1761.9						
Approach LOS										F						

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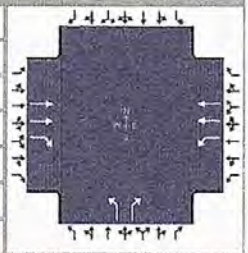
HCS7 Signalized Intersection Results Summary #4 w/o AM + imp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - AM - 2035 w.o. Project + Imp...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1330	138	23	1481		401		104			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4		
Green	3.3	74.7	24.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		80.7	9.3	90.0		30.0		
Change Period, ($Y+R_c$), s		6.0	6.0	6.0		6.0		
Max Allow Headway (*MAH*), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g_s), s			2.5			26.0		
Green Extension Time (g_e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.55			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		1400	145	24	1559		422		109			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g_s), s		28.6	4.5	0.5	27.3		24.0		7.0			
Cycle Queue Clearance Time (g_c), s		28.6	4.5	0.5	27.3		24.0		7.0			
Green Ratio (*g/C*)		0.62	0.62	0.67	0.70		0.20		0.20			
Capacity (*c*), veh/h		2251	1002	260	2532		362		322			
Volume-to-Capacity Ratio (*X*)		0.622	0.145	0.093	0.616		1.166		0.340			
Back of Queue (Q), ft/ln (95 th percentile)		402.6	68.6	8.5	354		758.2		123			
Back of Queue (Q), veh/ln (95 th percentile)		16.1	2.7	0.3	14.2		30.3		4.9			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh		14.0	9.4	10.9	9.5		48.0		41.2			
Incremental Delay (d_2), s/veh		1.3	0.3	0.1	1.1		100.8		0.2			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		15.3	9.7	11.0	10.6		148.8		41.4			
Level of Service (LOS)		B	A	B	B		F		D			
Approach Delay, s/veh / LOS	14.7	B		10.6	B		126.7	F		0.0		
Intersection Delay, s/veh / LOS	29.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	0.67	A	2.33	B	2.32	B
Bicycle LOS Score / LOS	1.76	B	1.79	B		F		

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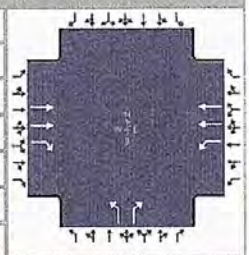
HCS7 Signalized Intersection Input Data

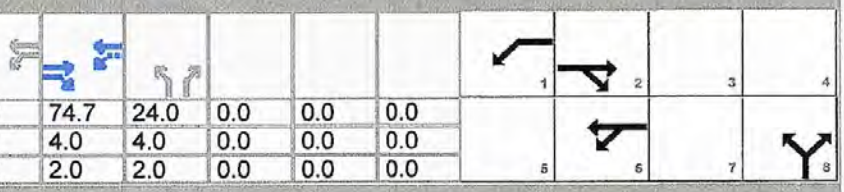
#4 w/o AM + imp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - AM - 2035 w.o. Project + I...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1330	138	23	1481		401		104			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	3.3	74.7		24.0	0.0	0.0	0.0					
Yellow	4.0	4.0		4.0	0.0	0.0	0.0					
Red	2.0	2.0		2.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1330	138	23	1481		401		104			
Initial Queue (Q_b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %		0	0	0	0		0		0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)		3	3	3	3		3		3			
Upstream Filtering (I)		1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft		12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		70.0	20.0	90.0		30.0		
Yellow Change Interval (Y), s		4.0	4.0	4.0		4.0		
Red Clearance Interval (R_c), s		2.0	2.0	2.0		2.0		
Minimum Green (G_{min}), s		6	6	6		6		
Start-Up Lost Time (l_1), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (PT), s		2.0	2.0	2.0		2.0		
Recall Mode		Min	Off	Min		Off		
Dual Entry		Yes	No	Yes		Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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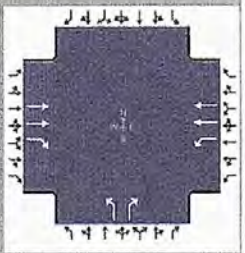
HCS7 Signalized Intersection Results Summary #4 w/o PM timp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - PM - 2035 w.o. Project + Im...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1644	129	5	1453		552		198			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	1.0	67.0	34.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0		5	6	7	8	
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		73.0	7.0	80.0		40.0		
Change Period, (*Y+R c*), s		6.0	6.0	6.0		6.0		
Max Allow Headway (*MAH*), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (*g s*), s			2.1			36.0		
Green Extension Time (*g e*), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.16			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		1731	136	5	1529		581		208			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (*g s*), s		48.6	1.7	0.1	33.7		34.0		12.8			
Cycle Queue Clearance Time (*g c*), s		48.6	1.7	0.1	33.7		34.0		12.8			
Green Ratio (*g/C*)		0.56	0.84	0.58	0.62		0.28		0.28			
Capacity (*c*), veh/h		2021	1356	118	2231		513		456			
Volume-to-Capacity Ratio (*X*)		0.856	0.100	0.044	0.686		1.133		0.457			
Back of Queue (Q), ft/ln (95 th percentile)		679.4	13.7	2.6	464.6		932.7		213.2			
Back of Queue (Q), veh/ln (95 th percentile)		27.2	0.5	0.1	18.6		37.3		8.5			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (*d 1*), s/veh		22.4	1.6	21.3	15.3		43.0		35.4			
Incremental Delay (*d 2*), s/veh		4.9	0.1	0.1	1.7		81.9		0.3			
Initial Queue Delay (*d 3*), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		27.3	1.8	21.4	17.0		124.9		35.7			
Level of Service (LOS)		C	A	C	B		F		D			
Approach Delay, s/veh / LOS	25.5	C		17.0	B		101.3	F		0.0		
Intersection Delay, s/veh / LOS	36.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	0.69	A	2.33	B	2.32	B
Bicycle LOS Score / LOS	2.03	B	1.75	B		F		

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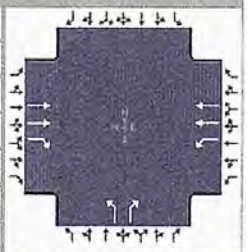
HCS7 Signalized Intersection Input Data

#4 w/o PM + MD

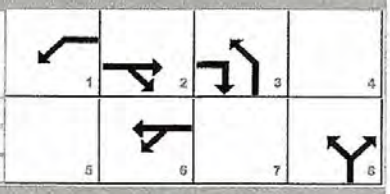
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - PM - 2035 w.o. Project + I...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1644	129	5	1453		552		198			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.0	67.0	34.0	0.0	0.0	0.0	
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1644	129	5	1453		552		198			
Initial Queue (Q_b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %		0	0	0	0		0		0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)		3	3	3	3		3		3			
Upstream Filtering (I)		1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft		12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (P_g), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		60.0	20.0	80.0	20.0	40.0		
Yellow Change Interval (Y), s		4.0	4.0	4.0	4.0	4.0		
Red Clearance Interval (R_c), s		2.0	2.0	2.0	2.0	2.0		
Minimum Green (G_{min}), s		6	6	6	6	6		
Start-Up Lost Time (l_t), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (PT), s		2.0	2.0	2.0	2.0	2.0		
Recall Mode		Min	Off	Min	Off	Off		
Dual Entry		Yes	No	Yes	No	Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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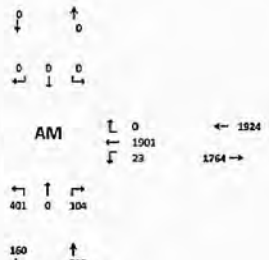
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: LTC Pkwy
FILENAME: Willow Lakes
COUNT DATE: 1/14/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: TWSC

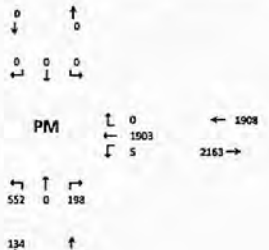
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	1	0	0	0	0	159	30	5	201	6	308	1804
7:15-7:30	0	0	3	0	0	0	0	158	24	7	243	8	435	1801
7:30-7:45	0	0	1	0	0	0	0	217	27	2	236	0	483	1856
7:45-8:00	0	0	2	0	0	0	0	226	30	6	224	0	488	1709
8:00-8:15	0	0	0	0	0	0	0	234	30	6	185	0	455	1513
8:15-8:30	0	0	2	0	0	0	0	223	22	2	181	0	430	
8:30-8:45	0	0	0	0	0	0	0	143	8	3	173	0	327	
8:45-9:00	0	0	0	0	0	0	0	143	13	7	141	0	301	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	0	6	0	0	0	0	835	111	21	888	0	1861	
Season Factor	0	0	6	0	0	0	0	835	111	21	888	0	1861	
Growth	0	0	6	0	0	0	0	900	120	23	957	0	2006	
In/Out	IN	-	-	-	-	-	-	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	31%	0%		
PROJECT	0	0	0	0	0	0	0	330	0	0	420	0	750	
Midway %	3%							13%	3%		13%			
Village at Midway	44							78	18		189		329	
LTC Ranch %	19.6%		6.0%					8.0%			8.0%			
LTC Ranch Volume	157		97					141			130		731	
Southern Grove %								1.0%			1.0%			
Southern Grove								62			53		115	
Wilson Groves %								1.0%			1.0%			
Wilson Groves								39			38		77	
Riverland/Kennedy %								1.0%			1.0%			
Riverland/Kennedy								48			56		104	
Western Grove %								1.0%			1.0%			
Western Grove								14			21		35	
Ravina %								5.0%			5.0%			
Ravina								1			3		5	
Shinn Road 251 %								27.0%			27.0%			
Shinn Road 251								29			31		60	
Shinn Road Equestrian Estates %								20.0%			20.0%			
Shinn Road Equestrian Estates								13			4		17	
Total	401	0	104	0	0	0	0	1660	138	23	1901	0	4226	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,155	1,065
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,118	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravina	72	68
Shinn Road 251	133	109
Shinn Road Equestrian Estates	21	63

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	15	0	3	0	0	0	0	185	7	2	224	0	436	1672
4:15-4:30	15	0	1	0	0	0	0	151	16	1	211	0	395	1685
4:30-4:45	15	0	1	0	0	0	0	188	16	0	194	0	416	1707
4:45-5:00	18	0	3	0	0	0	0	220	22	3	159	0	425	1673
5:00-5:15	25	0	9	0	0	0	0	175	19	1	221	0	450	1633
5:15-5:30	12	0	3	0	0	0	0	209	12	1	179	0	416	
5:30-5:45	17	0	0	0	0	0	0	182	12	0	175	0	386	
5:45-6:00	6	0	2	0	0	0	0	194	9	0	159	0	370	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Season Factor	70	0	18	0	0	0	0	792	69	5	753	0	1707	
Growth	75	0	19	0	0	0	0	854	74	5	811	0	1840	
In/Out	IN	-	-	-	-	-	-	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	31%	0%		
PROJECT	0	0	0	0	0	0	0	321	0	0	450	0	771	
Midway %	3.0%							13.0%	3.0%		13.0%			
Village at Midway	32							237	55		84		408	
LTC Ranch %	19.6%		6.0%					8.0%			8.0%			
LTC Ranch Volume	455		378					338			286		1056	
Southern Grove %								1.0%			1.0%			
Southern Grove								70			101		171	
Wilson Groves %								1.0%			1.0%			
Wilson Groves								45			56		102	
Riverland/Kennedy %								1.0%			1.0%			
Riverland/Kennedy								71			73		144	
Western Grove %								1.0%			1.0%			
Western Grove								15			23		46	
Ravina %								5.0%			5.0%			
Ravina								4			2		6	
Shinn Road 251 %								27.0%			27.0%			
Shinn Road 251								92			95		187	
Shinn Road Equestrian Estates %								20.0%			20.6%			
Shinn Road Equestrian Estates								8			14		23	
Total	552	0	198	0	0	0	0	1965	179	5	1903	0	4752	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,450	1,834
Village at Midway	716	1,824
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,055	7,277
Western Grove	2,513	2,063
Ravina	77	44
Shinn Road 251	353	344
Shinn Road Equestrian Estates	71	42

F-68

4 WIP

#4 w/P AM

HCS7 Two-Way Stop-Control Report

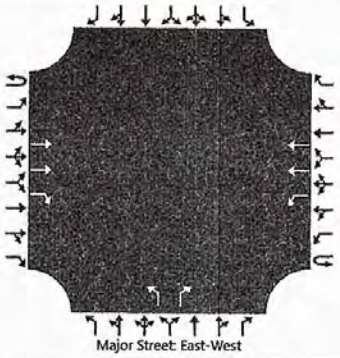
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			1660	138	0	23	1901			401		104				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						24				422		109				
Capacity, c (veh/h)						308				83		291				
v/c Ratio						0.08				5.09		0.38				
95% Queue Length, Q_{95} (veh)						0.3				45.8		1.7				
Control Delay (s/veh)						17.7				1939.7		24.6				
Level of Service (LOS)						C				F		C				
Approach Delay (s/veh)						0.2				1545.3						
Approach LOS										F						

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#4 w/P PM

HCS7 Two-Way Stop-Control Report

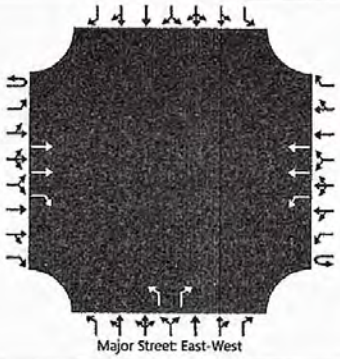
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & LTC Pkwy
Jurisdiction	St. Lucie County
East/West Street	Midway Road
North/South Street	LTC Parkway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			1965	129	0	5	1903			552		198				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5				581		208				
Capacity, c (veh/h)						232				62		227				
v/c Ratio						0.02				9.42		0.92				
95% Queue Length, Q_{95} (veh)						0.1				68.1		7.7				
Control Delay (s/veh)						20.9				3918.5		85.0				
Level of Service (LOS)						C				F		F				
Approach Delay (s/veh)						0.1				2906.5						
Approach LOS										F						

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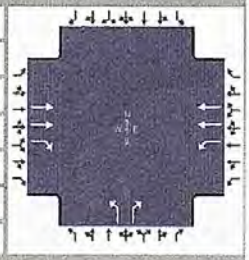
HCS7 Signalized Intersection Results Summary

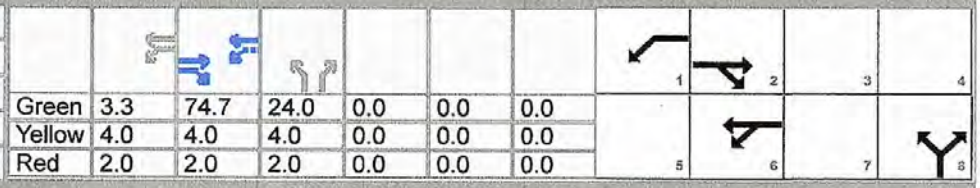
#4 w/P AM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - AM - 2035 with Project + Imp...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.3	74.7	24.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		80.7	9.3	90.0		30.0		
Change Period, ($Y+R_c$), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g_s), s			2.5			26.0		
Green Extension Time (g_e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.55			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (v), veh/h		1747	145	24	2001		422		109			
Adjusted Saturation Flow Rate (s), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g_s), s		42.3	4.5	0.5	44.6		24.0		7.0			
Cycle Queue Clearance Time (g_c), s		42.3	4.5	0.5	44.6		24.0		7.0			
Green Ratio (g/C)		0.62	0.62	0.67	0.70		0.20		0.20			
Capacity (c), veh/h		2251	1002	185	2532		362		322			
Volume-to-Capacity Ratio (X)		0.776	0.145	0.131	0.790		1.166		0.340			
Back of Queue (Q), ft/ln (95 th percentile)		567.3	68.6	10.7	543.3		758.2		123			
Back of Queue (Q), veh/ln (95 th percentile)		22.7	2.7	0.4	21.7		30.3		4.9			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh		16.6	9.4	15.7	12.1		48.0		41.2			
Incremental Delay (d_2), s/veh		2.7	0.3	0.1	2.6		100.8		0.2			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh		19.3	9.7	15.8	14.7		148.8		41.4			
Level of Service (LOS)		B	A	B	B		F		D			
Approach Delay, s/veh / LOS	18.5	B		14.7	B		126.7	F		0.0		
Intersection Delay, s/veh / LOS	29.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	0.67	A	2.33	B	2.32	B
Bicycle LOS Score / LOS	2.05	B	2.16	B		F		

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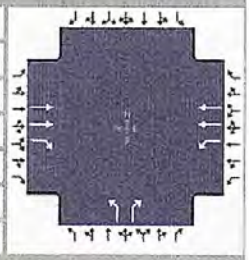
HCS7 Signalized Intersection Input Data

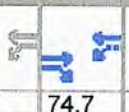
#4 w/p AM+imp

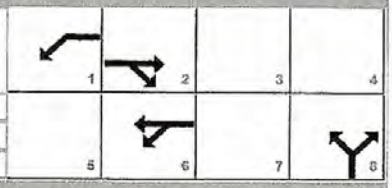
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - AM - 2035 with Project + I...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On





Green	3.3	74.7	24.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			
Initial Queue (Q_b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %		0	0	0	0		0		0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)		3	3	3	3		3		3			
Upstream Filtering (I)		1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft		12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		70.0	20.0	90.0		30.0		
Yellow Change Interval (Y), s		4.0	4.0	4.0		4.0		
Red Clearance Interval (R_c), s		2.0	2.0	2.0		2.0		
Minimum Green (G_{min}), s		6	6	6		6		
Start-Up Lost Time (l1), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (PT), s		2.0	2.0	2.0		2.0		
Recall Mode		Min	Off	Min		Off		
Dual Entry		Yes	No	Yes		Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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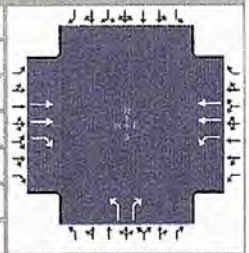
HCS7 Signalized Intersection Results Summary #4 w/p PM+imp

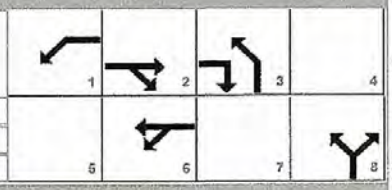
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - PM - 2035 with Project + Im...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1965	129	5	1903		552		198			

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	86.9	34.0	0.0	0.0	0.0	
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		92.9	7.1	100.0		40.0		
Change Period, ($Y+R_c$), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g_s), s			2.1			36.0		
Green Extension Time (g_e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.19			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (v), veh/h		2068	136	5	2003		581		208			
Adjusted Saturation Flow Rate (s), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g_s), s		70.9	1.8	0.1	57.1		34.0		15.8			
Cycle Queue Clearance Time (g_c), s		70.9	1.8	0.1	57.1		34.0		15.8			
Green Ratio (g/C)		0.62	0.86	0.64	0.67		0.24		0.24			
Capacity (c), veh/h		2245	1390	89	2429		439		391			
Volume-to-Capacity Ratio (X)		0.921	0.098	0.059	0.825		1.322		0.533			
Back of Queue (Q), ft/ln (95 th percentile)		960	14	4.2	736.4		1278.8		259.6			
Back of Queue (Q), veh/ln (95 th percentile)		38.4	0.6	0.2	29.5		51.2		10.4			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh		23.5	1.4	28.5	16.9		53.0		46.1			
Incremental Delay (d_2), s/veh		7.7	0.1	0.1	3.3		160.2		0.7			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh		31.2	1.6	28.6	20.3		213.2		46.8			
Level of Service (LOS)		C	A	C	C		F		D			
Approach Delay, s/veh / LOS	29.4	C		20.3	C		169.3	F		0.0		
Intersection Delay, s/veh / LOS	47.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	0.68	A	2.33	B	2.33	B
Bicycle LOS Score / LOS	2.31	B	2.14	B		F		

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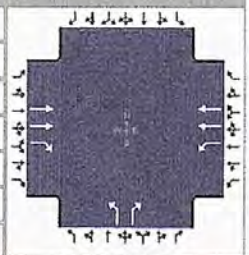
HCS7 Signalized Intersection Input Data

#4 w/P PM temp

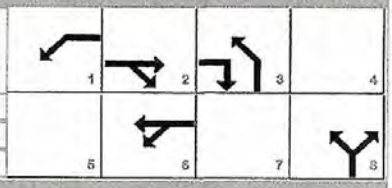
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - PM - 2035 with Project + Im...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1965	129	5	1903		552		198			

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	86.9	34.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1965	129	5	1903		552		198			
Initial Queue (Q_b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %		0	0	0	0		0		0			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (*AT*)		3	3	3	3		3		3			
Upstream Filtering (*I*)		1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (*W*), ft		12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		80.0	20.0	100.0	20.0	40.0		
Yellow Change Interval (*Y*), s		4.0	4.0	4.0	4.0	4.0		
Red Clearance Interval (R_c), s		2.0	2.0	2.0	2.0	2.0		
Minimum Green (G_{min}), s		6	6	6	6	6		
Start-Up Lost Time (*l1*), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (*e*), s		2.0	2.0	2.0	2.0			
Passage (*PT*), s		2.0	2.0	2.0	2.0	2.0		
Recall Mode		Min	Off	Min	Off	Off		
Dual Entry		Yes	No	Yes	No	Yes		
Walk (*Walk*), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (*PC*), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

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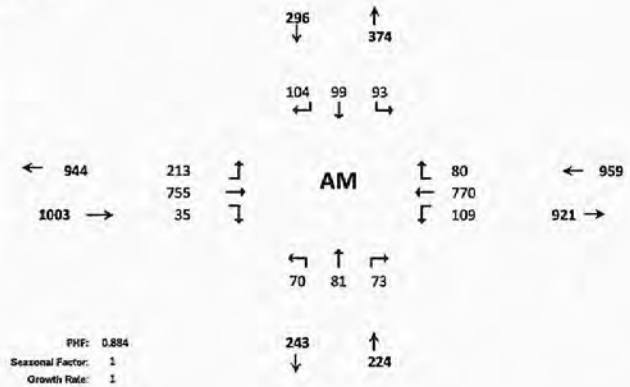
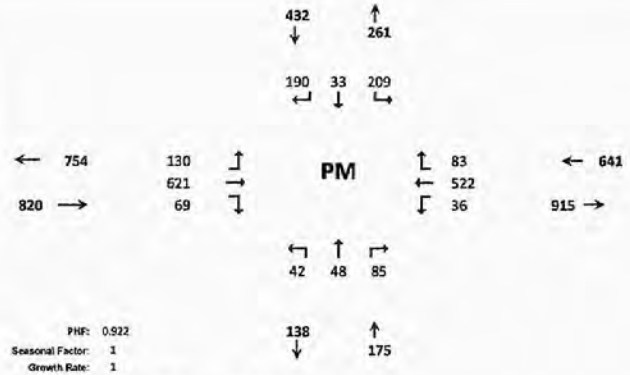
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Glades Cut Off
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	17	25	9	16	12	22	28	148	5	40	169	27	518	2438
7:15-7:30	17	25	13	24	16	31	52	156	8	43	214	19	628	2482
7:30-7:45	26	20	29	22	18	27	29	170	13	24	196	16	590	2330
7:45-8:00	18	20	25	29	37	22	51	261	9	25	187	18	702	2200
8:00-8:15	9	16	6	18	18	24	81	168	5	17	173	27	562	1880
8:15-8:30	7	4	4	15	5	33	40	139	9	17	170	33	476	
8:30-8:45	8	11	15	25	8	22	43	119	5	16	173	15	460	
8:45-9:00	3	12	12	17	7	22	37	110	1	17	131	13	382	
AM PEAK HOUR IS FROM:	7:15AM TO 8:15AM													
Volumes	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Season Factor	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Growth	70	81	73	93	99	104	213	755	35	109	770	80	2482	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	70	81	73	93	99	104	213	755	35	109	770	80	2482	



15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	6	8	32	56	9	61	46	127	10	14	128	27	524	2068
4:15-4:30	10	20	11	56	11	61	44	161	16	3	135	33	561	2035
4:30-4:45	15	13	25	58	6	40	19	162	25	12	142	14	531	1962
4:45-5:00	11	7	17	39	7	28	21	171	18	7	117	9	452	1966
5:00-5:15	5	13	18	43	10	27	23	145	10	14	175	8	491	1923
5:15-5:30	11	10	12	46	7	21	23	159	18	15	152	14	488	
5:30-5:45	6	7	11	45	16	27	18	227	10	15	133	20	535	
5:45-6:00	1	10	12	23	7	27	17	175	2	9	115	11	409	
PM PEAK HOUR IS FROM:	4:00PM TO 5:00PM													
Volumes	42	48	85	209	33	190	130	621	69	36	522	83	2068	
Season Factor	42	48	85	209	33	190	130	621	69	36	522	83	2068	
Growth	42	48	85	209	33	190	130	621	69	36	522	83	2068	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	42	48	85	209	33	190	130	621	69	36	522	83	2068	



F-75

#9E

#5

ECONOLITE

St. Lucie County

00022 - MIDWAY RD @ GLADES CUT OFF - - Econolite Type - Cobalt

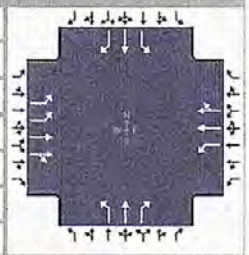
Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	15	10	7	7	10	10	7	7	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	0	0	0	0	7	0	0	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	20	0	0	0	0	0	20	0	0	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	60	20	25	25	60	10	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

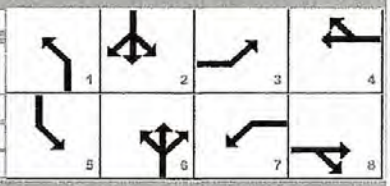
HCS7 Signalized Intersection Results Summary #5 EAM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - Existing - 6.2.202...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	213	755	35	109	770	80	70	81	73	93	99	104

Signal Information					EB			WB			NB			SB		
Cycle, s	85.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	9.2	3.5		10.0	7.3	0.8	24.2					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0		3.0	3.0	0.0	3.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.1	32.0	14.3	31.2	20.7	21.5	17.2	18.0
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.2
Queue Clearance Time (g_s), s	7.7	20.8	7.7	23.2	4.9	5.9	6.1	7.9
Green Extension Time (g_e), s	0.4	2.0	0.0	1.0	0.1	0.8	0.1	0.8
Phase Call Probability	1.00	1.00	0.95	1.00	0.85	1.00	0.92	1.00
Max Out Probability	0.00	0.83	1.00	1.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	242	452	445	124	491	475	80	92	83	106	113	118
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1870	1810	1900	1837	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	5.7	18.8	18.8	5.7	21.2	21.2	2.9	3.6	3.9	4.1	4.7	5.9
Cycle Queue Clearance Time (g_c), s	5.7	18.8	18.8	5.7	21.2	21.2	2.9	3.6	3.9	4.1	4.7	5.9
Green Ratio (g/C)	0.10	0.29	0.29	0.09	0.28	0.28	0.27	0.16	0.16	0.23	0.12	0.12
Capacity (c), veh/h	335	558	549	156	541	523	436	302	256	403	223	189
Volume-to-Capacity Ratio (X)	0.722	0.811	0.811	0.793	0.908	0.908	0.182	0.304	0.324	0.262	0.503	0.624
Back of Queue (Q), ft/ln (95 th percentile)	109.1	358.4	354.3	128.6	436.5	426.3	53.4	73.7	66.7	77	97.3	104.6
Back of Queue (Q), veh/ln (95 th percentile)	4.4	14.3	14.2	5.1	17.5	17.1	2.1	2.9	2.7	3.1	3.9	4.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	37.4	27.8	27.8	38.1	29.3	29.3	24.0	31.6	31.7	27.1	35.2	35.7
Incremental Delay (d_2), s/veh	1.1	8.2	8.3	9.3	17.8	18.3	0.1	0.2	0.3	0.1	0.7	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.5	36.0	36.2	47.4	47.2	47.6	24.1	31.8	32.0	27.2	35.8	37.0
Level of Service (LOS)	D	D	D	D	D	D	C	C	C	C	D	D
Approach Delay, s/veh / LOS	36.6	D		47.4	D		29.4	C		33.5	C	
Intersection Delay, s/veh / LOS	39.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.28	B	2.29	B	2.45	B
Bicycle LOS Score / LOS	1.43	A	1.39	A	0.91	A	1.04	A

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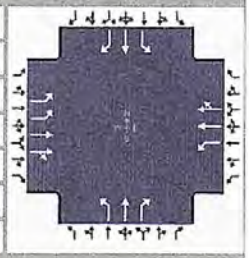
HCS7 Signalized Intersection Input Data

#5E AM

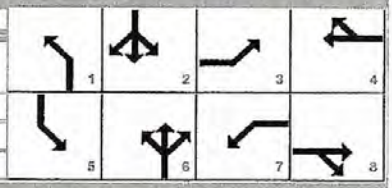
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - Existing - 6.2.202...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	213	755	35	109	770	80	70	81	73	93	99	104

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.2	3.5		10.0	7.3	0.8	24.2					
Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Red	3.0	0.0		3.0	3.0	0.0	3.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	213	755	35	109	770	80	70	81	73	93	99	104
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	25.0	10.0	25.0	25.0	60.0	25.0	60.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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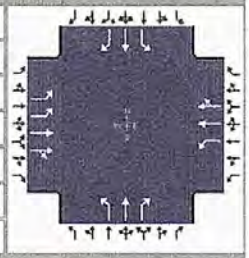
HCS7 Signalized Intersection Results Summary

#5 E.PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off Midway - PM - Existing - 6.2.2020...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	130	621	69	36	522	83	42	48	85	209	33	190

Signal Information			
Cycle, s	74.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.2	0.8	11.3	3.9	2.7	17.0	1	2	3	4		
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	5	6	7	8		
Red	3.0	0.0	3.0	3.0	0.0	3.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	13.6	26.7	10.9	24.0	17.2	19.3	18.0	20.1
Change Period, (*Y+R c*), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time (g_s), s	4.9	15.9	3.6	14.5	3.4	5.9	9.7	11.2
Green Extension Time (g_e), s	0.2	2.3	0.0	2.4	0.0	0.8	0.4	0.8
Phase Call Probability	0.95	1.00	0.56	1.00	0.61	1.00	0.99	1.00
Max Out Probability	0.00	0.23	0.00	0.17	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	141	381	369	39	336	322	46	52	92	227	36	207
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1833	1810	1900	1809	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	2.9	13.9	13.9	1.6	12.5	12.5	1.4	1.8	3.9	7.7	1.2	9.2
Cycle Queue Clearance Time (g_c), s	2.9	13.9	13.9	1.6	12.5	12.5	1.4	1.8	3.9	7.7	1.2	9.2
Green Ratio (*g/C*)	0.09	0.26	0.26	0.05	0.23	0.23	0.27	0.15	0.15	0.28	0.16	0.16
Capacity (*c*), veh/h	311	499	482	95	430	410	486	287	244	514	307	260
Volume-to-Capacity Ratio (*X*)	0.454	0.764	0.765	0.414	0.781	0.785	0.094	0.181	0.379	0.442	0.117	0.794
Back of Queue (*Q*), ft/ln (95 th percentile)	53.3	259	253	31.2	235	228	25.4	35.6	65.2	138.6	23.8	159.9
Back of Queue (*Q*), veh/ln (95 th percentile)	2.1	10.4	10.1	1.2	9.4	9.1	1.0	1.4	2.6	5.5	1.0	6.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	32.4	25.5	25.5	34.4	27.2	27.3	20.3	27.8	28.6	22.0	26.9	30.2
Incremental Delay (d_2), s/veh	0.4	3.0	3.2	1.1	2.0	2.2	0.0	0.1	0.4	0.2	0.1	2.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	32.8	28.5	28.7	35.5	29.2	29.5	20.3	27.9	29.0	22.2	26.9	32.3
Level of Service (LOS)	C	C	C	D	C	C	C	C	C	C	C	C
Approach Delay, s/veh / LOS	29.3	C		29.7	C		26.6	C		27.0	C	
Intersection Delay, s/veh / LOS	28.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.28	B	2.29	B	2.44	B
Bicycle LOS Score / LOS	1.22	A	1.06	A	0.80	A	1.26	A

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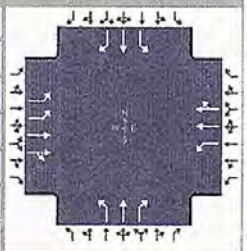
HCS7 Signalized Intersection Input Data

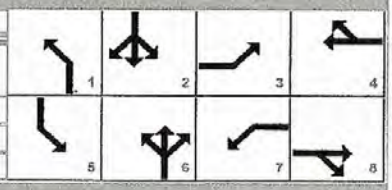
#5 E PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - Existing - 6.2.20...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	130	621	69	36	522	83	42	48	85	209	33	190

Signal Information			
Cycle, s	74.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.2	0.8	11.3	3.9	2.7	17.0						
Yellow	5.0	0.0	5.0	4.0	0.0	4.0						
Red	3.0	0.0	3.0	3.0	0.0	3.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	130	621	69	36	522	83	42	48	85	209	33	190
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	25.0	10.0	25.0	25.0	60.0	25.0	60.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (*l*$_t$), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Glades Cut Off
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	17	25	9	16	12	22	28	148	5	40	169	27	518	2438
7:15-7:30	17	25	13	24	26	31	52	156	8	43	214	19	628	2482
7:30-7:45	26	20	29	22	18	27	29	170	13	24	196	16	590	2330
7:45-8:00	18	20	25	29	37	22	51	261	9	25	187	18	702	2200
8:00-8:15	9	16	6	18	18	24	81	168	5	17	173	27	562	1880
8:15-8:30	7	4	4	15	5	33	40	139	9	17	170	33	476	
8:30-8:45	8	11	15	25	8	22	43	119	5	16	173	15	460	
8:45-9:00	3	12	12	17	7	22	37	110	1	17	131	13	382	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Season Factor	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Growth	75	87	79	100	107	112	230	814	38	117	830	86	2675	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1%					1%	1%	10%	1%		10%			
Village at Midway	15					44	18	60	6		145		288	
LTC Ranch %		2.5%	6.2%		2.5%			10.8%		6.2%	10.8%			
LTC Ranch Volume		41	101		46			175		113	197		672	
Southern Grove %							0.2%	0.8%			0.8%			
Southern Grove							12	50			50		115	
Wilson Groves %		0.1%			0.1%			0.7%			0.7%			
Wilson Groves		11			12			27			27		77	
Riverland/Kennedy %		0.1%			0.1%			0.7%			0.7%			
Riverland/Kennedy		17			14			39			34		104	
Western Grove %		0.5%	0.6%		0.5%			0.4%		0.6%	0.4%			
Western Grove		11	13		7			9		8	5		52	
Ravinia %			2.0%					11.0%		2.0%	11.0%			
Ravinia			0					2		1	7		12	
Frontera %								30.0%			30.0%			
Frontera								17			52		70	
Total	90	167	193	100	185	168	258	1185	44	240	1347	86	4063	

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	1,907
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	174

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	6	8	32	56	9	61	46	127	10	14	128	27	524	2068
4:15-4:30	10	20	31	55	11	61	44	161	15	3	135	33	561	2035
4:30-4:45	15	13	25	58	6	40	19	162	25	12	142	14	531	1961
4:45-5:00	11	7	17	39	7	28	21	171	18	7	137	9	452	1966
5:00-5:15	5	13	16	43	10	27	23	145	10	14	125	8	491	1933
5:15-5:30	11	10	11	46	7	21	23	159	18	15	152	14	488	
5:30-5:45	6	7	11	45	16	27	18	227	10	15	133	10	535	
5:45-6:00	3	10	12	23	7	27	17	175	2	9	115	11	409	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	42	48	85	209	33	190	130	621	69	35	522	83	2068	
Season Factor	42	48	85	209	33	190	130	621	69	35	522	83	2068	
Growth	45	51	92	225	36	205	140	669	74	39	563	89	2229	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1.0%					3.0%	3.0%	10.0%	1.0%		10.0%			
Village at Midway	7					22	55	182	18		73		357	
LTC Ranch %		2.5%	6.2%		2.5%			10.8%		6.2%	10.8%			
LTC Ranch Volume		74	184		58			228		148	255		1513	
Southern Grove %							0.2%	0.8%			0.8%			
Southern Grove							14	20	81		56		171	
Wilson Groves %		0.1%			0.1%			0.7%			0.7%			
Wilson Groves		17			14			39			32		102	
Riverland/Kennedy %		0.1%			0.1%			0.7%			0.7%			
Riverland/Kennedy		22			21			51			50		144	
Western Grove %		0.5%	0.6%		0.5%			0.4%		0.6%	0.4%			
Western Grove		10	12		10			8		12	10		64	
Ravinia %			2.0%					11.0%		2.0%	11.0%			
Ravinia			2					8		1	5		16	
Frontera %								30.0%			30.0%			
Frontera								62			27		90	
Total	53	175	290	225	139	241	255	1422	93	196	1075	89	4211	

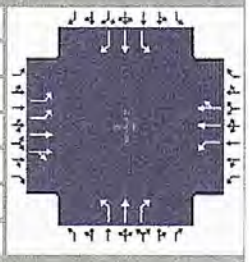
Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	716	1,824
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,072
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,005	7,277
Western Grove	2,510	2,061
Ravinia	77	44
Frontera	207	122

#5 w/o

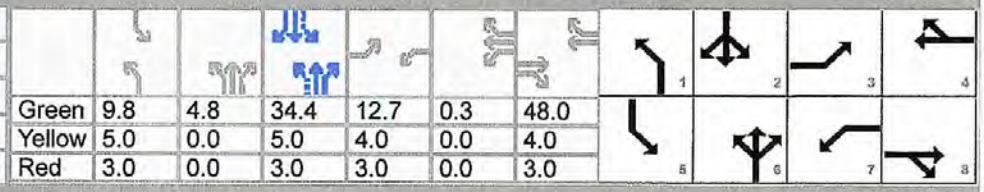
HCS7 Signalized Intersection Results Summary #5 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.8	4.8	34.4	12.7	0.3	48.0	
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	
Red	3.0	0.0	3.0	3.0	0.0	3.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	19.7	55.0	20.0	55.3	22.6	47.2	17.8	42.4
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	12.7	50.0	15.0	8.7	7.0		7.9	
Green Extension Time (g_e), s	0.0	0.0	0.0	3.4	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	1.00	1.00	0.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	272	651	643	253	121	114	95	176	203	105	195	177
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1876	1810	1900	1662	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	10.7	47.9	48.0	13.0	6.2	6.7	5.0	10.3	14.6	5.9	12.1	13.0
Cycle Queue Clearance Time (g_c), s	10.7	47.9	48.0	13.0	6.2	6.7	5.0	10.3	14.6	5.9	12.1	13.0
Green Ratio (*g/C*)	0.09	0.34	0.34	0.09	0.35	0.35	0.35	0.28	0.28	0.32	0.25	0.25
Capacity (*c*), veh/h	318	651	643	168	656	574	433	532	450	414	467	395
Volume-to-Capacity Ratio (*X*)	0.853	0.999	1.000	1.504	0.184	0.199	0.219	0.331	0.451	0.254	0.417	0.447
Back of Queue (*Q*), ft/ln (95 th percentile)	234.9	931.5	925.5	707.1	130.1	123.5	100.1	219.1	256.8	118.6	251.9	237.3
Back of Queue (*Q*), veh/ln (95 th percentile)	9.4	37.3	37.0	28.3	5.2	4.9	4.0	8.8	10.3	4.7	10.1	9.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	62.7	46.0	46.0	63.5	32.1	32.2	31.8	40.0	41.6	35.0	44.4	44.8
Incremental Delay (d_2), s/veh	17.8	34.9	35.5	255.0	0.0	0.1	0.1	1.7	3.2	0.1	2.7	3.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	80.6	80.9	81.5	318.5	32.1	32.3	31.9	41.7	44.8	35.1	47.1	48.4
Level of Service (LOS)	F	F	F	F	C	C	C	D	D	D	D	D
Approach Delay, s/veh / LOS	81.1	F		180.6	F		41.1	D		44.9	D	
Intersection Delay, s/veh / LOS	85.2						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.78	B	0.89	A	1.27	A	1.27	A

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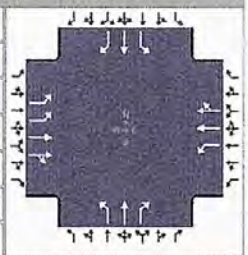
HCS7 Signalized Intersection Input Data #5 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...		
Project Description	without Project				

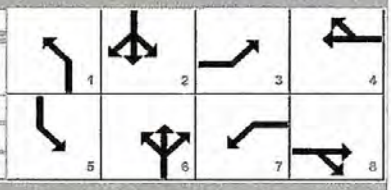


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.8	4.8		34.4	12.7	0.3	48.0					
Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Red	3.0	0.0		3.0	3.0	0.0	3.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	55.0	20.0	55.0	24.0	46.0	19.0	41.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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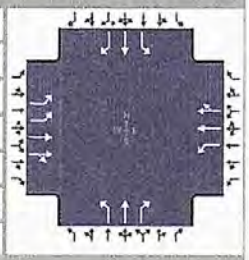
HCS7 Signalized Intersection Results Summary #5 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 w.o. Project...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	3.1	35.9	10.0	3.0	48.0	1	2	3	4	
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	5	6	7	8	
Red	3.0	0.0	3.0	3.0	0.0	3.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	17.0	55.0	20.0	58.0	21.1	47.0	18.0	43.9
Change Period, (*Y+R c*), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (*g s*), s	9.8	50.0	15.0	47.7	4.8		12.0	
Green Extension Time (*g e*), s	0.1	0.0	0.0	2.4	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.88		1.00	
Max Out Probability	0.96	1.00	1.00	0.98	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	200	798	787	205	651	639	54	189	287	222	147	215
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1858	1810	1900	1862	1810	1900	1610	1810	1900	1610
Queue Service Time (*g s*), s	7.8	48.0	48.0	13.0	45.3	45.7	2.8	11.2	21.9	10.0	8.8	16.0
Cycle Queue Clearance Time (*g c*), s	7.8	48.0	48.0	13.0	45.3	45.7	2.8	11.2	21.9	10.0	8.8	16.0
Green Ratio (*g/C*)	0.07	0.34	0.34	0.09	0.36	0.36	0.35	0.28	0.28	0.33	0.26	0.26
Capacity (*c*), veh/h	250	651	637	168	692	679	465	529	449	404	487	412
Volume-to-Capacity Ratio (*X*)	0.799	1.225	1.236	1.222	0.940	0.942	0.115	0.358	0.641	0.549	0.303	0.521
Back of Queue (Q), ft/ln (95 th percentile)	169.4	1465.7	1478.8	493.8	768.7	770.6	55.3	234.5	366.4	77.9	194	281.1
Back of Queue (Q), veh/ln (95 th percentile)	6.8	58.6	59.2	19.8	30.7	30.8	2.2	9.4	14.7	3.1	7.8	11.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	64.0	38.0	39.0	63.5	34.5	35.5	30.8	40.5	44.3	38.7	42.0	44.7
Incremental Delay (*d 2*), s/veh	7.6	114.5	119.2	141.4	20.5	21.1	0.0	1.9	6.9	0.9	1.6	4.6
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	71.6	152.5	158.2	204.9	55.0	56.7	30.8	42.4	51.2	39.6	43.6	49.3
Level of Service (LOS)	E	F	F	F	E	E	C	D	D	D	D	D
Approach Delay, s/veh / LOS	146.0	F		76.3	E		46.0	D		44.2	D	
Intersection Delay, s/veh / LOS	96.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.96	B	1.72	B	1.36	A	1.45	A

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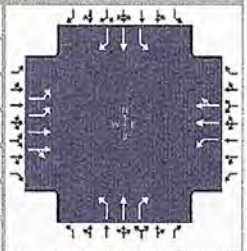
HCS7 Signalized Intersection Input Data

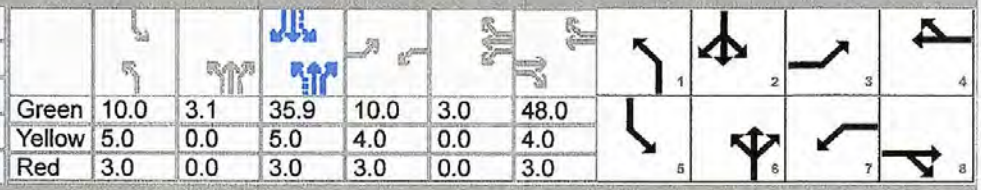
#5 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 w.o. Project...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.0	3.1		35.9	10.0	3.0	48.0					
Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Red	3.0	0.0		3.0	3.0	0.0	3.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	55.0	20.0	55.0	24.0	47.0	18.0	41.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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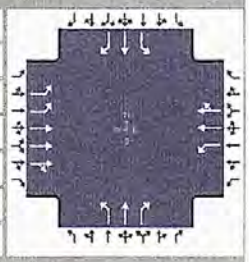
HCS7 Signalized Intersection Results Summary #5 w/o AM+IMP

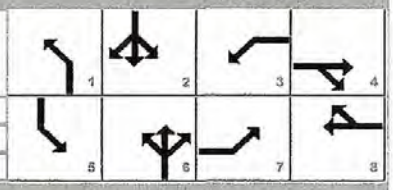
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.7	24.9	13.1	1.6	53.6	0.0	
Yellow	5.0	5.0	4.0	4.0	4.0	0.0	
Red	3.0	3.0	3.0	3.0	3.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.1	60.6	28.7	69.2	17.7	32.8	17.8	32.9
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	12.6	27.6	21.2	54.4	7.8		8.5	
Green Extension Time (g_e), s	0.4	8.8	0.5	7.9	0.1	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	0.00	0.06	0.00	0.23	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	272	868	426	253	760	749	95	176	203	105	195	177
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1864	1810	1900	1860	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	10.6	25.6	25.6	19.2	51.8	52.4	5.8	11.7	16.6	6.5	13.1	14.2
Cycle Queue Clearance Time (g_c), s	10.6	25.6	25.6	19.2	51.8	52.4	5.8	11.7	16.6	6.5	13.1	14.2
Green Ratio (*g/C*)	0.09	0.38	0.38	0.15	0.44	0.44	0.25	0.18	0.18	0.25	0.18	0.18
Capacity (*c*), veh/h	328	1456	714	280	845	827	262	337	286	293	338	287
Volume-to-Capacity Ratio (*X*)	0.828	0.596	0.596	0.902	0.900	0.905	0.362	0.521	0.711	0.359	0.576	0.617
Back of Queue (*Q*), ft/ln (95 th percentile)	210.6	434.9	429	350.3	838.9	835.2	118.5	254.6	310.2	132.3	280.6	266.8
Back of Queue (*Q*), veh/ln (95 th percentile)	8.4	17.4	17.2	14.0	33.6	33.4	4.7	10.2	12.4	5.3	11.2	10.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	62.4	34.5	34.5	58.1	36.0	36.1	42.7	52.2	54.2	42.6	52.7	53.1
Incremental Delay (d_2), s/veh	2.1	0.1	0.3	4.3	8.1	8.8	0.3	5.7	14.0	0.3	7.0	9.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	64.4	34.7	34.8	62.4	44.1	44.9	43.1	57.8	68.2	42.9	59.6	62.7
Level of Service (LOS)	E	C	C	E	D	D	D	E	E	D	E	E
Approach Delay, s/veh / LOS	39.9	D		47.1	D		59.3	E		57.1	E	
Intersection Delay, s/veh / LOS	46.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.28	B	2.46	B	2.61	C
Bicycle LOS Score / LOS	1.35	A	1.94	B	1.27	A	1.27	A

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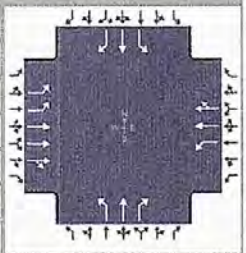
HCS7 Signalized Intersection Input Data #5 w/o AM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...		
Project Description	without Project + Imp				

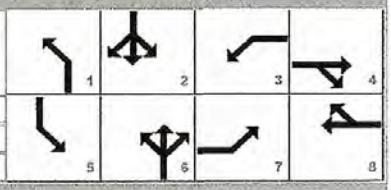


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.7	24.9	13.1	1.6	53.6	0.0						
Yellow	5.0	5.0	4.0	4.0	4.0	0.0						
Red	3.0	3.0	3.0	3.0	3.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	29.0	17.0	87.0	75.0	18.0	18.0	18.0	18.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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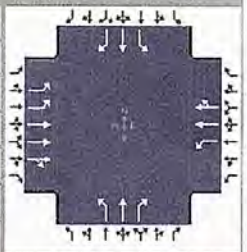
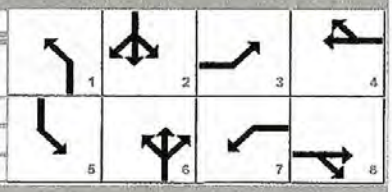
HCS7 Signalized Intersection Results Summary #5 w/o PM + MP

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off Midway - PM - 2035 w.o. Project...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	8.9	7.5		28.7	11.3	6.7	46.9					
Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Red	3.0	0.0		3.0	3.0	0.0	3.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	18.3	53.9	25.0	60.6	16.9	36.7	24.4	44.3
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	10.9	38.7	17.7	44.0	5.3		16.1	
Green Extension Time (g_e), s	0.4	8.1	0.3	8.3	0.1	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	0.19	0.00	0.17	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	226	1075	520	206	620	605	56	184	305	237	146	254
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1838	1810	1900	1848	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	8.9	36.7	36.7	15.7	41.9	42.0	3.3	11.9	26.0	14.1	8.7	19.4
Cycle Queue Clearance Time (g_c), s	8.9	36.7	36.7	15.7	41.9	42.0	3.3	11.9	26.0	14.1	8.7	19.4
Green Ratio (*g/C*)	0.08	0.33	0.33	0.13	0.38	0.38	0.27	0.21	0.21	0.33	0.26	0.26
Capacity (*c*), veh/h	283	1272	615	233	728	708	397	390	331	409	492	417
Volume-to-Capacity Ratio (*X*)	0.800	0.845	0.845	0.887	0.853	0.854	0.141	0.472	0.923	0.579	0.297	0.608
Back of Queue (Q), ft/ln (95 th percentile)	181.2	608.4	603.5	298.2	690	676.5	65.8	254.1	489	259.3	192.1	331.7
Back of Queue (Q), veh/ln (95 th percentile)	7.2	24.3	24.1	11.9	27.6	27.1	2.6	10.2	19.6	10.4	7.7	13.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	63.3	43.2	43.2	60.0	39.6	39.6	38.7	48.9	54.5	36.6	41.6	45.6
Incremental Delay (d_2), s/veh	2.0	2.4	4.7	4.5	4.9	5.1	0.1	4.1	33.3	0.5	1.5	6.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	65.3	45.5	47.9	64.5	44.5	44.7	38.7	53.0	87.9	37.1	43.2	52.1
Level of Service (LOS)	E	D	D	E	D	D	D	D	F	D	D	D
Approach Delay, s/veh / LOS	48.7	D		47.5	D		71.1	E		44.5	D	
Intersection Delay, s/veh / LOS	50.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.46	B	2.60	C
Bicycle LOS Score / LOS	1.49	A	1.67	B	1.39	A	1.54	B

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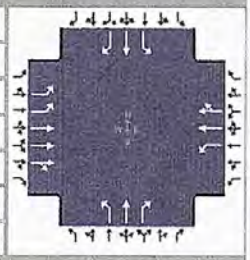
HCS7 Signalized Intersection Input Data

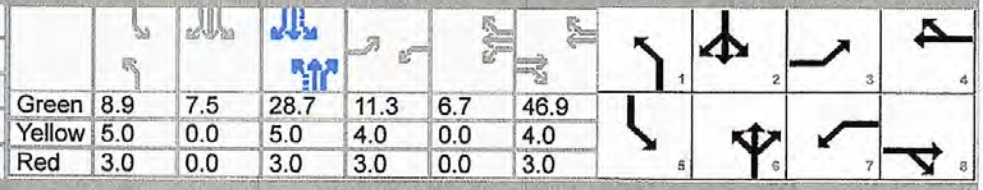
#5 w/c PM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 w.o. Project...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	8.9	7.5		28.7	11.3	6.7	46.9					
Yellow	5.0	0.0		5.0	4.0	0.0	4.0					
Red	3.0	0.0		3.0	3.0	0.0	3.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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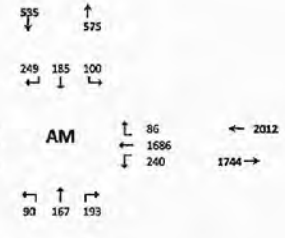
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Glades Cut Off
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: Signalized

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	17	25	9	16	12	22	28	148	5	40	169	27	518	2430
7:15-7:30	17	25	13	24	26	31	52	156	8	42	214	19	628	2481
7:30-7:45	26	20	19	22	18	27	29	170	13	24	196	16	590	2330
7:45-8:00	18	30	25	19	37	22	51	261	9	25	187	16	700	2309
8:00-8:15	9	16	6	18	18	24	81	168	5	17	173	27	562	1880
8:15-8:30	7	4	4	15	5	33	40	139	9	17	170	31	476	
8:30-8:45	8	11	15	25	8	22	43	119	5	16	173	15	460	
8:45-9:00	3	12	12	17	7	22	37	110	1	17	131	13	382	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Season Factor	70	81	73	93	99	104	213	755	35	109	770	80	2482	
Growth	75	87	79	100	107	112	230	814	38	117	830	86	2675	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	6%	6%	25%	0%	0%	25%	0%		
PROJECT	0	0	0	0	0	81	64	265	0	0	339	0	750	
Midway %	1%					3%	3%	10%	1%		10%			
Village at Midway	15					44	18	60	6		145		288	
LTC Ranch %		2.5%	6.2%		2.5%			10.8%		6.2%	10.8%			
LTC Ranch Volume		41	101		46			175		113	197		672	
Southern Grove %							0.2%	0.8%			0.8%			
Southern Grove							12	49			50		115	
Wilson Groves %		0.3%			0.3%			0.7%			0.7%			
Wilson Groves		11			12			27			27		77	
Riverland/Kennedy %		0.3%			0.3%			0.7%			0.7%			
Riverland/Kennedy		17			16			39			34		104	
Western Grove %		0.5%	0.6%		0.5%			0.4%		0.6%	0.4%			
Western Grove		11	13		7			9		8	5		52	
Ravinia %			2.0%					11.0%		2.0%	11.0%			
Ravinia			8					2		1	7		12	
Frontera %								30.0%			30.0%			
Frontera								17			52		70	
Total	90	167	193	100	185	249	322	1451	44	340	1686	86	4813	

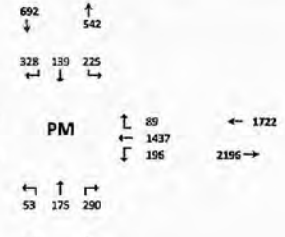


Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 25

	Trips In	Trips Out
Willow Lakes	1,355	1,005
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	72	68
Frontera	58	124

F-91

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	6	8	32	56	9	61	46	127	16	14	128	27	524	2068
4:15-4:30	10	20	11	56	11	61	44	101	16	8	135	33	561	2035
4:30-4:45	15	13	25	58	6	40	19	152	25	11	142	14	531	1952
4:45-5:00	11	7	17	39	7	28	21	171	18	7	117	9	452	1866
5:00-5:15	5	13	16	43	10	27	23	145	10	14	175	8	491	1923
5:15-5:30	11	10	11	46	7	21	23	159	18	15	152	14	488	
5:30-5:45	6	7	11	45	16	27	18	227	10	15	143	20	535	
5:45-6:00	1	10	12	23	7	27	17	175	2	9	115	11	409	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	42	48	85	209	33	190	130	625	69	36	522	83	2068	
Season Factor	42	48	85	209	33	190	130	625	69	36	522	83	2068	
Growth	45	52	92	225	36	205	140	669	74	39	563	89	2228	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	25%	0%		
PROJECT	0	0	0	0	0	87	62	259	0	0	363	0	771	
Midway %	1.0%					3.0%	3.0%	13.0%	1.0%		10.0%			
Village at Midway	7					22	55	182	18		73		357	
LTC Ranch %		2.5%	6.2%		2.5%			10.8%		6.2%	10.8%			
LTC Ranch Volume		74	184		59			321		144	251		1032	
Southern Grove %							0.2%	0.8%			0.8%			
Southern Grove							14	20	81		56		171	
Wilson Groves %		0.3%			0.3%			0.7%			0.7%			
Wilson Groves		17			14			39			32		102	
Riverland/Kennedy %		0.3%			0.3%			0.7%			0.7%			
Riverland/Kennedy		32			21			51			50		144	
Western Grove %		0.5%	0.6%		0.5%			0.4%		0.6%	0.4%			
Western Grove		10	12		10			8		12	10		64	
Ravinia %			2.0%					13.0%		2.0%	11.0%			
Ravinia			2					8		1	5		16	
Frontera %								30.0%			30.0%			
Frontera								62			37		99	
Total	53	175	290	225	139	328	277	1681	93	196	1437	89	4981	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

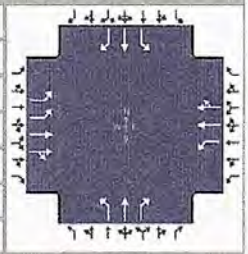
	Trips In	Trips Out
Willow Lakes	1,450	1,086
Village at Midway	726	1,824
LTC Ranch	2,330	2,970
Southern Grove	6,990	10,671
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44
Frontera	307	122

E-5 w/p

HCS7 Signalized Intersection Results Summary

#5 w/ PAM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.7	19.3	13.0	1.6	59.4	0.0	1	2	3	4		
Yellow	5.0	5.0	4.0	4.0	4.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	3.0	3.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.0	66.4	28.6	75.0	17.7	27.2	17.8	27.3
Change Period, (Y+R c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g s), s	15.0	59.7	21.2	70.0	8.1		8.9	
Green Extension Time (g e), s	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	1.00	0.00	1.00	0.37		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	339	789	784	253	934	931	95	176	203	105	195	262
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1880	1810	1900	1867	1810	1900	1610	1810	1900	1610
Queue Service Time (g s), s	13.0	57.3	57.7	19.2	68.0	68.0	6.1	12.3	17.4	6.9	13.8	19.3
Cycle Queue Clearance Time (g c), s	13.0	57.3	57.7	19.2	68.0	68.0	6.1	12.3	17.4	6.9	13.8	19.3
Green Ratio (g/C)	0.09	0.42	0.42	0.15	0.49	0.49	0.21	0.14	0.14	0.21	0.14	0.14
Capacity (c), veh/h	326	806	797	280	923	907	207	260	220	239	261	221
Volume-to-Capacity Ratio (X)	1.039	0.980	0.984	0.903	1.012	1.027	0.457	0.676	0.922	0.441	0.745	1.184
Back of Queue (Q), ft/ln (95 th percentile)	337.3	1032.8	1035	350.4	1233.7	1260.5	126.2	278.7	370.9	140.6	311.9	578.6
Back of Queue (Q), veh/ln (95 th percentile)	13.5	41.3	41.4	14.0	49.3	50.4	5.0	11.1	14.8	5.6	12.5	23.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d 1), s/veh	63.5	39.7	39.8	58.1	36.0	36.0	47.5	57.5	59.7	47.3	58.0	60.4
Incremental Delay (d 2), s/veh	60.2	26.6	27.7	4.4	32.6	36.9	0.6	13.2	43.2	0.5	17.5	119.1
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	123.7	66.4	67.6	62.5	68.6	72.9	48.0	70.7	102.8	47.8	75.5	179.5
Level of Service (LOS)	F	E	E	E	F	F	D	E	F	D	E	F
Approach Delay, s/veh / LOS	77.0	E		69.8	E		80.0	E		118.8	F	
Intersection Delay, s/veh / LOS	78.9						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.27	B	2.32	B	2.47	B
Bicycle LOS Score / LOS	2.07	B	2.23	B	1.27	A	1.42	A

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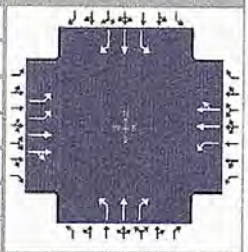
HCS7 Signalized Intersection Input Data

#5 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.7	19.3	13.0	1.6	59.4	0.0	1	2	3	4		
Yellow	5.0	5.0	4.0	4.0	4.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	3.0	3.0	0.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	47.0	48.0	75.0	20.0	18.0	27.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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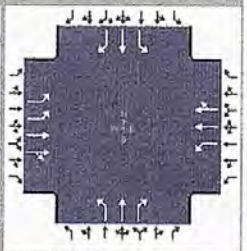
HCS7 Signalized Intersection Results Summary

#5 w/p PM

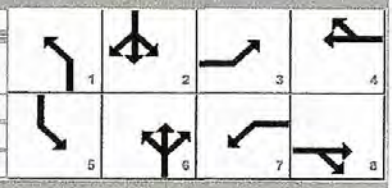
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.9	1.2	19.0	13.9	4.1	63.0	
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	
Red	3.0	0.0	3.0	3.0	0.0	3.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.9	70.0	25.0	74.1	16.9	27.0	18.0	28.1
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	13.4	65.0	17.7	56.8	5.6		12.1	
Green Extension Time (g_e), s	0.5	0.0	0.3	6.8	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	1.00	0.00	0.76	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	292	935	932	206	808	798	56	184	305	237	146	345
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1865	1810	1900	1861	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	11.4	63.0	63.0	15.7	54.0	54.8	3.6	13.0	19.0	10.1	10.0	20.1
Cycle Queue Clearance Time (g_c), s	11.4	63.0	63.0	15.7	54.0	54.8	3.6	13.0	19.0	10.1	10.0	20.1
Green Ratio (*g/C*)	0.10	0.45	0.45	0.13	0.48	0.48	0.20	0.14	0.14	0.21	0.14	0.14
Capacity (*c*), veh/h	349	855	839	233	910	891	240	257	218	233	273	232
Volume-to-Capacity Ratio (*X*)	0.834	1.094	1.111	0.887	0.888	0.896	0.233	0.716	1.400	1.018	0.535	1.490
Back of Queue (Q), ft/ln (95 th percentile)	222.4	1427.1	1466.1	298.2	880.3	881.8	73.1	294.8	784.3	298.3	228.2	925.5
Back of Queue (Q), veh/ln (95 th percentile)	8.9	57.1	58.6	11.9	35.2	35.3	2.9	11.8	31.4	11.9	9.1	37.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	61.9	38.5	38.5	60.0	33.0	33.3	46.8	57.9	60.5	56.0	55.6	59.9
Incremental Delay (d_2), s/veh	2.0	59.6	66.2	4.5	10.3	11.3	0.2	15.7	205.5	63.9	7.3	242.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	63.9	98.1	104.7	64.5	43.3	44.5	47.0	73.7	266.0	119.8	62.9	301.9
Level of Service (LOS)	E	F	F	E	D	D	D	E	F	F	E	F
Approach Delay, s/veh / LOS	96.3	F		46.3	D		178.6	F		194.7	F	
Intersection Delay, s/veh / LOS	101.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.28	B	2.32	B	2.47	B
Bicycle LOS Score / LOS	2.27	B	1.98	B	1.39	A	1.69	B

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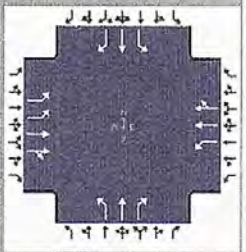
HCS7 Signalized Intersection Input Data

#5 wP PM

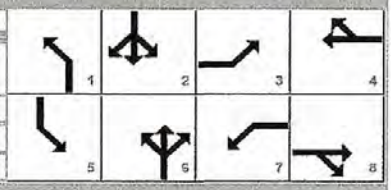
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.9	1.2	19.0	13.9	4.1	63.0	
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	
Red	3.0	0.0	3.0	3.0	0.0	3.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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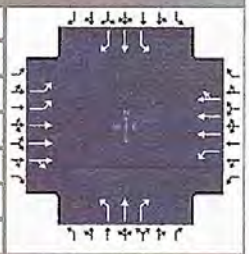
HCS7 Signalized Intersection Results Summary

#5 w/PAM+TMP

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4	
Green	8.9	0.3	21.2	13.9	4.1	53.7	5	6	7	8	
Yellow	5.0	5.0	5.0	4.0	0.0	4.0					
Red	3.0	3.0	3.0	3.0	0.0	3.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.9	60.7	25.0	64.8	16.9	29.2	25.1	37.5
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	13.4	43.0	17.7	31.7	5.5		17.0	
Green Extension Time (g_e), s	0.5	10.7	0.3	13.5	0.1	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	0.44	0.00	0.21	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	292	1256	612	206	1082	524	56	184	305	237	146	345
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1847	1810	1900	1841	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	11.4	40.4	41.0	15.7	28.9	29.7	3.5	12.8	21.2	15.0	9.2	26.4
Cycle Queue Clearance Time (g_c), s	11.4	40.4	41.0	15.7	28.9	29.7	3.5	12.8	21.2	15.0	9.2	26.4
Green Ratio (*g/C*)	0.10	0.38	0.38	0.13	0.41	0.41	0.21	0.15	0.28	0.29	0.21	0.31
Capacity (*c*), veh/h	349	1457	708	233	1568	760	330	288	451	346	400	499
Volume-to-Capacity Ratio (*X*)	0.834	0.862	0.864	0.887	0.690	0.690	0.169	0.640	0.677	0.684	0.366	0.692
Back of Queue (Q), ft/ln (95 th percentile)	222.4	607.3	631.5	298.2	435.1	448.4	71.4	281.4	391.1	284.5	205	426.3
Back of Queue (Q), veh/ln (95 th percentile)	8.9	24.3	25.3	11.9	17.4	17.9	2.9	11.3	15.6	11.4	8.2	17.1
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	61.9	31.0	32.4	60.0	25.0	26.6	44.6	55.8	44.8	41.8	47.3	42.4
Incremental Delay (d_2), s/veh	2.0	3.7	7.4	4.5	0.6	1.3	0.1	10.5	7.9	3.5	2.6	7.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	63.9	34.7	39.8	64.5	25.6	27.9	44.7	66.3	52.7	45.3	49.9	50.1
Level of Service (LOS)	E	C	D	E	C	C	D	E	D	D	D	D
Approach Delay, s/veh / LOS	40.1	D		30.7	C		56.5	E		48.5	D	
Intersection Delay, s/veh / LOS	39.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.28	B	2.61	C	2.73	C
Bicycle LOS Score / LOS	1.68	B	1.48	A	1.39	A	1.69	B

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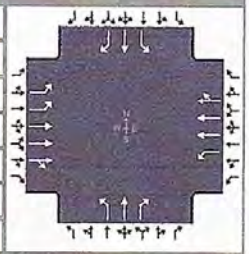
HCS7 Signalized Intersection Input Data

#5 w/PAM + mip

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	8.9	0.3	21.2	13.9	4.1	53.7						
Yellow	5.0	5.0	5.0	4.0	0.0	4.0						
Red	3.0	3.0	3.0	3.0	0.0	3.0						
							5	6	7	8		

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (*l*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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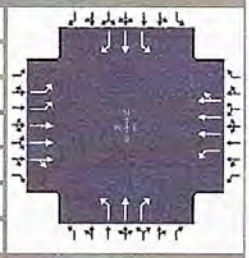
HCS7 Signalized Intersection Results Summary

#5 WIP PM+imp

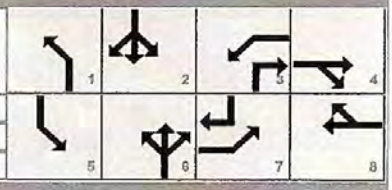
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.7	31.2	13.0	1.6	47.4	0.0	
Yellow	5.0	5.0	4.0	4.0	4.0	0.0	
Red	3.0	3.0	3.0	3.0	3.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.0	54.4	28.6	63.0	17.7	39.2	17.8	39.2
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (*MAH*), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	15.0	36.0	21.2	41.1	7.5		8.1	
Green Extension Time (g_e), s	0.0	11.3	0.4	12.0	0.1	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	0.36	0.00	0.30	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	339	1055	519	253	1254	612	95	176	203	105	195	262
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1900	1870	1810	1900	1851	1810	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	13.0	33.9	34.0	19.2	38.5	39.1	5.5	11.1	12.6	6.1	12.4	18.6
Cycle Queue Clearance Time (g_c), s	13.0	33.9	34.0	19.2	38.5	39.1	5.5	11.1	12.6	6.1	12.4	18.6
Green Ratio (*g/C*)	0.09	0.34	0.34	0.15	0.40	0.40	0.29	0.22	0.38	0.29	0.22	0.32
Capacity (*c*), veh/h	326	1286	633	280	1520	740	322	423	607	354	424	509
Volume-to-Capacity Ratio (*X*)	1.039	0.820	0.820	0.903	0.825	0.826	0.294	0.416	0.335	0.297	0.459	0.515
Back of Queue (*Q*), ft/ln (95 th percentile)	337.3	528.1	539.3	350.4	567.4	587.3	110.4	237.2	221.9	123.3	260.4	311.8
Back of Queue (*Q*), veh/ln (95 th percentile)	13.5	21.1	21.6	14.0	22.7	23.5	4.4	9.5	8.9	4.9	10.4	12.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	63.5	34.7	35.4	58.1	28.6	29.9	37.8	46.6	31.1	37.7	47.1	39.1
Incremental Delay (d_2), s/veh	60.2	2.3	4.5	4.4	2.2	4.5	0.2	3.0	1.5	0.2	3.6	3.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	123.7	37.0	39.9	62.5	30.8	34.4	38.0	49.6	32.6	37.8	50.6	42.8
Level of Service (LOS)	F	D	D	E	C	C	D	D	C	D	D	D
Approach Delay, s/veh / LOS	53.1	D		35.6	D		40.0	D		44.6	D	
Intersection Delay, s/veh / LOS	43.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.60	C	2.73	C
Bicycle LOS Score / LOS	1.54	B	1.65	B	1.27	A	1.42	A

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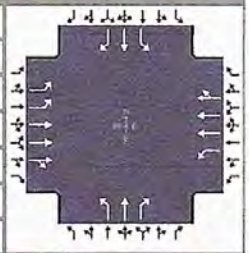
HCS7 Signalized Intersection Input Data

#5 w/p PM+ITP

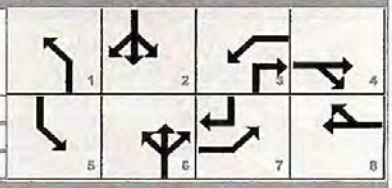
General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.7	31.2	13.0	1.6	47.4	0.0						
Yellow	5.0	5.0	4.0	4.0	4.0	0.0						
Red	3.0	3.0	3.0	3.0	3.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	47.0	48.0	75.0	20.0	18.0	27.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R_c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G_{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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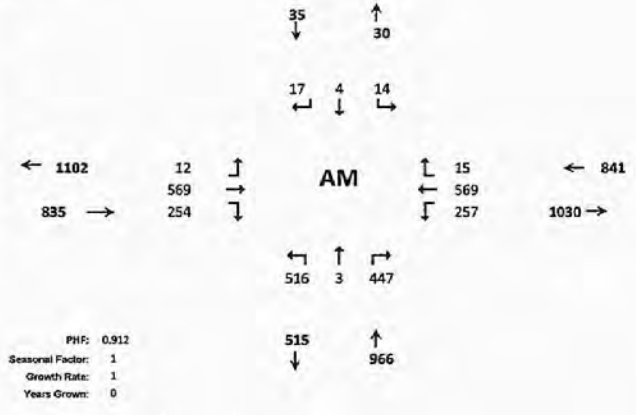
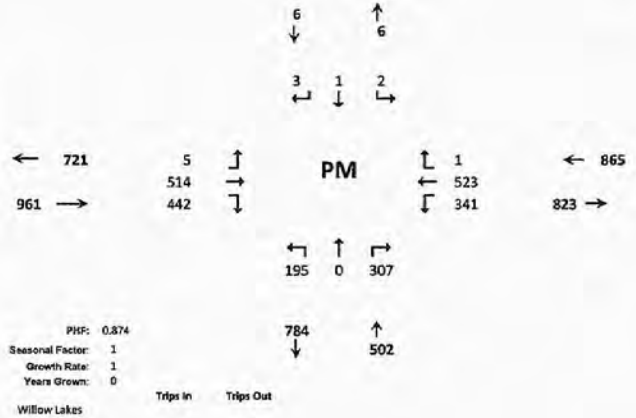
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Torino Pkwy
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
REPORT DATE:
DAY: Thursday
ANALYSIS YEAR: 2020
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: TWSC

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	136	1	126	3	2	1	3	117	52	45	124	5	615	2677
7:15-7:30	103	0	85	1	2	5	4	110	55	64	162	3	594	2623
7:30-7:45	135	1	108	6	0	7	1	161	77	92	145	1	734	2605
7:45-8:00	142	1	128	4	0	4	4	181	70	56	138	6	734	2311
8:00-8:15	110	1	101	2	0	3	8	123	41	49	121	2	561	1969
8:15-8:30	81	0	93	1	0	8	11	134	47	55	143	3	576	
8:30-8:45	82	1	67	3	1	5	4	93	35	48	99	2	440	
8:45-9:00	34	0	57	0	0	3	5	92	52	43	104	2	392	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	516	3	447	14	4	17	12	569	254	257	569	15	2677	
Season Factor	516	3	447	14	4	17	12	569	254	257	569	15	2677	
Growth	516	3	447	14	4	17	12	569	254	257	569	15	2677	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	516	3	447	14	4	17	12	569	254	257	569	15	2677	



15 Min Period Lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	50	1	59	0	2	0	1	143	71	58	98	0	483	2137
4:15-4:30	41	0	76	0	1	0	0	92	95	106	183	1	595	2230
4:30-4:45	54	0	76	0	1	3	1	117	69	63	128	0	512	2303
4:45-5:00	53	0	66	0	0	0	1	141	103	85	98	0	547	2334
5:00-5:15	43	0	63	0	1	2	3	94	98	86	185	1	576	2280
5:15-5:30	57	0	107	0	0	0	1	153	137	89	124	0	668	
5:30-5:45	42	0	71	2	0	1	0	126	104	81	116	0	543	
5:45-6:00	61	1	74	0	0	0	1	107	82	70	95	2	493	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Season Factor	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Growth	195	0	307	2	1	3	5	514	442	341	523	1	2334	
In/Out	-	IN	-	OUT	OUT	OUT	IN	-	-	-	-	IN		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	195	0	307	2	1	3	5	514	442	341	523	1	2334	



F-100

#6 E

#6 MIDWAY/TORINO

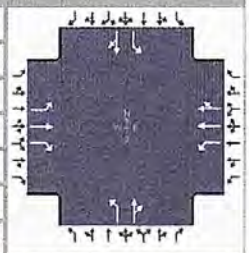
By-Phase Timing Data

	Phase											
	1	2	3	4	5	6	7	8	9	10	11	12
Direction	EBL	W/B	S/BL	N/B	W/BL	E/B	N/BL	S/B				
Minimum Green	7	7	7	7	7	7	7	7	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0
Cond Serv Min Grn	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10
Ped Clearance	0	16	0	16	0	16	0	16	0	16	0	16
Veh Extension	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Alt Veh Exten	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Extension	0	0	0	25	0	0	0	0	0	0	0	0
Max 1	15	60	15	40	35	60	40	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	50	0	0	0	0	0	0	0	0
Det. Fail Max	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
Red Clearance	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act. B4 Init	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Actuation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	30	30	30	30	30	30	30	30	30	30	30	30
Time B4 Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Waiting	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Signalized Intersection Results Summary

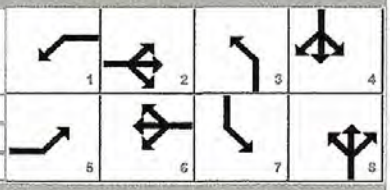
#6 E AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - Existing - 7.22.20.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	12	569	254	257	569	15	516	3	447	14	4	17

Signal Information					EB		WB			NB			SB		
Cycle, s	103.9	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	1.8	4.0	36.0	2.1	11.9	12.1					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.8	42.0	17.8	52.0	26.0	36.0	8.1	18.1
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.5	33.3	11.5	13.2	22.0	32.0	2.7	3.2
Green Extension Time (g_e), s	0.0	2.7	0.3	2.9	0.0	0.0	0.0	1.1
Phase Call Probability	0.31	1.00	1.00	1.00	1.00	1.00	0.35	1.00
Max Out Probability	0.00	0.04	0.01	0.00	1.00	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	13	599	267	271	309	306	543	474		15	22	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1883	1810	1612		1810	1658	
Queue Service Time (g_s), s	0.5	31.3	13.5	9.5	11.2	11.2	20.0	30.0		0.7	1.2	
Cycle Queue Clearance Time (g_c), s	0.5	31.3	13.5	9.5	11.2	11.2	20.0	30.0		0.7	1.2	
Green Ratio (g/C)	0.36	0.35	0.35	0.48	0.44	0.44	0.33	0.29		0.14	0.12	
Capacity (c), veh/h	360	658	558	314	841	833	565	465		106	193	
Volume-to-Capacity Ratio (X)	0.035	0.910	0.479	0.863	0.367	0.367	0.961	1.018		0.140	0.115	
Back of Queue (Q), ft/ln (95 th percentile)	8.5	531.4	214.5	193.6	204.1	202.9	308.4	603.6		14.6	22.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.3	21.3	8.6	7.7	8.2	8.1	12.3	24.1		0.6	0.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	21.2	32.4	26.6	23.2	19.3	19.3	35.0	37.0		39.8	41.1	
Incremental Delay (d_2), s/veh	0.0	8.3	0.2	8.1	0.1	0.1	28.2	46.4		0.2	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	21.2	40.7	26.8	31.2	19.4	19.4	63.2	83.3		40.0	41.2	
Level of Service (LOS)	C	D	C	C	B	B	E	F		D	D	
Approach Delay, s/veh / LOS	36.2	D		23.0	C		72.6	E		40.7	D	
Intersection Delay, s/veh / LOS	45.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.91	B	2.12	B	2.31	B
Bicycle LOS Score / LOS	1.94	B	1.22	A	2.17	B	0.55	A

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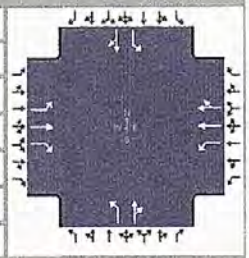
HCS7 Signalized Intersection Input Data

#6 EAM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - Existing - 7.22.20.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	12	569	254	257	569	15	516	3	447	14	4	17

Signal Information			
Cycle, s	103.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.8	4.0	36.0	2.1	11.9	12.1	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	569	254	257	569	15	516	3	447	14	4	17
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0	30.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l*$_1$), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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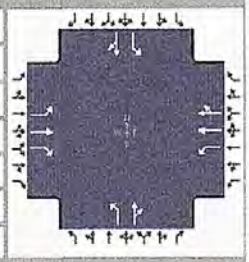
HCS7 Signalized Intersection Results Summary

#6 EPM

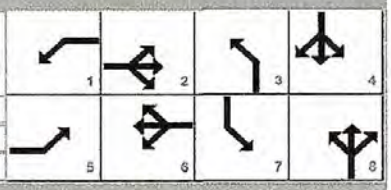
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - Existing 7.22.20.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3

Signal Information			
Cycle, s	84.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.7	6.0		28.1	0.3	4.0	9.1					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	6.7	34.1	18.7	46.1	16.3	25.0	6.3	15.1
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.2	24.8	12.3	9.5	10.1	18.4	2.1	2.2
Green Extension Time (g_e), s	0.0	3.1	0.4	3.2	0.2	0.6	0.0	0.7
Phase Call Probability	0.12	1.00	1.00	1.00	0.99	1.00	0.05	1.00
Max Out Probability	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	541	465	359	276	276	205	323		2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1610		1810	1674	
Queue Service Time (g_s), s	0.2	22.4	22.8	10.3	7.5	7.5	8.1	16.4		0.1	0.2	
Cycle Queue Clearance Time (g_c), s	0.2	22.4	22.8	10.3	7.5	7.5	8.1	16.4		0.1	0.2	
Green Ratio (g/C)	0.34	0.33	0.33	0.51	0.48	0.48	0.25	0.23		0.11	0.11	
Capacity (c), veh/h	391	635	538	420	907	906	460	365		101	181	
Volume-to-Capacity Ratio (X)	0.013	0.852	0.865	0.854	0.304	0.304	0.447	0.886		0.021	0.023	
Back of Queue (Q), ft/ln (95 th percentile)	2.8	359.1	320.3	194.6	127	126.9	146.4	269.1		1.7	3.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	14.4	12.8	7.8	5.1	5.1	5.9	10.8		0.1	0.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	18.3	26.2	26.3	17.6	13.5	13.5	26.5	31.6		33.8	33.7	
Incremental Delay (d_2), s/veh	0.0	1.3	1.7	7.0	0.1	0.1	0.3	6.7		0.0	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	18.3	27.4	28.0	24.6	13.6	13.6	26.8	38.3		33.8	33.7	
Level of Service (LOS)	B	C	C	C	B	B	C	D		C	C	
Approach Delay, s/veh / LOS	27.6	C		17.9	B		33.8	C		33.7	C	
Intersection Delay, s/veh / LOS	25.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.90	B	2.12	B	2.30	B
Bicycle LOS Score / LOS	2.16	B	1.24	A	1.36	A	0.50	A

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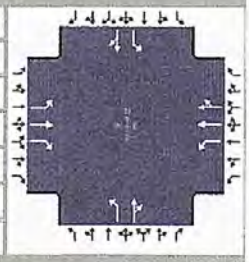
HCS7 Signalized Intersection Input Data

#6 E PM

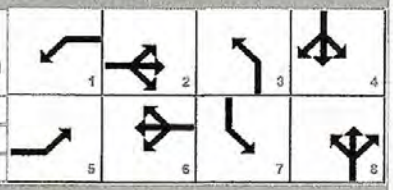
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - Existing 7.22.20.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3

Signal Information			
Cycle, s	84.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

	EB			WB			NB			SB		
Green	0.7	6.0		28.1	0.3	4.0	9.1					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk ($Walk$), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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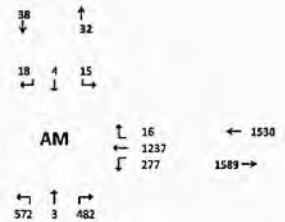
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Torino Pkwy
E/W STREET: Midway Rd
CONTROL: TWSC
FILENAME: Willow Lakes
COUNT DATE: 1/20/2010
DAY: Thursday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

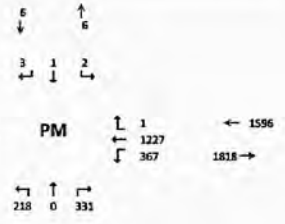
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	136	1	126	3	2	1	3	117	52	45	124	5	615	2677
7:15-7:30	103	0	85	1	2	5	4	110	55	64	152	3	584	2623
7:30-7:45	135	1	108	6	0	7	1	161	77	91	145	1	734	2605
7:45-8:00	142	1	128	4	8	4	4	181	70	56	138	6	734	2311
8:00-8:15	110	1	101	2	0	3	8	123	41	49	121	2	561	1969
8:15-8:30	81	0	93	1	0	8	11	134	47	55	143	3	576	
8:30-8:45	82	1	67	3	1	5	4	93	35	48	99	2	440	
8:45-9:00	34	0	57	0	0	3	5	92	52	43	104	2	392	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	516	3	447	14	4	17	12	569	254	257	569	15	2677	
Season Factor	516	3	447	14	4	17	12	569	254	257	569	15	2677	
Growth	556	3	482	15	4	18	13	613	274	277	613	16	2885	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1%							0%	1%		0%			
Village at Midway	15							54	6		131		205	
LTC Ranch %								17.0%			17.0%			
LTC Ranch Volume								276			310		586	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								27			27		54	
Riverland/Kennedy %								0.7%			0.7%			
Riverland/Kennedy								39			34		73	
Western Grove %								1.0%			1.0%			
Western Grove								21			14		35	
Ravinia %	2.0%							11.0%	2.0%		11.0%			
Ravinia	1							2	0		7		12	
Frontera %								30.0%			30.0%			
Frontera								17			52		70	
Total	572	3	482	15	4	18	13	1092	289	277	1237	16	4010	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	663
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,333
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	174

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	50	1	59	0	2	0	1	143	71	58	98	0	483	2137
4:15-4:30	41	0	76	0	1	0	0	92	95	106	183	1	595	2230
4:30-4:45	54	0	76	0	1	3	1	117	69	63	128	0	512	2363
4:45-5:00	53	0	66	0	0	0	1	141	103	85	98	0	547	2334
5:00-5:15	43	0	63	0	1	2	3	94	98	86	185	1	576	2280
5:15-5:30	57	0	107	0	0	0	1	153	137	89	124	0	668	
5:30-5:45	42	0	71	2	0	1	0	126	104	81	116	0	543	
5:45-6:00	61	1	74	0	0	0	1	107	82	70	95	2	493	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Season Factor	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Growth	219	0	331	2	1	3	5	554	476	367	564	1	2515	
In/Out	-	-	-	-	-	IN	OUT	OUT	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1.0%							9.0%	1.0%		9.0%			
Village at Midway	7							164	18		65		255	
LTC Ranch %								17.0%			17.0%			
LTC Ranch Volume								505			394		899	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			55		136	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								39			32		71	
Riverland/Kennedy %								0.7%			0.7%			
Riverland/Kennedy								51			50		101	
Western Grove %								1.0%			1.0%			
Western Grove								21			25		46	
Ravinia %	2.0%							11.0%	2.0%		11.0%			
Ravinia	1							8	2		5		16	
Frontera %								30.0%			30.0%			
Frontera								63			37		99	
Total	218	0	331	2	1	3	5	1485	496	367	1227	1	4138	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	725	1,824
LTC Ranch	2,330	2,970
Southern Grove	6,990	10,673
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,055	7,277
Western Grove	2,530	2,061
Ravinia	73	44
Frontera	207	122

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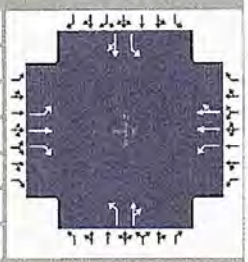
#6 W/O

HCS7 Signalized Intersection Results Summary #6 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 w.o. Project - 7....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	2.2	2.8	55.0	2.5	15.5	6.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0		5	6	7	8	
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	8.2	61.0	17.0	69.8	30.0	33.5	8.5	12.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.5		13.0		26.0	29.5	3.0	3.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.10	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	14	1149	295	292	661	658	602	511		16	23	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1891	1810	1612		1810	1656	
Queue Service Time (g_s), s	0.5	55.0	14.6	11.0	30.0	30.0	24.0	27.5		1.0	1.6	
Cycle Queue Clearance Time (g_c), s	0.5	55.0	14.6	11.0	30.0	30.0	24.0	27.5		1.0	1.6	
Green Ratio (*g/C*)	0.48	0.46	0.46	0.57	0.53	0.53	0.27	0.23		0.07	0.05	
Capacity (*c*), veh/h	205	871	738	226	1010	1006	473	370		97	83	
Volume-to-Capacity Ratio (*X*)	0.067	1.320	0.399	1.289	0.654	0.654	1.272	1.380		0.163	0.280	
Back of Queue (Q), ft/ln (95 th percentile)	8.7	2193	235.5	638.6	476.3	475.4	773.5	1135.8		20	30.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.3	87.7	9.4	25.5	19.1	19.0	30.9	45.4		0.8	1.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	18.9	32.5	21.6	39.2	20.2	20.2	44.5	46.2		52.5	54.9	
Incremental Delay (d_2), s/veh	0.1	152.2	1.6	159.2	3.3	3.3	138.2	187.2		0.3	0.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	18.9	184.7	23.2	198.4	23.5	23.5	182.7	233.4		52.7	55.6	
Level of Service (LOS)	B	F	C	F	C	C	F	F		D	E	
Approach Delay, s/veh / LOS	150.5	F		55.2	E		206.0	F		54.4	D	
Intersection Delay, s/veh / LOS	127.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.90	B	2.13	B	2.32	B
Bicycle LOS Score / LOS	2.89	C	1.82	B	2.32	B	0.55	A

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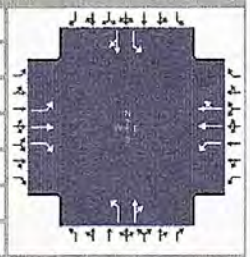
HCS7 Signalized Intersection Input Data

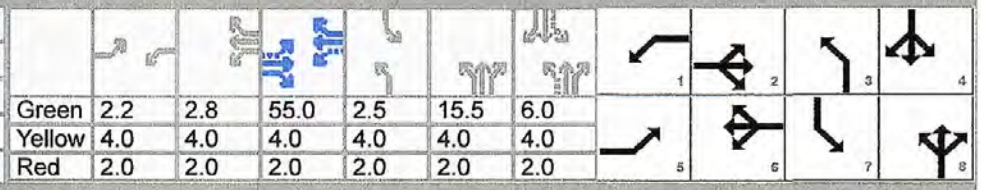
#6 W/O AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 w.o. Project - 7....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	2.2	2.8		55.0	2.5	15.5	6.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	14.0	61.0	17.0	64.0	30.0	29.0	13.0	12.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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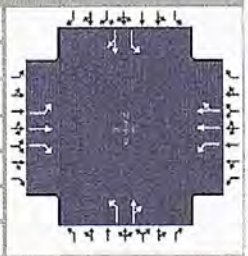
HCS7 Signalized Intersection Results Summary

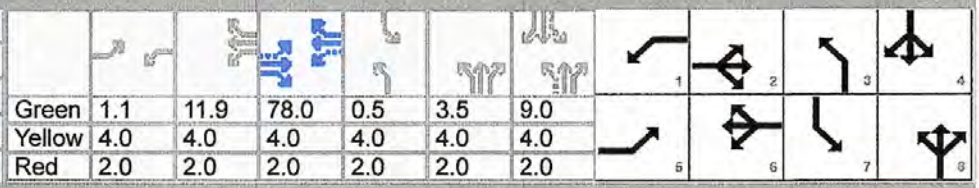
#6 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	11.9	78.0	0.5	3.5	9.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.1	84.0	25.0	101.9	16.0	24.5	6.5	15.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.2		21.0		12.0	20.5	2.2	2.3
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.09

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1563	522	386	646	646	229	348		2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1610		1810	1674	
Queue Service Time (g_s), s	0.2	78.0	29.8	19.0	22.7	22.7	10.0	18.5		0.2	0.3	
Cycle Queue Clearance Time (g_c), s	0.2	78.0	29.8	19.0	22.7	22.7	10.0	18.5		0.2	0.3	
Green Ratio (*g/C*)	0.56	0.56	0.56	0.71	0.68	0.68	0.15	0.13		0.07	0.06	
Capacity (*c*), veh/h	286	1058	897	298	1301	1301	269	213		58	108	
Volume-to-Capacity Ratio (*X*)	0.018	1.477	0.582	1.298	0.497	0.497	0.852	1.636		0.037	0.039	
Back of Queue (Q), ft/ln (95 th percentile)	3.2	3669.9	418.7	870.7	348.6	348.5	203	1004.7		3.2	6.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	146.8	16.7	34.8	13.9	13.9	8.1	40.2		0.1	0.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	13.5	31.0	20.3	51.7	10.5	10.5	59.3	60.7		61.2	61.5	
Incremental Delay (d_2), s/veh	0.0	219.9	2.8	156.8	1.4	1.4	21.2	306.3		0.1	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	13.5	250.9	23.1	208.5	11.9	11.9	80.6	367.0		61.3	61.5	
Level of Service (LOS)	B	F	C	F	B	B	F	F		E	E	
Approach Delay, s/veh / LOS	193.4	F		57.1	E		253.3	F		61.4	E	
Intersection Delay, s/veh / LOS	148.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.88	B	2.15	B	2.32	B
Bicycle LOS Score / LOS	3.94	D	1.87	B	1.44	A	0.50	A

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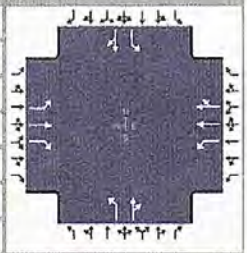
HCS7 Signalized Intersection Input Data

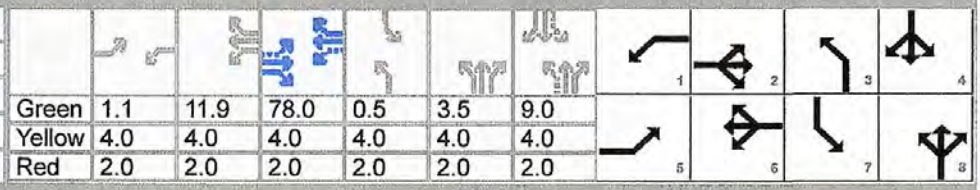
#6 W/O PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	11.9	78.0	0.5	3.5	9.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	84.0	84.0	25.0	25.0	16.0	18.0	13.0	15.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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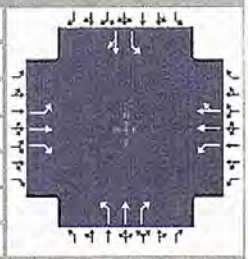
HCS7 Signalized Intersection Results Summary

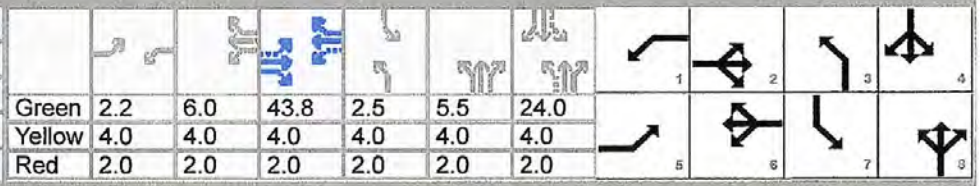
#6 W/O +NBR AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project -...		
Project Description	without Project +NB2				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.2	6.0	43.8	2.5	5.5	24.0	
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Red	2.0	2.0	2.0	2.0	2.0	2.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	49.8	20.2	61.8	20.0	41.5	8.5	30.0
Change Period, (Y+R c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g s), s	2.6		16.3		16.0	37.5	2.8	3.4
Green Extension Time (g e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1149	295	292	661	658	602	3	507	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1891	1810	1900	1610	1810	1656	
Queue Service Time (g s), s	0.6	43.7	17.1	14.3	34.2	34.2	14.0	0.1	35.5	0.8	1.4	
Cycle Queue Clearance Time (g c), s	0.6	43.7	17.1	14.3	34.2	34.2	14.0	0.1	35.5	0.8	1.4	
Green Ratio (g/C)	0.38	0.37	0.37	0.50	0.47	0.47	0.33	0.30	0.30	0.22	0.20	
Capacity (c), veh/h	163	692	587	277	884	880	535	562	476	382	331	
Volume-to-Capacity Ratio (X)	0.084	1.661	0.502	1.052	0.747	0.748	1.126	0.006	1.065	0.041	0.070	
Back of Queue (Q), ft/ln (95 th percentile)	10.7	2989.7	278.8	494.3	559.6	558.5	737.6	2.8	753.4	16.1	24.6	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	119.6	11.2	19.8	22.4	22.3	29.5	0.1	30.1	0.6	1.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d 1), s/veh	25.5	38.1	29.7	38.1	26.3	26.3	41.5	29.8	42.3	36.8	39.0	
Incremental Delay (d 2), s/veh	0.1	303.7	3.1	68.5	5.7	5.8	78.5	0.0	59.7	0.0	0.0	
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	25.6	341.8	32.7	106.6	32.0	32.1	119.9	29.8	102.0	36.8	39.0	
Level of Service (LOS)	C	F	C	F	C	C	F	C	F	D	D	
Approach Delay, s/veh / LOS	276.4	F		45.5	D		111.5	F		38.1	D	
Intersection Delay, s/veh / LOS	142.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	1.91	B	2.12	B	2.30	B
Bicycle LOS Score / LOS	2.89	C	1.82	B	2.32	B	0.55	A

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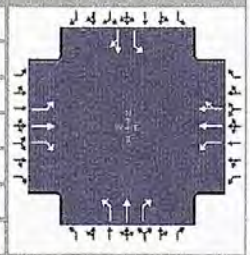
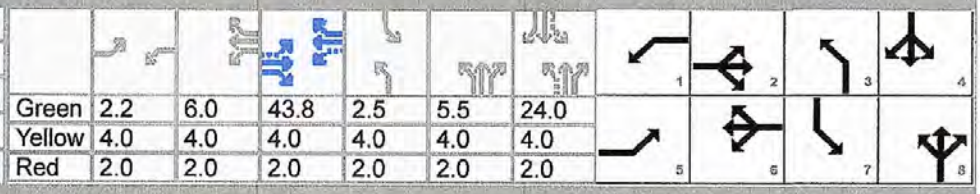
HCS7 Signalized Intersection Input Data #6 w/o +NBR AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project -...		
Project Description	without Project + NBR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	2.2	6.0		43.8	2.5	5.5	24.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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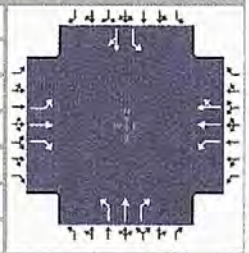
HCS7 Signalized Intersection Results Summary #6 w/o +N BR PM

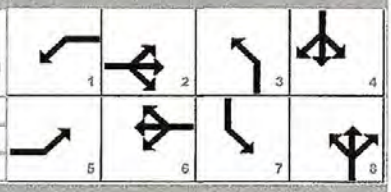
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....		
Project Description	without Project +N BR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	12.2		64.0	0.5	7.5	18.7					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	70.0	25.3	88.2	20.0	38.2	6.5	24.7
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (*g s*), s	2.2		21.4		16.0	31.8	2.1	2.3
Green Extension Time (*g e*), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	0.18	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1563	522	386	646	646	229	0	348	2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1900	1610	1810	1674	
Queue Service Time (*g s*), s	0.2	64.0	36.5	19.4	29.8	29.8	14.0	0.0	29.8	0.1	0.3	
Cycle Queue Clearance Time (*g c*), s	0.2	64.0	36.5	19.4	29.8	29.8	14.0	0.0	29.8	0.1	0.3	
Green Ratio (*g/C*)	0.46	0.46	0.46	0.61	0.59	0.59	0.25	0.23	0.23	0.14	0.13	
Capacity (*c*), veh/h	222	868	736	302	1116	1116	420	437	370	249	223	
Volume-to-Capacity Ratio (*X*)	0.024	1.800	0.710	1.280	0.579	0.579	0.546	0.000	0.941	0.008	0.019	
Back of Queue (Q), ft/ln (95 th percentile)	4.1	4551.4	525.7	856.5	470.6	470.5	278.3	0	514.2	2.9	5.8	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	182.1	21.0	34.3	18.8	18.8	11.1	0.0	20.6	0.1	0.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (*d 1*), s/veh	20.8	38.0	30.5	49.3	18.1	18.1	45.6	0.0	53.0	52.2	52.7	
Incremental Delay (*d 2*), s/veh	0.0	364.8	5.7	149.1	2.2	2.2	0.8	0.0	25.5	0.0	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	20.8	402.8	36.3	198.4	20.3	20.3	46.4	0.0	78.5	52.2	52.7	
Level of Service (LOS)	C	F	D	F	C	C	D		E	D	D	
Approach Delay, s/veh / LOS	310.3	F		61.3	E		65.8	E		52.6	D	
Intersection Delay, s/veh / LOS	181.4						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	1.90	B	2.14	B	2.32	B
Bicycle LOS Score / LOS	3.94	D	1.87	B	1.44	A	0.50	A

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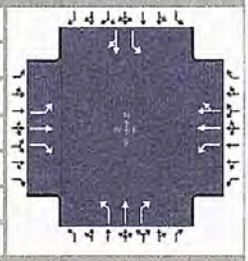
HCS7 Signalized Intersection Input Data

#6 w/o +NBR PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....		
Project Description	without Project + NBR				

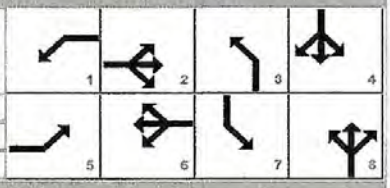


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	12.2	64.0	0.5	7.5	18.7	
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Red	2.0	2.0	2.0	2.0	2.0	2.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	70.0	20.0	70.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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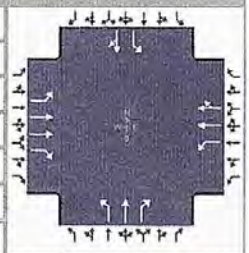
HCS7 Signalized Intersection Results Summary #6 w/o AM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project +...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			NB			SB		
Green	2.2	2.5	43.5	2.5	15.5	17.8					
Yellow	4.0	4.0	4.0	4.0	4.0	4.0					
Red	2.0	2.0	2.0	2.0	2.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	49.5	16.7	58.0	30.0	45.3	8.5	23.8
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.6		13.1		26.0	39.1	2.9	3.5
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.1
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1149	295	292	661	658	602	3	507	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1900	1891	1810	1900	1610	1810	1656	
Queue Service Time (g_s), s	0.6	35.8	17.2	11.1	36.2	36.3	24.0	0.1	37.1	0.9	1.5	
Cycle Queue Clearance Time (g_c), s	0.6	35.8	17.2	11.1	36.2	36.3	24.0	0.1	37.1	0.9	1.5	
Green Ratio (g/C)	0.38	0.36	0.36	0.47	0.43	0.43	0.36	0.33	0.33	0.17	0.15	
Capacity (c), veh/h	145	1301	579	257	824	821	607	622	527	303	245	
Volume-to-Capacity Ratio (X)	0.094	0.883	0.509	1.135	0.802	0.802	0.991	0.005	0.963	0.052	0.095	
Back of Queue (Q), ft/ln (95 th percentile)	10.8	581.9	281	446.3	604.9	603.7	423.6	2.7	628.4	17.4	26.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	23.3	11.2	17.9	24.2	24.1	16.9	0.1	25.1	0.7	1.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	26.9	36.1	30.1	29.9	29.5	29.5	38.5	27.2	39.6	41.9	44.2	
Incremental Delay (d_2), s/veh	0.1	9.0	3.2	97.6	8.1	8.1	34.2	0.0	28.5	0.0	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	27.0	45.0	33.3	127.5	37.6	37.6	72.6	27.2	68.2	41.9	44.3	
Level of Service (LOS)	C	D	C	F	D	D	E	C	E	D	D	
Approach Delay, s/veh / LOS	42.5	D		53.9	D		70.5	E		43.3	D	
Intersection Delay, s/veh / LOS	54.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	1.92	B	2.29	B	2.46	B
Bicycle LOS Score / LOS	1.69	B	1.82	B	2.32	B	0.55	A

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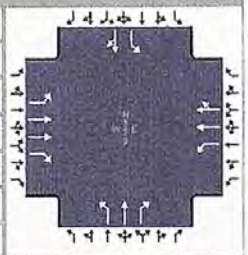
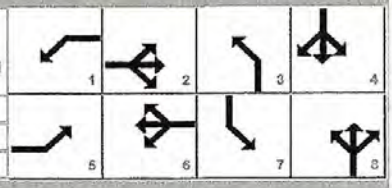
HCS7 Signalized Intersection Input Data #6 w/o AM Pump

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project +...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.2	2.5		43.5	2.5	15.5	17.8					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	15.0	50.0	15.0	50.0	30.0	25.0	30.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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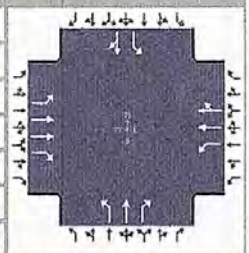
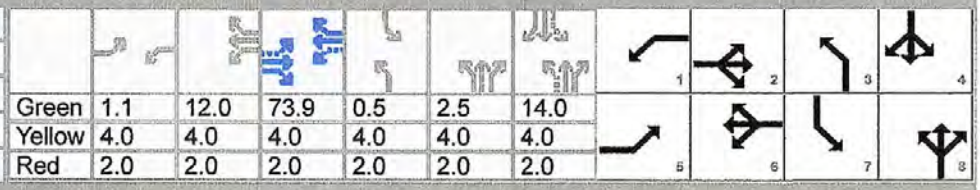
HCS7 Signalized Intersection Results Summary #6 w/o PM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project + I...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	12.0	73.9	0.5	2.5	14.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	79.9	25.1	97.9	15.0	28.5	6.5	20.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.2		21.1		11.0	24.5	2.1	2.3
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1563	522	386	646	646	229	0	348	2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1899	1810	1900	1610	1810	1674	
Queue Service Time (g_s), s	0.2	50.3	31.7	19.1	24.8	24.8	9.0	0.0	22.5	0.1	0.3	
Cycle Queue Clearance Time (g_c), s	0.2	50.3	31.7	19.1	24.8	24.8	9.0	0.0	22.5	0.1	0.3	
Green Ratio (*g/C*)	0.54	0.53	0.53	0.68	0.66	0.66	0.18	0.16	0.16	0.10	0.10	
Capacity (*c*), veh/h	268	1909	850	354	1247	1247	307	305	259	201	167	
Volume-to-Capacity Ratio (*X*)	0.020	0.819	0.614	1.090	0.518	0.518	0.747	0.000	1.346	0.010	0.025	
Back of Queue (*Q*), ft/ln (95 th percentile)	3.5	727.1	448.6	697.3	384.1	384	178.6	0	838.7	3	6	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.1	29.1	17.9	27.9	15.4	15.4	7.1	0.0	33.5	0.1	0.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	15.4	27.5	23.1	42.1	12.5	12.5	55.7	0.0	58.7	56.4	56.9	
Incremental Delay (d_2), s/veh	0.0	4.1	3.3	74.2	1.5	1.5	8.6	0.0	179.1	0.0	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	15.4	31.5	26.4	116.4	14.1	14.1	64.3	0.0	237.9	56.4	56.9	
Level of Service (LOS)	B	C	C	F	B	B	E		F	E	E	
Approach Delay, s/veh / LOS	30.2	C		37.6	D		168.9	F		56.7	E	
Intersection Delay, s/veh / LOS	51.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.88	B	2.31	B	2.47	B
Bicycle LOS Score / LOS	2.21	B	1.87	B	1.44	A	0.50	A

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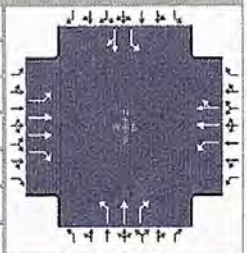
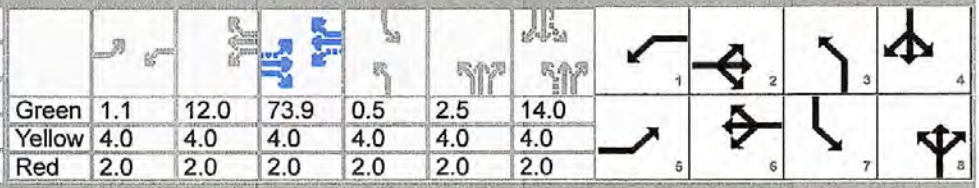
HCS7 Signalized Intersection Input Data #6 w/o AM turn

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project + I...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	1.1	12.0		73.9	0.5	2.5	14.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	80.0	25.0	85.0	15.0	20.0	15.0	20.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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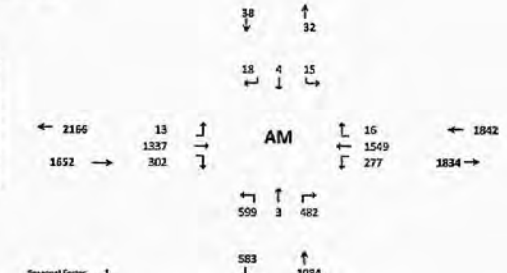
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Tolino Pkwy
FILENAME: Willow Lakes
COUNT DATE: 7/20/2020
REPORT DATE:
DAY: Thursday
ANALYSIS YEAR: 2025
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: TWSC

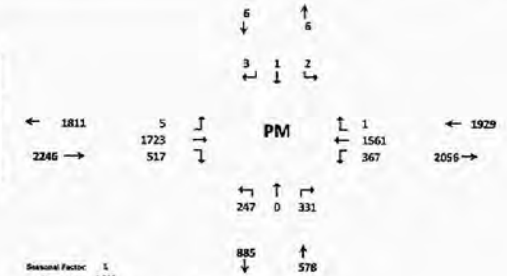
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	136	1	126	3	2	1	3	117	53	45	124	5	615	2677
7:15-7:30	103	0	83	1	2	5	4	110	56	64	162	3	594	2633
7:30-7:45	135	1	108	6	0	7	1	161	77	92	145	1	734	2605
7:45-8:00	142	1	128	4	0	4	4	181	70	56	138	6	734	2311
8:00-8:15	110	1	101	2	0	3	8	123	41	89	121	2	561	1969
8:15-8:30	81	0	93	1	0	0	11	134	47	55	143	3	576	
8:30-8:45	82	1	67	3	1	5	4	93	35	48	99	2	440	
8:45-9:00	34	0	57	0	0	3	5	92	52	63	104	2	392	
AM PEAK HOUR IS FROM:			7:00AM TO 8:00AM											
Volumes	516	3	447	14	4	17	13	569	254	257	569	15	2677	
Season Factor	516	3	447	14	4	17	12	560	254	257	569	15	2677	
Growth	556	3	482	15	4	18	13	613	274	277	613	16	2885	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	23%	2%	0%	23%	0%		
PROJECT	27	0	0	0	0	0	0	245	21	0	312	0	606	
Midway %	1%							9%	1%		9%			
Village at Midway	15							54	6		181		205	
LTC Ranch %								17.0%			17.0%			
LTC Ranch Volume								276			310		586	
Southern Grove %								0.8%			0.8%			
Southern Grove								42			50		92	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								27			27		54	
Riverland/Kennedy %								0.7%			0.7%			
Riverland/Kennedy								39			34		73	
Western Grove %								1.0%			1.0%			
Western Grove								21			14		35	
Ravinia %	2.0%							11.0%	2.0%		11.0%			
Ravinia	1							2	0		7		12	
Frontera %								30.0%			30.0%			
Frontera								17			52		70	
Total	599	3	482	15	4	18	13	1307	301	277	1549	16	4615	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

	Trips In	Trips Out
Willow Lakes	1,355	1,065
Village at Midway	1,451	603
LTC Ranch	1,623	1,624
Southern Grove	6,218	5,333
Wilson Groves	3,675	3,867
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	174

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	50	1	59	0	2	0	1	143	71	58	98	0	483	2137
4:15-4:30	41	0	76	0	1	0	0	92	95	106	163	1	595	2230
4:30-4:45	54	0	76	0	1	3	1	117	69	63	128	0	512	2363
4:45-5:00	53	0	66	0	0	0	1	141	103	85	98	0	547	2334
5:00-5:15	43	0	63	0	1	2	3	94	98	86	185	1	576	2280
5:15-5:30	57	0	107	0	0	0	1	153	137	89	124	0	668	
5:30-5:45	42	0	71	2	0	1	0	126	104	81	116	0	543	
5:45-6:00	61	1	74	0	0	0	1	107	82	70	95	2	493	
PM PEAK HOUR IS FROM:			4:45PM TO 5:45PM											
Volumes	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Season Factor	195	0	307	2	1	3	5	514	442	341	523	1	2334	
Growth	210	0	331	2	1	3	5	554	476	367	564	1	2515	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	23%	2%	0%	23%	0%		
PROJECT	29	0	0	0	0	0	0	238	21	0	334	0	622	
Midway %	1.0%							9.0%	1.0%		9.0%			
Village at Midway	7							164	18		65		255	
LTC Ranch %								17.0%			17.0%			
LTC Ranch Volume								505			394		899	
Southern Grove %								0.8%			0.8%			
Southern Grove								81			55		136	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								39			32		71	
Riverland/Kennedy %								0.7%			0.7%			
Riverland/Kennedy								51			50		101	
Western Grove %								1.0%			1.0%			
Western Grove								21			25		46	
Ravinia %	2.0%							11.0%	2.0%		13.0%			
Ravinia	1							8	2		5		16	
Frontera %								30.0%			30.0%			
Frontera								62			37		99	
Total	247	0	331	2	1	3	5	1723	517	367	1561	1	4760	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

	Trips In	Trips Out
Willow Lakes	1,490	1,009
Village at Midway	716	1,824
LTC Ranch	2,320	2,970
Southern Grove	5,990	10,071
Wilson Groves	4,541	1,639
Riverland/Kennedy	7,095	7,177
Western Grove	2,510	2,061
Ravinia	77	44
Frontera	207	122

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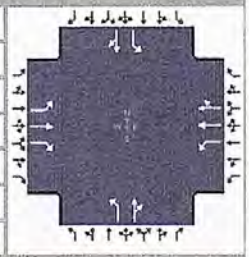
#6 w/p

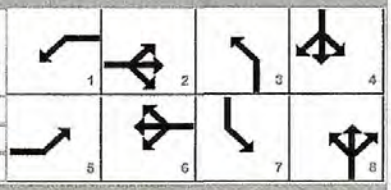
HCS7 Signalized Intersection Results Summary #6 w/ PAM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Green	2.2	1.8	62.0	2.5	9.5	6.0		
Yellow	4.0	4.0	4.0	4.0	4.0	4.0		
Red	2.0	2.0	2.0	2.0	2.0	2.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	8.2	68.0	16.0	75.8	24.0	27.5	8.5	12.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.4		12.0		22.0	18.9	3.0	3.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	0.06	0.00	0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	14	1407	318	292	824	823	631	237		16	23	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1899	1893	1810	1613		1810	1656	
Queue Service Time (g_s), s	0.4	63.0	14.3	10.0	37.7	37.9	20.0	16.9		1.0	1.6	
Cycle Queue Clearance Time (g_c), s	0.4	63.0	14.3	10.0	37.7	37.9	20.0	16.9		1.0	1.6	
Green Ratio (*g/C*)	0.54	0.53	0.53	0.62	0.59	0.59	0.25	0.18		0.07	0.05	
Capacity (*c*), veh/h	170	998	832	211	1120	1101	437	290		122	83	
Volume-to-Capacity Ratio (*X*)	0.081	1.411	0.382	1.383	0.736	0.748	1.444	0.818		0.129	0.280	
Back of Queue (*Q*), ft/ln (95 th percentile)	7.5	2932	226.2	690.5	566.6	569.3	1095.7	298.4		19.9	30.4	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.3	117.3	9.0	27.6	22.7	22.8	43.8	11.9		0.8	1.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	17.6	28.5	17.5	40.5	18.1	17.9	45.6	47.3		52.3	54.9	
Incremental Delay (d_2), s/veh	0.1	190.9	1.3	199.3	4.3	4.7	212.5	10.6		0.2	0.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	17.6	219.4	18.8	239.7	22.4	22.5	258.1	57.9		52.5	55.6	
Level of Service (LOS)	B	F	B	F	C	C	F	E		D	E	
Approach Delay, s/veh / LOS	181.1	F		55.1	E		203.4	F		54.3	D	
Intersection Delay, s/veh / LOS	131.0						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	1.89	B	2.14	B	2.32	B
Bicycle LOS Score / LOS	3.36	C	2.09	B	1.92	B	0.55	A

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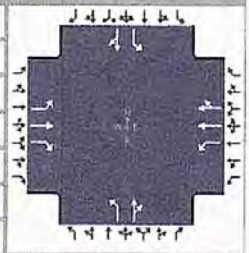
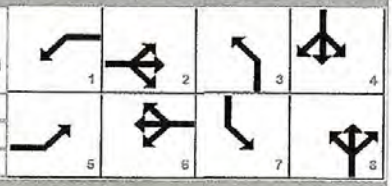
HCS7 Signalized Intersection Input Data #6 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	2.2	1.8		62.0	2.5	9.5	6.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	68.0	68.0	12.0	12.0	24.0	21.0	19.0	16.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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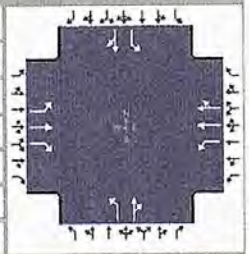
HCS7 Signalized Intersection Results Summary #6 w/P PM

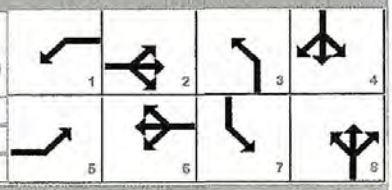
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	7.9		89.0	0.5	5.5	6.0					
Yellow	4.0	4.0		4.0	4.0	0.0	4.0					
Red	2.0	2.0		2.0	2.0	0.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.1	95.0	21.0	108.9	12.0	17.5	6.5	12.0
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (*g s*), s	2.1		17.0		8.0	13.5	2.2	2.3
Green Extension Time (*g e*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.06	0.64

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1814	544	386	822	822	260	138		2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1900	1810	1610		1810	1674	
Queue Service Time (*g s*), s	0.1	89.0	26.0	15.0	28.3	28.3	6.0	11.5		0.2	0.3	
Cycle Queue Clearance Time (*g c*), s	0.1	89.0	26.0	15.0	28.3	28.3	6.0	11.5		0.2	0.3	
Green Ratio (*g/C*)	0.64	0.64	0.64	0.76	0.73	0.73	0.10	0.08		0.05	0.04	
Capacity (*c*), veh/h	226	1208	1023	245	1396	1396	187	133		58	72	
Volume-to-Capacity Ratio (*X*)	0.023	1.502	0.532	1.574	0.589	0.589	1.391	1.040		0.037	0.059	
Back of Queue (Q), ft/ln (95 th percentile)	2.5	4282.8	357.1	1051.5	396.3	396.2	557.3	318.2		3.2	6.5	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	171.3	14.3	42.1	15.9	15.8	22.3	12.7		0.1	0.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (*d 1*), s/veh	9.9	25.5	14.0	53.8	8.7	8.7	64.8	64.2		63.9	64.3	
Incremental Delay (*d 2*), s/veh	0.0	230.2	2.0	276.9	1.8	1.8	205.3	89.3		0.1	0.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	9.9	255.7	16.0	330.7	10.5	10.5	270.1	153.5		64.0	64.4	
Level of Service (LOS)	A	F	B	F	B	B	F	F		E	E	
Approach Delay, s/veh / LOS	199.9	F		71.4	E		229.7	F		64.3	E	
Intersection Delay, s/veh / LOS	147.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.86	B	2.15	B	2.32	B
Bicycle LOS Score / LOS	4.39	D	2.16	B	1.14	A	0.50	A

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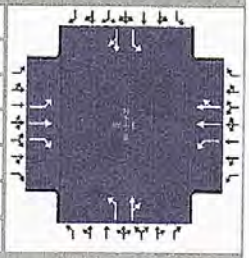
HCS7 Signalized Intersection Input Data

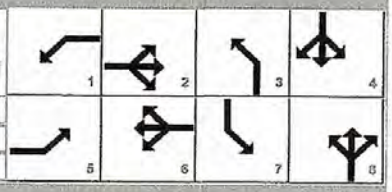
#6 W/P PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	1.1	7.9		89.0	0.5	5.5	6.0					
Yellow	4.0	4.0		4.0	4.0	0.0	4.0					
Red	2.0	2.0		2.0	2.0	0.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None		0	L			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	84.0	95.0	21.0	32.0	12.0	12.0	12.0	12.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk ($Walk$), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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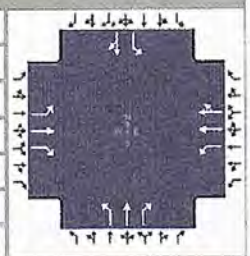
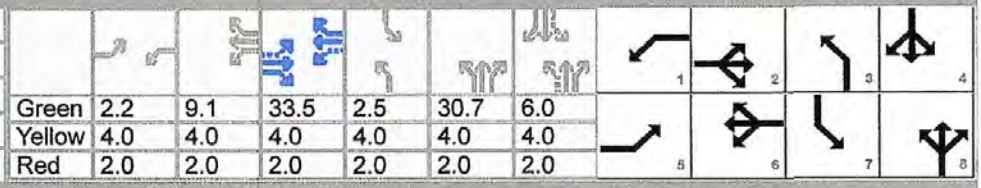
HCS7 Signalized Intersection Results Summary # 6 w/P +NBR AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....		
Project Description	with Project +NBR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.2	9.1	33.5	2.5	30.7	6.0			
Yellow	4.0	4.0	4.0	4.0	4.0	4.0			
Red	2.0	2.0	2.0	2.0	2.0	2.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	39.5	23.3	54.6	45.2	48.7	8.5	12.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.6		17.0		38.8	15.1	3.0	3.6
Green Extension Time (g_e), s	0.0	0.0	0.3	0.0	0.4	0.5	0.0	0.3
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		0.02		1.00	0.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	14	1407	318	292	824	823	631	3	234	16	23	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1899	1893	1810	1900	1610	1810	1656	
Queue Service Time (g_s), s	0.6	34.5	21.3	15.0	49.6	49.6	36.8	0.1	13.1	1.0	1.6	
Cycle Queue Clearance Time (g_c), s	0.6	34.5	21.3	15.0	49.6	49.6	36.8	0.1	13.1	1.0	1.6	
Green Ratio (*g/C*)	0.30	0.29	0.29	0.44	0.41	0.41	0.43	0.36	0.36	0.07	0.05	
Capacity (*c*), veh/h	93	546	449	321	785	767	756	677	573	169	83	
Volume-to-Capacity Ratio (*X*)	0.147	2.577	0.707	0.908	1.050	1.074	0.834	0.005	0.407	0.094	0.280	
Back of Queue (*Q*), ft/ln (95 th percentile)	12.6	4883.3	355.6	306.5	1052.7	1112.3	579.5	2.6	213.9	19.8	30.4	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.5	195.3	14.2	12.3	42.1	44.5	23.2	0.1	8.6	0.8	1.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	34.5	42.8	38.9	35.0	35.2	35.2	30.4	24.9	29.1	52.3	54.9	
Incremental Delay (d_2), s/veh	0.3	715.1	9.1	15.9	46.0	54.1	7.0	0.0	0.2	0.1	0.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	34.8	757.9	47.9	50.8	81.2	89.3	37.4	24.9	29.3	52.4	55.6	
Level of Service (LOS)	C	F	D	D	F	F	D	C	C	D	E	
Approach Delay, s/veh / LOS	622.4	F		80.1	F		35.1	D		54.3	D	
Intersection Delay, s/veh / LOS	277.1						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.50	B	1.92	B	2.12	B	2.32	B
Bicycle LOS Score / LOS	3.36	C	2.09	B	1.92	B	0.55	A

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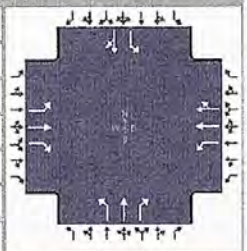
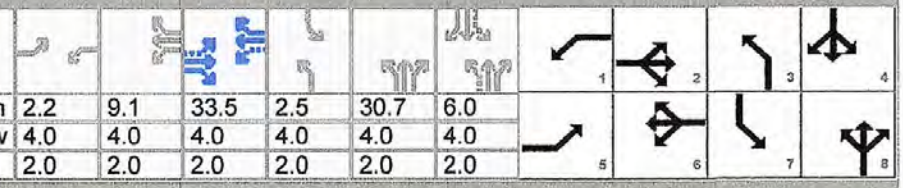
HCS7 Signalized Intersection Input Data #6 w/p +NBR AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....		
Project Description	with Project + NBR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	2.2	9.1		33.5	2.5	30.7	6.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	14.0	32.0	25.0	43.0	47.0	30.0	33.0	16.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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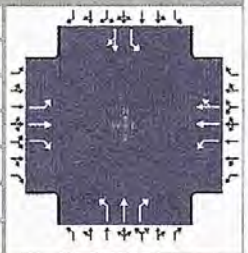
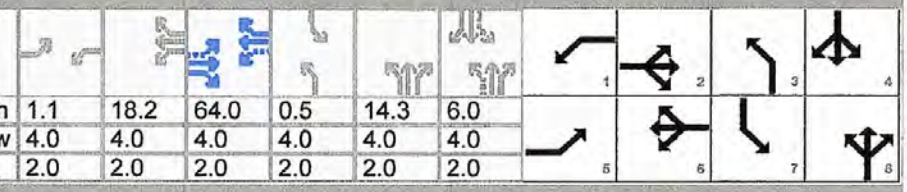
HCS7 Signalized Intersection Results Summary #6 w/P+NBR PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....		
Project Description	with Project + NBR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	18.2	64.0	0.5	14.3	6.0		
Yellow	4.0	4.0	4.0	4.0	4.0	4.0		
Red	2.0	2.0	2.0	2.0	2.0	2.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	70.0	31.3	94.2	26.7	32.2	6.5	12.0
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.2		27.3		20.7	12.7	2.2	2.3
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	0.00	0.00	0.16

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1814	544	386	822	822	260	0	138	2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1900	1810	1900	1610	1810	1674	
Queue Service Time (g_s), s	0.2	64.0	38.8	25.3	39.5	39.5	18.7	0.0	10.7	0.2	0.3	
Cycle Queue Clearance Time (g_c), s	0.2	64.0	38.8	25.3	39.5	39.5	18.7	0.0	10.7	0.2	0.3	
Green Ratio (*g/C*)	0.47	0.46	0.46	0.65	0.63	0.63	0.21	0.19	0.19	0.05	0.04	
Capacity (*c*), veh/h	169	869	736	378	1197	1196	377	356	302	119	71	
Volume-to-Capacity Ratio (*X*)	0.031	2.088	0.739	1.022	0.687	0.687	0.689	0.000	0.457	0.018	0.059	
Back of Queue (*Q*), ft/ln (95 th percentile)	4.1	5878	556.9	645	588.3	588.3	338.5	0	191.1	3.2	6.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.2	235.1	22.3	25.8	23.5	23.5	13.5	0.0	7.6	0.1	0.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	21.2	38.0	31.2	49.0	16.9	16.9	51.7	0.0	50.5	63.8	64.3	
Incremental Delay (d_2), s/veh	0.0	493.6	6.6	51.9	3.2	3.2	3.9	0.0	0.4	0.0	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	21.2	531.6	37.7	100.9	20.1	20.1	55.5	0.0	50.9	63.8	64.4	
Level of Service (LOS)	C	F	D	F	C	C	E		D	E	E	
Approach Delay, s/veh / LOS	416.7	F		35.5	D		53.9	D		64.2	E	
Intersection Delay, s/veh / LOS	224.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.39	B	1.89	B	2.14	B	2.32	B
Bicycle LOS Score / LOS	4.39	D	2.16	B	1.14	A	0.50	A

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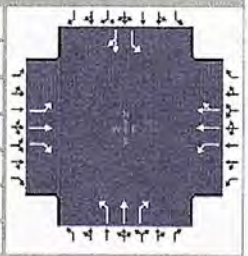
HCS7 Signalized Intersection Input Data

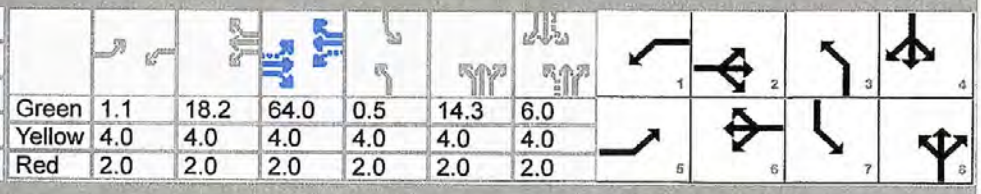
#6 WP +NBR PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....		
Project Description	with Project +NBR				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	18.2	64.0	0.5	14.3	6.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None		0	L			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	70.0	30.0	80.0	28.0	27.0	13.0	12.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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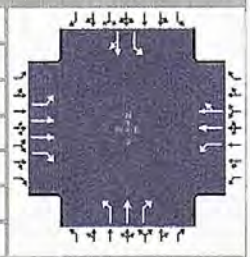
HCS7 Signalized Intersection Results Summary

#6 W/P + imp AM

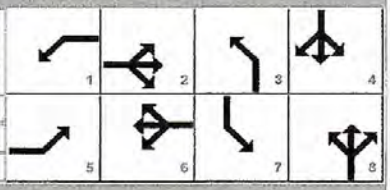
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project + I...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.2	7.4	49.4	2.5	16.5	6.0	
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Red	2.0	2.0	2.0	2.0	2.0	2.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	55.4	21.6	68.8	31.0	34.5	8.5	12.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.5		15.2		29.0	17.5	3.0	3.6
Green Extension Time (g_e), s	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.4
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1407	318	292	824	823	631	3	234	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1899	1610	1810	1899	1893	1810	1900	1610	1810	1656	
Queue Service Time (g_s), s	0.5	41.0	17.4	13.2	43.1	43.2	27.0	0.2	15.5	1.0	1.6	
Cycle Queue Clearance Time (g_c), s	0.5	41.0	17.4	13.2	43.1	43.2	27.0	0.2	15.5	1.0	1.6	
Green Ratio (g/C)	0.43	0.42	0.42	0.56	0.53	0.53	0.31	0.24	0.24	0.07	0.05	
Capacity (c), veh/h	138	1594	663	322	1010	991	542	452	383	169	83	
Volume-to-Capacity Ratio (X)	0.099	0.883	0.480	0.905	0.816	0.831	1.163	0.007	0.610	0.094	0.280	
Back of Queue (Q), ft/ln (95 th percentile)	9.8	663.2	277.4	358.5	670.9	677	625.4	3.1	251.5	19.8	30.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	26.5	11.1	14.3	26.8	27.1	25.0	0.1	10.1	0.8	1.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	24.1	32.5	25.9	33.0	23.6	23.3	41.9	34.9	40.8	52.3	54.9	
Incremental Delay (d_2), s/veh	0.1	7.4	2.5	11.7	7.3	8.1	92.2	0.0	0.6	0.1	0.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	24.2	40.0	28.4	44.7	30.9	31.4	134.1	34.9	41.4	52.4	55.6	
Level of Service (LOS)	C	D	C	D	C	C	F	C	D	D	E	
Approach Delay, s/veh / LOS	37.7	D		33.2	C		108.7	F		54.3	D	
Intersection Delay, s/veh / LOS	49.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.48	B	1.90	B	2.30	B	2.47	B
Bicycle LOS Score / LOS	1.92	B	2.09	B	1.92	B	0.55	A

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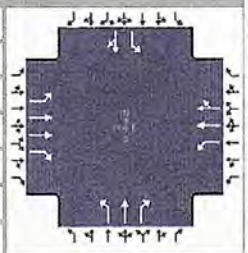
HCS7 Signalized Intersection Input Data

#6 WIP+IMP PM

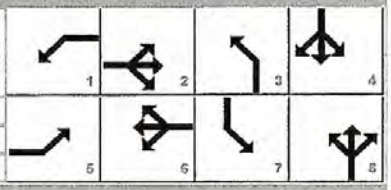
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project + I...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.2	7.4		49.4	2.5	16.5	6.0					
Yellow	4.0	4.0		4.0	4.0	4.0	4.0					
Red	2.0	2.0		2.0	2.0	2.0	2.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	31.0	45.0	20.0	34.0	31.0	16.0	39.0	24.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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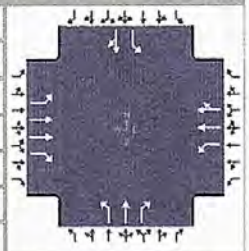
HCS7 Signalized Intersection Results Summary

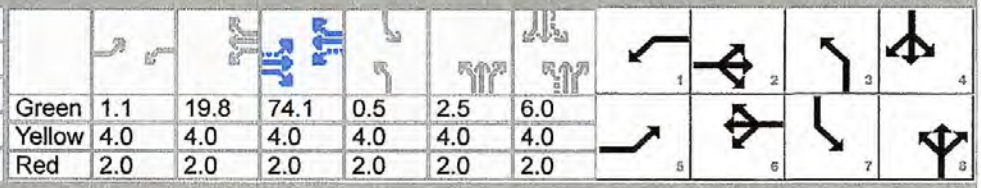
#6 WP Imp PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project + I...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	1.1	19.8	74.1	0.5	2.5	6.0
Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Red	2.0	2.0	2.0	2.0	2.0	2.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	80.1	32.9	105.9	15.0	20.5	6.5	12.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g_s), s	2.2		26.2		11.0	13.8	2.2	2.3
Green Extension Time (g_e), s	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.2
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	5	1814	544	386	822	822	260	0	138	2	4	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1900	1810	1900	1610	1810	1674	
Queue Service Time (g_s), s	0.2	66.2	33.6	24.2	30.6	30.6	9.0	0.0	11.8	0.2	0.3	
Cycle Queue Clearance Time (g_c), s	0.2	66.2	33.6	24.2	30.6	30.6	9.0	0.0	11.8	0.2	0.3	
Green Ratio (*g/C*)	0.54	0.53	0.53	0.74	0.71	0.71	0.12	0.10	0.10	0.05	0.04	
Capacity (*c*), veh/h	214	1915	852	414	1356	1356	226	197	167	119	71	
Volume-to-Capacity Ratio (*X*)	0.025	0.947	0.638	0.933	0.606	0.606	1.152	0.000	0.827	0.018	0.059	
Back of Queue (*Q*), ft/ln (95 th percentile)	3.5	968.9	472.4	487.1	434.2	434.1	403.2	0	213.3	3.2	6.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.1	38.8	18.9	19.5	17.4	17.4	16.1	0.0	8.5	0.1	0.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	15.2	31.1	23.4	46.9	10.1	10.1	62.8	0.0	61.5	63.8	64.3	
Incremental Delay (d_2), s/veh	0.0	11.4	3.6	4.3	2.0	2.0	107.2	0.0	3.9	0.0	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	15.2	42.5	27.1	51.2	12.1	12.1	170.0	0.0	65.4	63.8	64.4	
Level of Service (LOS)	B	D	C	D	B	B	F		E	E	E	
Approach Delay, s/veh / LOS	38.9		D	19.6		B	133.8		F	64.2		E
Intersection Delay, s/veh / LOS	38.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.38	B	1.87	B	2.32	B	2.48	B
Bicycle LOS Score / LOS	2.44	B	2.16	B	1.14	A	0.50	A

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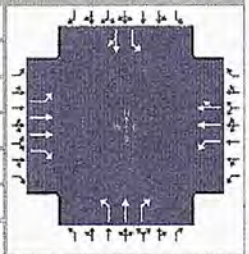
HCS7 Signalized Intersection Input Data

#6 WP+imp PM

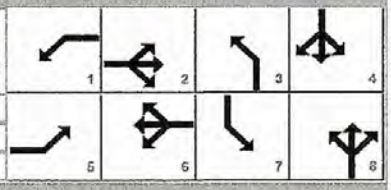
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project + I...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.1	19.8	74.1	0.5	2.5	6.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None		0	L			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	27.0	74.0	88.0	15.0	22.0	17.0	24.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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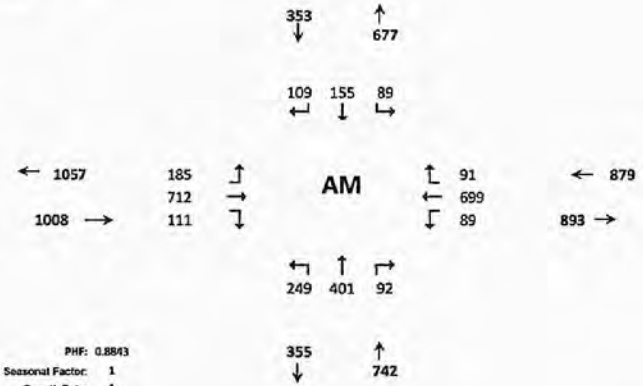
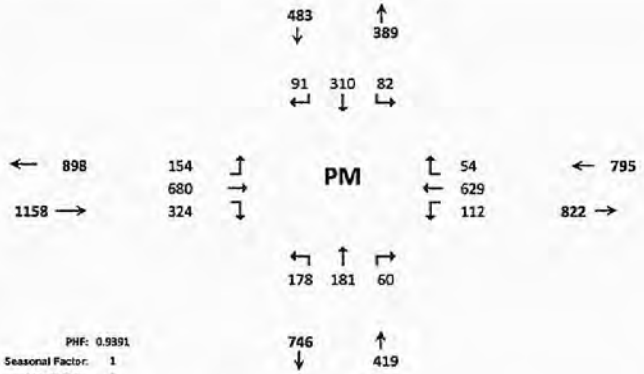
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Selvitz Rd
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	45	71	24	18	24	32	30	196	33	9	148	21	651	2982
7:15-7:30	63	81	22	15	32	27	44	183	28	18	145	23	681	2958
7:30-7:45	67	122	22	37	39	22	59	151	32	22	213	21	807	2853
7:45-8:00	74	127	24	19	60	28	52	182	18	40	193	26	843	2606
8:00-8:15	54	52	11	21	31	20	40	173	28	16	168	13	627	2265
8:15-8:30	52	59	23	13	28	20	34	127	26	17	167	10	576	
8:30-8:45	60	57	23	12	33	25	30	151	29	7	111	22	560	
8:45-9:00	38	39	23	19	15	15	30	150	30	10	116	17	502	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Season Factor	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Growth	249	401	92	89	155	109	185	712	111	89	699	91	2982	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	249	401	92	89	155	109	185	712	111	89	699	91	2982	



15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	52	57	12	24	55	39	31	186	58	35	173	10	732	2810
4:15-4:30	72	56	17	15	66	27	36	159	44	37	154	16	699	2794
4:30-4:45	48	49	22	20	69	21	52	151	74	26	162	8	702	2855
4:45-5:00	57	40	13	16	73	22	35	157	75	29	144	16	677	2762
5:00-5:15	24	48	7	33	86	23	26	190	85	23	157	14	716	2635
5:15-5:30	49	44	18	13	82	25	41	182	90	34	166	16	760	
5:30-5:45	30	46	6	14	55	22	29	159	64	28	143	13	609	
5:45-6:00	44	42	11	11	53	12	25	122	59	29	129	13	550	
PM PEAK HOUR IS FROM:	4:30 PM TO 5:30PM													
Volumes	178	181	60	82	310	91	154	680	324	112	629	54	2855	
Season Factor	178	181	60	82	310	91	154	680	324	112	629	54	2855	
Growth	178	181	60	82	310	91	154	680	324	112	629	54	2855	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	178	181	60	82	310	91	154	680	324	112	629	54	2855	



F-132

3 of 3

St. Lucie County

ECONOLITE

00026 - MIDWAY RD @ SELVITZ RD - - Econolite Type - Cobalt

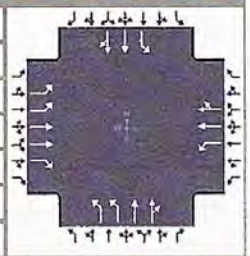
Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	10	10	12	10	10	10	10	10	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	24	0	26	0	26	0	29	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	3.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	14	60	22	24	13	60	16	24	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Signalized Intersection Results Summary

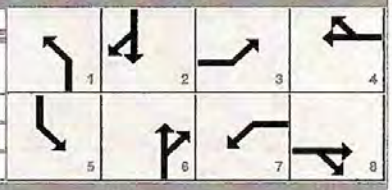
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - Existing - 6.2.2020.xus		
Project Description	Existing + Committed				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	185	712	111	89	699	91	249	401	92	89	155	109

Signal Information			
Cycle, s	82.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	1.0	14.7	9.0	2.9	22.0	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	17.9	30.9	15.0	28.0	16.0	21.6	15.0	20.7
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s	6.5	18.6	6.4	21.3	8.4	14.1	6.4	8.5
Green Extension Time (g_e), s	0.4	2.3	0.1	0.7	0.3	1.5	0.1	1.5
Phase Call Probability	0.99	1.00	0.90	1.00	1.00	1.00	0.90	1.00
Max Out Probability	0.00	0.63	0.00	1.00	0.07	0.00	0.01	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	210	809	126	101	458	440	283	288	272	101	156	144
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1823	1757	1900	1777	1810	1900	1646
Queue Service Time (g_s), s	4.5	16.6	4.9	4.4	19.2	19.3	6.4	11.9	12.1	4.4	6.1	6.5
Cycle Queue Clearance Time (g_c), s	4.5	16.6	4.9	4.4	19.2	19.3	6.4	11.9	12.1	4.4	6.1	6.5
Green Ratio (*g/C*)	0.14	0.30	0.30	0.11	0.27	0.27	0.12	0.19	0.19	0.11	0.18	0.18
Capacity (*c*), veh/h	507	1090	485	198	506	486	425	360	337	198	338	293
Volume-to-Capacity Ratio (*X*)	0.415	0.742	0.260	0.512	0.905	0.905	0.666	0.799	0.808	0.512	0.461	0.492
Back of Queue (Q), ft/ln (95 th percentile)	81.4	279.4	77.4	83.1	390.8	380.1	116.7	225.4	216.9	83.1	118.4	110.4
Back of Queue (Q), veh/ln (95 th percentile)	3.3	11.2	3.1	3.3	15.6	15.2	4.7	9.0	8.7	3.3	4.7	4.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	32.2	26.0	21.9	34.7	29.3	29.3	34.7	32.0	32.0	34.7	30.4	30.6
Incremental Delay (d_2), s/veh	0.2	2.5	0.1	0.8	16.7	17.3	0.7	1.6	1.8	0.8	0.4	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	32.4	28.4	22.0	35.5	46.0	46.6	35.4	33.5	33.8	35.5	30.8	31.1
Level of Service (LOS)	C	C	C	D	D	D	D	C	C	D	C	C
Approach Delay, s/veh / LOS	28.4	C		45.2	D		34.2	C		32.1	C	
Intersection Delay, s/veh / LOS	35.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.29	B	2.58	C
Bicycle LOS Score / LOS	1.43	A	1.31	A	1.18	A	0.82	A

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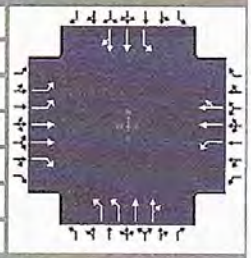
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - Existing - 6.2.2020.xus		
Project Description	Existing + Committed				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	185	712	111	89	699	91	249	401	92	89	155	109

Signal Information			
Cycle, s	82.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	1.0	14.7	9.0	2.9	22.0	1	2	3	4		
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	0.0	2.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	185	712	111	89	699	91	249	401	92	89	155	109
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	22.0	24.0	16.0	24.0	14.0	60.0	13.0	60.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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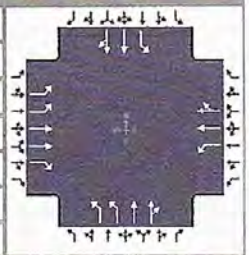
HCS7 Signalized Intersection Results Summary

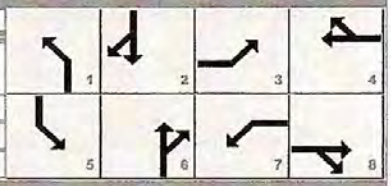
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - Existing - 6.2.2020.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	680	324	112	629	54	178	181	60	82	310	91

Signal Information			
Cycle, s	76.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.4	1.4		11.8	9.2	2.4		18.7				
Yellow	4.0	0.0		4.0	4.0	0.0		4.0				
Red	2.0	0.0		2.0	2.0	0.0		2.0				



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	17.6	27.2	15.2	24.7	15.8	19.2	14.4	17.8
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (*g s*), s	5.1	16.9	6.7	15.8	5.8	6.9	5.4	10.6
Green Extension Time (*g e*), s	0.3	2.7	0.1	2.9	0.2	1.2	0.1	1.2
Phase Call Probability	0.97	1.00	0.92	1.00	0.98	1.00	0.84	1.00
Max Out Probability	0.00	0.46	0.00	0.37	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	164	723	345	119	368	358	189	131	126	87	219	207
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1847	1757	1900	1741	1810	1900	1753
Queue Service Time (*g s*), s	3.1	13.7	14.9	4.7	13.8	13.8	3.8	4.6	4.9	3.4	8.4	8.6
Cycle Queue Clearance Time (*g c*), s	3.1	13.7	14.9	4.7	13.8	13.8	3.8	4.6	4.9	3.4	8.4	8.6
Green Ratio (*g/C*)	0.15	0.28	0.28	0.12	0.25	0.25	0.13	0.17	0.17	0.11	0.16	0.16
Capacity (*c*), veh/h	538	1008	449	219	469	456	454	330	302	201	295	272
Volume-to-Capacity Ratio (*X*)	0.305	0.718	0.768	0.544	0.786	0.787	0.417	0.397	0.415	0.435	0.744	0.762
Back of Queue (Q), ft/ln (95 th percentile)	55.8	233.2	242.4	88.2	255.1	250.7	67.4	88.8	85.7	64.1	164.3	156.5
Back of Queue (Q), veh/ln (95 th percentile)	2.2	9.3	9.7	3.5	10.2	10.0	2.7	3.6	3.4	2.6	6.6	6.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	28.6	24.7	25.2	31.4	26.7	26.8	30.4	27.9	28.0	31.6	30.6	30.7
Incremental Delay (*d 2*), s/veh	0.1	1.5	5.2	0.8	3.9	4.1	0.2	0.3	0.3	0.6	1.4	1.7
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	28.7	26.2	30.3	32.2	30.6	30.8	30.7	28.1	28.3	32.1	32.1	32.4
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	C	C
Approach Delay, s/veh / LOS	27.7	C		30.9	C		29.3	C		32.2	C	
Intersection Delay, s/veh / LOS	29.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.29	B	2.58	C
Bicycle LOS Score / LOS	1.50	B	1.19	A	0.86	A	0.91	A

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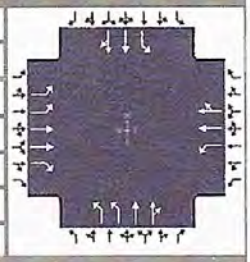
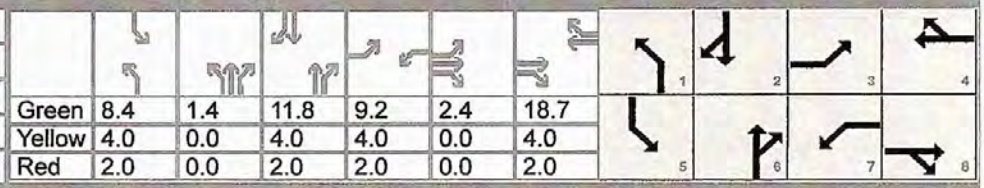
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - Existing - 6.2.2020.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	680	324	112	629	54	178	181	60	82	310	91

Signal Information			
Cycle, s	76.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.4	1.4		11.8	9.2	2.4	18.7					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	680	324	112	629	54	178	181	60	82	310	91
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	22.0	24.0	16.0	24.0	14.0	60.0	13.0	60.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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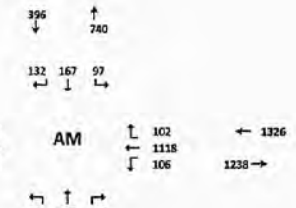
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Selvitz Rd
FILENAME: Willow Lakes
COUNT DATE: 7/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: Signalized

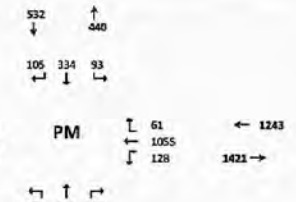
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	45	71	24	18	24	32	30	196	33	9	148	21	651	2982
7:15-7:30	63	81	22	15	32	27	44	183	28	18	145	23	681	2958
7:30-7:45	67	122	22	37	39	22	59	151	32	23	219	21	807	2853
7:45-8:00	74	127	24	19	60	28	52	182	18	40	193	26	843	2606
8:00-8:15	54	52	11	21	31	20	40	173	28	16	108	13	537	2265
8:15-8:30	52	55	23	13	28	20	34	127	25	17	167	10	576	
8:30-8:45	60	57	23	12	33	25	30	151	29	7	111	22	560	
8:45-9:00	38	35	23	19	15	15	30	150	30	10	116	17	501	
AM PEAK HOUR IS FROM:			7:00AM TO 8:00AM											
Volumes	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Season Factor	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Growth	268	432	99	96	167	117	199	767	120	96	753	98	3214	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1%					1%	1%	5%	1%		5%			
Village at Midway	15					15	6	30	6		73		144	
LTC Ranch %	1.4%							6.3%	1.4%		6.3%			
LTC Ranch Volume	26							102	23		115		265	
Southern Grove %	0.1%							0.7%	0.1%		0.7%			
Southern Grove	6							37	5		44		92	
Wilson Groves %	0.1%							0.9%	0.1%		0.7%			
Wilson Groves	4							27	4		27		61	
Riverland/Kennedy %	0.1%							0.6%	0.1%		0.6%			
Riverland/Kennedy	5							23	6		29		73	
Western Grove %								1.1%			1.1%			
Western Grove								23			15		38	
Ravinia %			2.0%	6.0%				16.0%		2.0%	15.0%	6.0%		
Ravinia			0	1				4		1	11	4	22	
Frontera %			30.0%					20.0%		5.0%	30.0%			
Frontera			6					12		9	52		78	
Total	323	432	105	97	167	132	205	1035	163	106	1118	102	3387	

Seasonal Factor	1		
Growth Rate	1.005		
Years Grown	15		
		Trips In	Trips Out
Willow Lakes		1,317	1,052
Village at Midway		1,451	663
LTC Ranch		1,823	1,624
Southern Grove		6,218	5,333
Wilson Groves		3,675	3,607
Riverland/Kennedy		4,791	5,568
Western Grove		1,352	2,135
Ravinia		22	68
Frontera		58	134



15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	52	57	12	24	55	39	31	186	58	35	173	30	732	2810
4:15-4:30	72	56	17	15	65	27	36	159	44	37	154	16	699	2794
4:30-4:45	48	49	22	20	69	21	52	151	74	26	162	8	702	2855
4:45-5:00	57	60	13	16	73	22	35	157	75	29	144	16	677	2762
5:00-5:15	24	48	7	13	86	23	26	190	85	23	157	14	716	2635
5:15-5:30	49	44	18	13	82	25	41	181	90	34	156	16	750	
5:30-5:45	30	46	6	14	55	22	29	159	64	28	143	13	609	
5:45-6:00	44	42	11	11	53	12	35	121	59	29	129	13	550	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	178	181	60	82	310	91	154	680	324	152	629	54	2855	
Season Factor	178	181	60	82	310	91	154	680	324	152	629	54	2855	
Growth	192	195	65	88	334	98	166	733	349	121	678	58	3077	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	1.0%					1.0%	1.0%	5.0%	1.0%		5.0%			
Village at Midway	7					7	10	91	10		36		179	
LTC Ranch %	1.4%							6.3%	1.4%		6.2%			
LTC Ranch Volume	33							187	42		146		407	
Southern Grove %								0.7%			0.7%			
Southern Grove								70			49		119	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								39			32		71	
Riverland/Kennedy %								0.6%			0.8%			
Riverland/Kennedy								44			43		86	
Western Grove %								1.1%			1.1%			
Western Grove								23			28		50	
Ravinia %			2.0%	6.0%				16.0%		2.0%	16.0%	6.0%		
Ravinia			2	5				12		1	7	3	29	
Frontera %			50.0%					30.0%		5.0%	30.0%			
Frontera			21					41		6	37		105	
Total	212	195	87	93	334	105	184	1241	409	128	1055	61	4124	

Seasonal Factor	1		
Growth Rate	1.005		
Years Grown	15		
		Trips In	Trips Out
Willow Lakes		1,441	1,027
Village at Midway		726	1,824
LTC Ranch		2,320	2,979
Southern Grove		6,990	10,671
Wilson Groves		4,543	5,639
Riverland/Kennedy		7,095	7,277
Western Grove		2,510	2,061
Ravinia		77	44
Frontera		207	122



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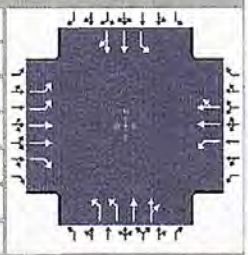
w/o

2/10/2020

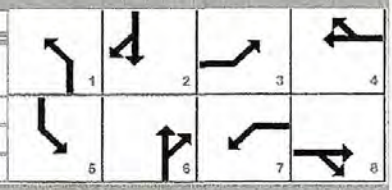
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 w.o. Project - 7.10.2...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	205	1035	163	106	1118	102	323	442	105	97	167	132

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.7	3.8	26.2	9.8	2.2	44.3	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	52.6	15.8	50.3	19.4	36.0	15.7	32.2
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	9.1	33.6	9.2	41.6	13.4		8.6	
Green Extension Time (g_e), s	0.2	5.7	0.1	2.8	0.0	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	0.98	1.00	1.00		0.97	
Max Out Probability	0.11	0.30	0.10	0.86	1.00		0.06	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	216	1089	172	112	651	633	340	296	280	102	164	151
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1844	1757	1900	1774	1810	1900	1629
Queue Service Time (g_s), s	7.1	31.6	8.8	7.2	39.4	39.6	11.4	16.6	16.8	6.6	8.9	9.5
Cycle Queue Clearance Time (g_c), s	7.1	31.6	8.8	7.2	39.4	39.6	11.4	16.6	16.8	6.6	8.9	9.5
Green Ratio (*g/C*)	0.10	0.39	0.39	0.08	0.37	0.37	0.11	0.25	0.25	0.08	0.22	0.22
Capacity (*c*), veh/h	351	1404	625	147	702	681	394	475	443	146	415	356
Volume-to-Capacity Ratio (*X*)	0.615	0.776	0.275	0.758	0.927	0.930	0.864	0.624	0.631	0.700	0.395	0.423
Back of Queue (*Q*), ft/ln (95 th percentile)	139.1	490.9	146.1	153.9	701.4	691.1	243.8	326.3	314.1	136.1	194.6	184.2
Back of Queue (*Q*), veh/ln (95 th percentile)	5.6	19.6	5.8	6.2	28.1	27.6	9.8	13.1	12.6	5.4	7.8	7.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	51.8	32.1	25.1	54.0	36.3	36.3	52.4	40.0	40.1	53.8	40.1	40.4
Incremental Delay (d_2), s/veh	1.0	2.3	0.1	4.9	17.2	18.0	16.5	6.1	6.7	2.3	2.8	3.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	52.8	34.5	25.2	58.8	53.4	54.3	68.9	46.1	46.7	56.0	42.9	44.0
Level of Service (LOS)	D	C	C	E	D	D	E	D	D	E	D	D
Approach Delay, s/veh / LOS	36.1	D		54.3	D		54.8	D		46.5	D	
Intersection Delay, s/veh / LOS	47.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.30	B	2.60	C
Bicycle LOS Score / LOS	1.71	B	1.64	B	1.24	A	0.83	A

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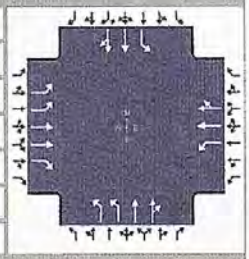
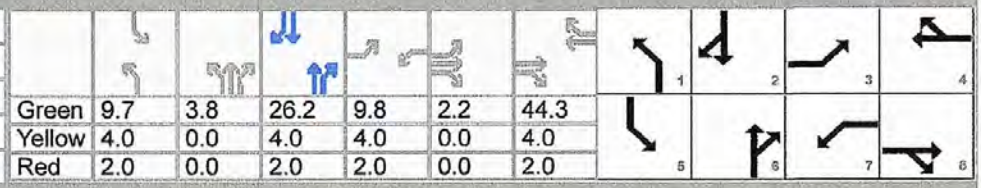
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 w.o. Project + Imp -...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	205	1035	163	106	1118	102	323	442	105	97	167	132

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	9.7	3.8		26.2	9.8	2.2	44.3					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	205	1035	163	106	1118	102	323	442	105	97	167	132
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	50.0	20.0	50.0	18.0	32.0	18.0	32.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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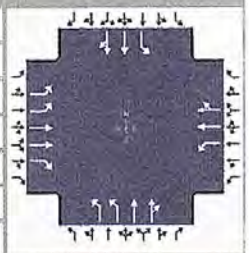
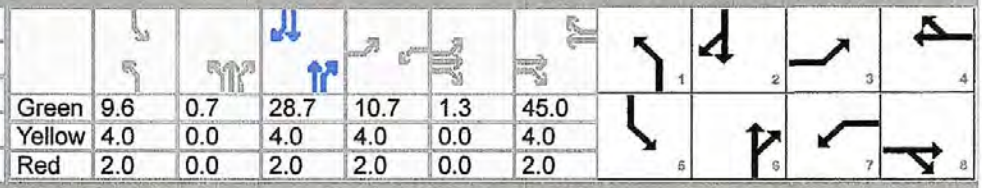
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - 2035 w.o. Project - 7.10....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	184	1241	409	128	1055	61	232	195	87	93	334	105

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.6	0.7		28.7	10.7	1.3	45.0					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	52.3	16.7	51.0	16.3	35.4	15.6	34.7
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	8.3	43.7	10.8	36.1	10.2		8.3	
Green Extension Time (g_e), s	0.2	2.6	0.1	5.5	0.2	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	0.99	1.00	1.00		0.96	
Max Out Probability	0.04	0.95	0.79	0.58	1.00		0.10	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	194	1306	431	135	593	582	244	153	144	98	238	224
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1863	1757	1900	1705	1810	1900	1745
Queue Service Time (g_s), s	6.3	41.7	26.9	8.8	34.0	34.1	8.2	7.9	8.4	6.3	13.1	13.4
Cycle Queue Clearance Time (g_c), s	6.3	41.7	26.9	8.8	34.0	34.1	8.2	7.9	8.4	6.3	13.1	13.4
Green Ratio (*g/C*)	0.10	0.39	0.39	0.09	0.38	0.38	0.09	0.24	0.24	0.08	0.24	0.24
Capacity (*c*), veh/h	351	1395	621	162	713	699	303	465	418	145	454	417
Volume-to-Capacity Ratio (*X*)	0.552	0.937	0.693	0.833	0.832	0.833	0.807	0.328	0.345	0.675	0.525	0.537
Back of Queue (*Q*), ft/ln (95 th percentile)	123.1	669.6	392.1	202.7	575.1	566.9	173.5	172.6	164.9	129.7	266.5	256.1
Back of Queue (*Q*), veh/ln (95 th percentile)	4.9	26.8	15.7	8.1	23.0	22.7	6.9	6.9	6.6	5.2	10.7	10.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	51.5	35.5	30.9	53.8	34.1	34.1	53.8	37.2	37.4	53.7	39.7	39.9
Incremental Delay (d_2), s/veh	0.5	11.5	2.6	15.4	7.5	7.7	7.7	1.9	2.3	2.0	4.3	4.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	52.0	47.0	33.6	69.2	41.5	41.7	61.6	39.1	39.6	55.7	44.0	44.8
Level of Service (LOS)	D	D	C	E	D	D	E	D	D	E	D	D
Approach Delay, s/veh / LOS	44.5	D		44.5	D		49.4	D		46.4	D	
Intersection Delay, s/veh / LOS	45.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.28	B	2.30	B	2.59	C
Bicycle LOS Score / LOS	2.08	B	1.57	B	0.93	A	0.95	A

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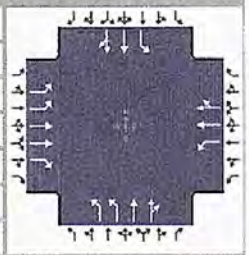
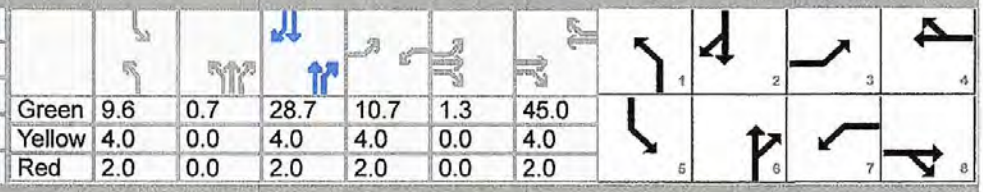
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - 2035 w.o. Project - 7.10....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	184	1241	409	128	1055	61	232	195	87	93	334	105

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.6	0.7		28.7	10.7	1.3	45.0					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	184	1241	409	128	1055	61	232	195	87	93	334	105
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	50.0	20.0	50.0	18.0	32.0	18.0	32.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Selvitz Rd
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	45	71	24	18	24	32	30	198	33	9	148	21	655	2982
7:15-7:30	63	81	22	15	32	27	44	183	28	18	145	23	681	2958
7:30-7:45	67	122	22	37	39	22	59	151	32	22	213	21	807	2953
7:45-8:00	74	127	24	19	60	28	52	182	18	40	193	26	843	2506
8:00-8:15	54	53	11	21	31	20	40	173	28	16	168	13	627	2265
8:15-8:30	51	59	23	13	28	20	34	127	16	17	157	10	576	
8:30-8:45	60	57	23	12	33	25	30	151	29	7	111	22	560	
8:45-9:00	38	29	23	19	15	15	30	150	30	10	116	17	502	
AM PEAK HOUR IS FROM:			7:00AM TO 8:00AM											
Volumes	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Season Factor	249	401	92	89	155	109	185	712	111	89	699	91	2982	
Growth	268	432	99	96	167	117	199	767	120	96	753	98	3214	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	3%	0%	0%	0%	0%	1%	1%	19%	3%	0%	19%	0%		
PROJECT	41	0	0	0	0	14	11	202	32	0	257	0	557	
Midway %	1%					1%	1%	5%	1%		5%			
Village at Midway	15					15	6	30	6		73		144	
LTC Ranch %	1.4%							6.3%	1.4%		6.3%			
LTC Ranch Volume	26							162	28		115		265	
Southern Grove %	0.3%							0.7%	0.1%		0.7%			
Southern Grove	6							37	5		44		92	
Wilson Groves %	0.1%							0.7%	0.1%		0.7%			
Wilson Groves	4							27	4		27		61	
Riverland/Kennedy %	0.3%							0.6%	0.1%		0.6%			
Riverland/Kennedy	5							33	6		29		73	
Western Grove %								1.1%			1.1%			
Western Grove								23			15		38	
Ravinia %			2.0%	6.0%				16.0%		2.0%	16.0%	6.0%		
Ravinia			0	1				4		1	11	4	22	
Frontera %			10.0%					20.0%		5.0%	10.0%			
Frontera			5					12		9	52		78	
Total	364	432	105	97	167	146	216	1237	195	106	1375	192	4541	

	Trips In	Trips Out
Willow Lakes	1,355	1,065
Village at Midway	1,451	601
LTC Ranch	1,823	1,624
Southern Grove	5,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	124

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

15 Min Period Lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	51	57	12	24	55	39	31	166	58	35	173	30	732	2810
4:15-4:30	72	56	17	15	66	27	36	159	44	37	154	16	699	2794
4:30-4:45	68	49	22	20	69	21	52	151	74	26	162	8	702	2855
4:45-5:00	57	40	13	16	73	22	35	157	75	29	164	16	677	2762
5:00-5:15	24	48	7	33	86	23	28	190	85	23	157	14	716	2835
5:15-5:30	49	44	18	13	82	25	41	182	90	34	166	16	760	
5:30-5:45	30	46	6	14	55	22	29	159	64	28	143	13	609	
5:45-6:00	44	41	11	11	53	12	25	122	59	29	129	13	550	
PM PEAK HOUR IS FROM:			4:30 PM TO 5:30PM											
Volumes	178	183	60	82	310	91	154	680	314	132	629	54	2855	
Season Factor	178	183	60	82	310	91	154	680	314	132	629	54	2855	
Growth	192	195	65	88	334	98	166	733	345	121	678	58	3077	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	3%	0%	0%	0%	0%	1%	1%	19%	3%	0%	19%	0%		
PROJECT	44	0	0	0	0	15	10	197	31	0	276	0	573	
Midway %	1.0%					1.0%	1.0%	5.0%	1.0%		5.0%			
Village at Midway	7					7	18	93	18		36		179	
LTC Ranch %	1.4%							6.3%	1.4%		6.3%			
LTC Ranch Volume	32							187	42		146		407	
Southern Grove %								0.7%			0.7%			
Southern Grove								78			49		119	
Wilson Groves %								0.7%			0.7%			
Wilson Groves								39			32		71	
Riverland/Kennedy %								0.6%			0.6%			
Riverland/Kennedy								84			43		86	
Western Grove %								1.1%			1.1%			
Western Grove								23			28		50	
Ravinia %			2.0%	6.0%				16.0%		2.0%	16.0%	6.0%		
Ravinia			3	5				12		1	7	3	29	
Frontera %			10.0%					20.0%		5.0%	30.0%			
Frontera			21					41		6	37		105	
Total	275	195	87	93	334	120	196	1438	440	128	1330	61	4599	

	Trips In	Trips Out
Willow Lakes	1,450	1,010
Village at Midway	726	1,824
LTC Ranch	2,130	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,539
Riverland/Kennedy	7,055	7,277
Western Grove	2,510	2,081
Ravinia	77	44
Frontera	207	122

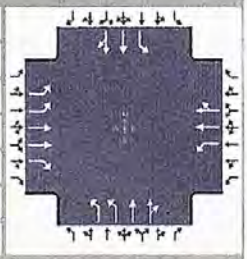
Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

F-144

#4 w/p

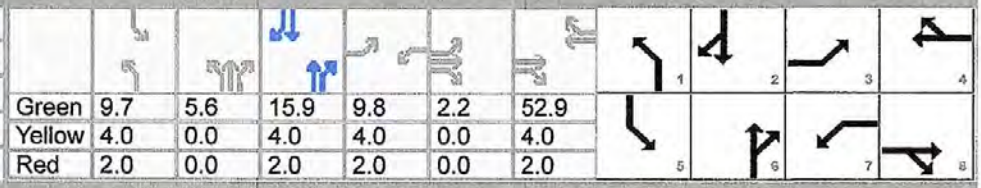
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 with Project - 7.9.20...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.7	5.6		15.9	9.8	2.2	52.9					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	61.1	15.8	58.9	21.3	27.5	15.7	21.9
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	9.5	38.5	9.2	49.8	14.8		8.6	
Green Extension Time (g_e), s	0.2	8.0	0.1	3.0	0.5	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	0.98	1.00	1.00		0.97	
Max Out Probability	0.56	0.37	0.00	0.92	0.14		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	227	1302	205	112	784	771	383	291	274	102	173	157
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1854	1757	1900	1772	1810	1900	1615
Queue Service Time (g_s), s	7.5	36.5	9.5	7.2	47.1	47.8	12.8	17.8	18.1	6.6	10.4	11.2
Cycle Queue Clearance Time (g_c), s	7.5	36.5	9.5	7.2	47.1	47.8	12.8	17.8	18.1	6.6	10.4	11.2
Green Ratio (*g/C*)	0.10	0.46	0.46	0.08	0.44	0.44	0.13	0.18	0.18	0.08	0.13	0.13
Capacity (*c*), veh/h	351	1661	739	147	837	817	447	340	317	146	251	213
Volume-to-Capacity Ratio (*X*)	0.647	0.784	0.278	0.758	0.936	0.944	0.856	0.856	0.866	0.700	0.687	0.735
Back of Queue (*Q*), ft/ln (95 th percentile)	149.9	540.2	153.8	150.4	802	804.9	249.3	391	379.7	136.1	244	237.1
Back of Queue (*Q*), veh/ln (95 th percentile)	6.0	21.6	6.2	6.0	32.1	32.2	10.0	15.6	15.2	5.4	9.8	9.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	52.0	27.4	20.1	54.0	32.0	32.2	51.3	47.8	47.9	53.8	49.7	50.1
Incremental Delay (d_2), s/veh	2.4	2.2	0.1	3.0	16.8	18.5	7.6	23.2	25.7	2.3	14.3	20.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	54.4	29.6	20.2	57.0	48.8	50.6	58.9	70.9	73.6	56.0	64.0	70.1
Level of Service (LOS)	D	C	C	E	D	D	E	E	E	E	E	E
Approach Delay, s/veh / LOS	31.7	C		50.2	D		66.9	E		64.3	E	
Intersection Delay, s/veh / LOS	48.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.27	B	2.31	B	2.60	C
Bicycle LOS Score / LOS	1.92	B	1.86	B	1.27	A	0.84	A

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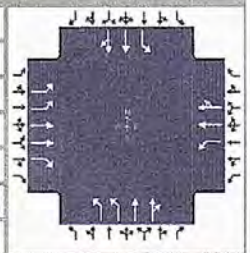
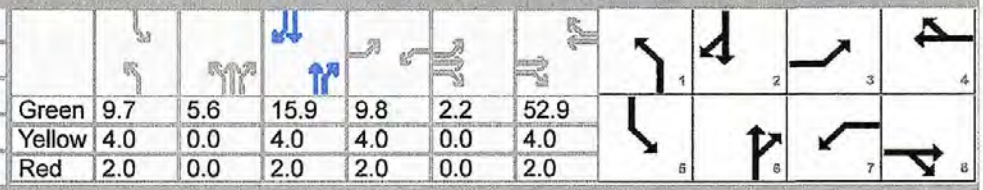
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 with Project - 7.9.20...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.7	5.6		15.9	9.8	2.2	52.9					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	19.0	44.0	34.0	59.0	25.0	16.0	26.0	17.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk ($Walk$), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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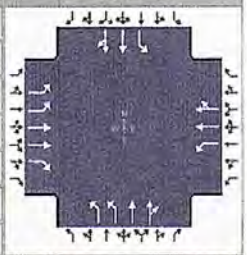
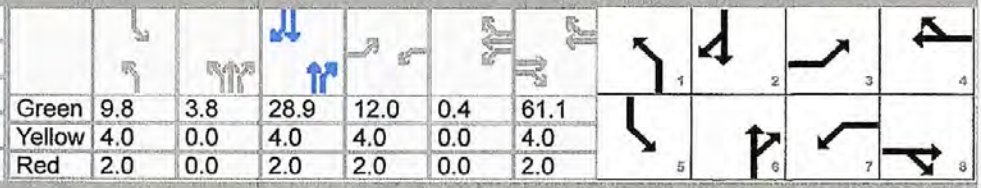
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz Midway - PM - 2035 with Project - 7.21.20...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	9.8	3.8		28.9	12.0	0.4	61.1					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	67.1	18.4	67.5	19.6	38.7	15.8	34.9
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	9.9	58.8	12.3	52.0	13.4		9.4	
Green Extension Time (g_e), s	0.2	2.3	0.2	6.6	0.2	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	0.99	1.00	1.00		0.98	
Max Out Probability	0.01	1.00	0.00	0.71	0.87		0.95	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	205	1514	463	135	736	728	289	153	144	98	247	231
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1757	1809	1610	1810	1900	1870	1757	1900	1705	1810	1900	1729
Queue Service Time (g_s), s	7.9	56.8	31.9	10.3	49.7	50.0	11.4	9.4	9.9	7.4	16.6	17.1
Cycle Queue Clearance Time (g_c), s	7.9	56.8	31.9	10.3	49.7	50.0	11.4	9.4	9.9	7.4	16.6	17.1
Green Ratio (*g/C*)	0.09	0.44	0.44	0.09	0.44	0.44	0.10	0.23	0.23	0.07	0.21	0.21
Capacity (*c*), veh/h	301	1578	703	160	835	822	341	444	399	126	393	358
Volume-to-Capacity Ratio (*X*)	0.682	0.959	0.659	0.840	0.882	0.886	0.850	0.344	0.362	0.775	0.630	0.645
Back of Queue (*Q*), ft/ln (95 th percentile)	158.8	886.4	450.5	211.2	812	808.4	234.4	203.5	196.5	170.8	334.6	319.9
Back of Queue (*Q*), veh/ln (95 th percentile)	6.4	35.5	18.0	8.4	32.5	32.3	9.4	8.1	7.9	6.8	13.4	12.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	62.1	38.2	31.2	62.8	35.9	36.0	62.2	44.7	44.9	64.0	50.6	50.8
Incremental Delay (d_2), s/veh	1.0	13.9	1.8	4.4	10.4	10.9	11.4	2.1	2.5	12.0	7.5	8.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	63.2	52.1	33.0	67.3	46.3	46.9	73.6	46.8	47.4	76.0	58.1	59.5
Level of Service (LOS)	E	D	C	E	D	D	E	D	D	E	E	E
Approach Delay, s/veh / LOS	49.1	D		48.4	D		60.2	E		61.7	E	
Intersection Delay, s/veh / LOS	51.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.31	B	2.60	C
Bicycle LOS Score / LOS	2.29	B	1.81	B	0.97	A	0.96	A

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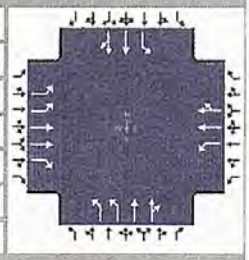
HCS7 Signalized Intersection Input Data

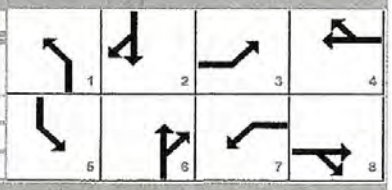
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz Midway - PM - 2035 with Project - 7.21.20...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.8	3.8		28.9	12.0	0.4	61.1					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	23.0	37.0	49.0	63.0	22.0	36.0	18.0	32.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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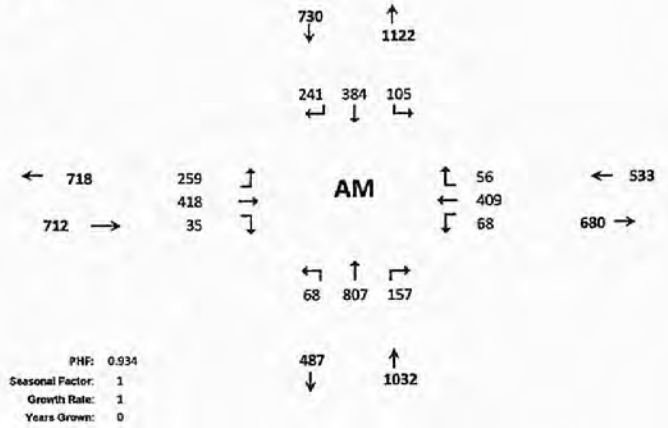
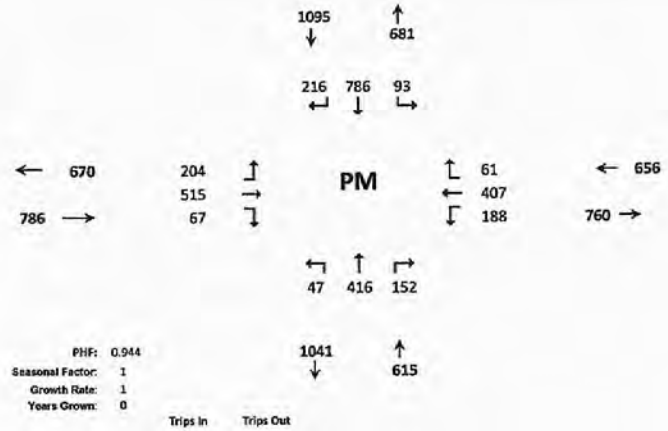
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: S 25th St
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2020
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: Signalized

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	15	193	37	36	83	55	84	82	7	9	85	17	703	3007
7:15-7:30	15	201	35	23	101	68	91	104	9	20	104	19	790	2978
7:30-7:45	15	233	46	30	133	71	34	108	10	18	94	13	805	2883
7:45-8:00	23	180	39	16	67	47	50	124	9	21	126	7	709	2687
8:00-8:15	5	121	34	23	92	41	50	127	14	34	123	10	674	2595
8:15-8:30	18	159	55	25	87	39	50	91	18	40	101	12	695	
8:30-8:45	12	121	44	18	79	25	62	101	3	27	101	16	609	
8:45-9:00	12	133	35	21	104	36	58	103	4	23	72	16	617	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	68	807	157	105	384	241	259	418	35	68	409	56	3007	
Season Factor	68	807	157	105	384	241	259	418	35	68	409	56	3007	
Growth	68	807	157	105	384	241	259	418	35	68	409	56	3007	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	68	807	157	105	384	241	259	418	35	68	409	56	3007	



15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	11	97	42	22	122	56	42	132	19	43	114	15	715	2989
4:15-4:30	11	87	49	23	141	63	50	137	27	45	105	12	750	3009
4:30-4:45	20	114	48	20	171	62	41	110	14	31	98	14	743	3060
4:45-5:00	10	100	43	20	179	53	50	141	23	42	103	17	781	3152
5:00-5:15	14	90	24	25	166	48	42	148	16	50	106	6	735	3046
5:15-5:30	14	92	38	20	214	52	58	118	12	51	110	22	801	
5:30-5:45	9	134	47	28	227	63	54	108	16	45	88	16	835	
5:45-6:00	11	109	44	27	121	37	57	103	17	40	92	17	675	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Season Factor	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Growth	47	416	152	93	786	216	204	515	67	188	407	61	3152	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	47	416	152	93	786	216	204	515	67	188	407	61	3152	



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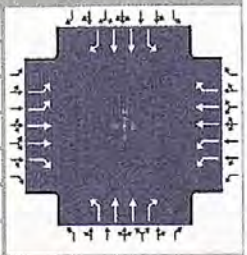
HCS7 Signalized Intersection Results Summary

#8 EAM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - Existing - 7.9.2020 (2).xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241

Signal Information			
Cycle, s	67.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.3	0.9	21.1	5.3	2.5	12.0	1	2	3	4	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	5	6	7	8	
Red	1.0	0.0	1.5	1.0	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	12.7	19.4	10.3	17.0	10.3	26.6	11.2	27.5
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s	7.2	9.6	3.3	9.7	4.6	16.7	6.1	10.7
Green Extension Time (g_e), s	0.5	2.2	0.1	2.2	0.1	4.3	0.1	4.3
Phase Call Probability	0.99	1.00	0.75	1.00	0.75	1.00	0.88	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	278	449	38	73	440	60	73	868	169	113	413	259
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	5.2	7.6	1.3	1.3	7.7	2.2	2.6	14.7	5.4	4.1	5.9	8.7
Cycle Queue Clearance Time (g_c), s	5.2	7.6	1.3	1.3	7.7	2.2	2.6	14.7	5.4	4.1	5.9	8.7
Green Ratio (g/C)	0.11	0.21	0.21	0.08	0.18	0.18	0.08	0.31	0.31	0.09	0.33	0.33
Capacity (c), veh/h	403	776	345	274	643	286	141	1134	505	166	1183	527
Volume-to-Capacity Ratio (X)	0.691	0.579	0.109	0.267	0.684	0.211	0.518	0.765	0.335	0.681	0.349	0.492
Back of Queue (Q), ft/ln (95 th percentile)	90.9	130.7	19.6	23.5	136.1	33.9	49.1	230.4	80	77.1	95.7	127.8
Back of Queue (Q), veh/ln (95 th percentile)	3.6	5.2	0.8	0.9	5.4	1.4	2.0	9.2	3.2	3.1	3.8	5.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	28.8	23.9	21.4	29.4	26.1	23.8	30.0	21.0	17.8	29.8	17.3	18.3
Incremental Delay (d_2), s/veh	0.8	0.3	0.1	0.2	0.5	0.1	1.1	0.4	0.1	1.8	0.1	0.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	29.6	24.1	21.5	29.6	26.6	23.9	31.1	21.4	18.0	31.6	17.4	18.6
Level of Service (LOS)	C	C	C	C	C	C	C	C	B	C	B	B
Approach Delay, s/veh / LOS	26.0	C		26.7	C		21.5	C		19.8	B	
Intersection Delay, s/veh / LOS	23.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.44	B	2.56	C	2.56	C
Bicycle LOS Score / LOS	1.12	A	0.96	A	1.40	A	1.14	A

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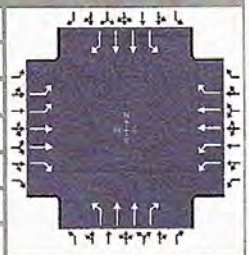
HCS7 Signalized Intersection Input Data

#8 E AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - Existing - 7.9.2020.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241

Signal Information			
Cycle, s	67.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.3	0.9	21.1	5.3	2.5	12.0	1	2	3	4		
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	5	6	7	8		
Red	1.0	0.0	1.5	1.0	0.0	1.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	24.0	70.0	24.0	70.0	20.0	90.0	20.0	90.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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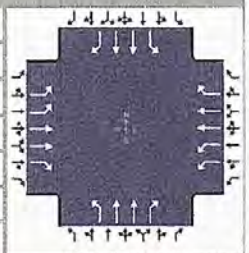
HCS7 Signalized Intersection Results Summary #8 E PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - PM - Existing - 7.9.2020.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216

Signal Information			
Cycle, s	65.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.2	1.7		18.2	6.9	13.7	0.0	1	2	3	4	
Yellow	4.0	0.0		4.0	4.0	4.0	0.0	5	6	7	8	
Red	1.0	0.0		1.5	1.0	1.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	11.9	18.8	11.8	18.7	9.2	23.7	10.9	25.4
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s	5.8	11.2	5.5	9.0	3.7	8.6	5.4	15.6
Green Extension Time (g_e), s	0.4	2.5	0.4	2.5	0.0	4.1	0.1	4.1
Phase Call Probability	0.98	1.00	0.97	1.00	0.60	1.00	0.83	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	217	548	71	200	433	65	50	443	162	99	836	230
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g_s), s	3.8	9.2	2.4	3.5	7.0	2.2	1.7	6.6	5.2	3.4	13.6	7.6
Cycle Queue Clearance Time (g_c), s	3.8	9.2	2.4	3.5	7.0	2.2	1.7	6.6	5.2	3.4	13.6	7.6
Green Ratio (g/C)	0.11	0.21	0.21	0.10	0.21	0.21	0.06	0.28	0.28	0.09	0.31	0.31
Capacity (c), veh/h	370	765	341	367	763	339	117	1013	451	163	1105	492
Volume-to-Capacity Ratio (X)	0.587	0.716	0.209	0.544	0.568	0.191	0.428	0.437	0.358	0.608	0.757	0.467
Back of Queue (Q), ft/ln (95 th percentile)	67.2	158.1	36.4	61.5	120	33.1	32.3	108.3	77.8	63.8	215.8	110.4
Back of Queue (Q), veh/ln (95 th percentile)	2.7	6.3	1.5	2.5	4.8	1.3	1.3	4.3	3.1	2.6	8.6	4.4
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	27.9	23.9	21.2	27.8	23.1	21.2	29.4	19.3	18.8	28.6	20.5	18.4
Incremental Delay (d_2), s/veh	0.6	0.5	0.1	0.5	0.2	0.1	0.9	0.1	0.2	1.4	0.4	0.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	28.4	24.4	21.4	28.2	23.4	21.3	30.3	19.4	19.0	30.0	20.9	18.6
Level of Service (LOS)	C	C	C	C	C	C	C	B	B	C	C	B
Approach Delay, s/veh / LOS	25.2	C		24.6	C		20.1	C		21.2	C	
Intersection Delay, s/veh / LOS	22.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.56	C	2.56	C
Bicycle LOS Score / LOS	1.18	A	1.06	A	1.03	A	1.45	A

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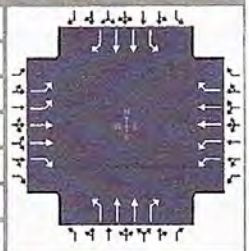
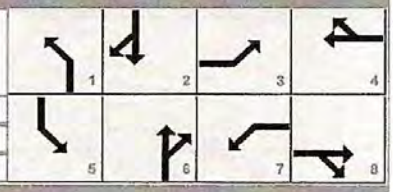
HCS7 Signalized Intersection Input Data #8 E PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - PM - Existing - 7.9.2020.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216

Signal Information					EB			WB			NB			SB		
Cycle, s	65.1	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	4.2	1.7		18.2	6.9	13.7	0.0					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	0.0		4.0	4.0	4.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.5	1.0	1.0	0.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	24.0	70.0	24.0	70.0	20.0	90.0	20.0	90.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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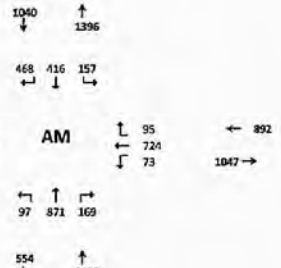
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: S 25th St
FILENAME: Willow Lakes
COUNT DATE: 2/18/2020
REPORT DATE:
DAY: Tuesday
ANALYSIS YEAR: 2035
E/W STREET: Midway Rd
CITY: St Lucie
CONTROL: Signalized

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	15	193	37	16	83	55	64	82	7	9	85	17	703	3007
7:15-7:30	15	201	35	23	101	68	91	104	9	20	104	19	790	2978
7:30-7:45	35	233	46	30	133	71	34	108	18	18	94	13	805	2883
7:45-8:00	23	180	39	16	67	47	50	134	9	21	126	7	709	2687
8:00-8:15	5	121	34	23	92	41	50	127	14	34	123	10	674	2595
8:15-8:30	18	159	55	25	87	39	50	91	18	40	101	12	695	
8:30-8:45	12	121	44	18	79	25	62	101	3	27	101	16	609	
8:45-9:00	12	133	35	21	104	36	58	103	4	25	72	16	617	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	68	807	157	105	384	241	259	418	35	68	409	56	3037	
Season Factor	68	807	157	105	384	241	259	418	35	68	409	56	3037	
Growth	73	870	169	113	414	260	279	450	38	73	441	60	3241	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	0.4%					2.6%	2.6%	2.9%	0.4%		2.9%			
Village at Midway	6					36	16	17	2		42		121	
LTC Ranch %	0.8%					5.2%	5.2%	5.8%	0.8%		5.8%			
LTC Ranch Volume	15					95	64	94	13		106		407	
Southern Grove %								0.5%			0.5%			
Southern Grove								26			31		57	
Wilson Groves %						0.1%	0.1%	1.0%			1.0%			
Wilson Groves						4	4	38			39		85	
Riverland/Kennedy %						0.1%	0.1%	1.2%			1.0%			
Riverland/Kennedy						5	6	56			48		114	
Western Grove %						0.1%	0.1%	0.7%			0.7%			
Western Grove						1	2	15			9		28	
Ravinia %	17.0%					23.0%	23.0%	35.0%	17.0%		36.0%			
Ravinia	4					5	16	24	12		8		65	
Frontera %		3.0%		25.0%	1.0%	35.0%	40.0%					60.0%		
Frontera		2		44	2	61	23					35		
Total	97	871	169	157	416	468	430	721	65	73	724	95	4121	

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

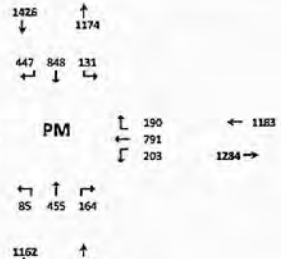
	Trips In	Trips Out
Willow Lakes	1,327	1,052
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,233
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	124



15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	11	97	42	22	122	56	42	132	19	43	114	15	715	2989
4:15-4:30	11	87	49	23	141	63	50	137	27	45	105	12	750	3009
4:30-4:45	20	114	48	20	171	62	41	110	14	31	98	14	743	3060
4:45-5:00	10	100	43	20	179	53	50	141	23	42	103	17	781	3152
5:00-5:15	14	90	24	25	166	48	42	148	16	50	106	6	735	3046
5:15-5:30	14	92	18	20	214	52	58	118	12	51	110	22	801	
5:30-5:45	9	134	47	28	227	63	54	108	16	45	88	16	835	
5:45-6:00	11	109	44	27	121	37	57	103	17	40	92	17	675	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Season Factor	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Growth	51	448	164	100	847	233	220	555	72	203	439	66	3397	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	0.4%					2.6%	2.0%	2.9%	0.4%		2.9%			
Village at Midway	3					19	47	53	7		21		150	
LTC Ranch %	0.8%					5.2%	5.2%	5.8%	0.8%		5.8%			
LTC Ranch Volume	19					121	154	172	24		135		624	
Southern Grove %						0.0%	0.0%	0.5%			0.5%			
Southern Grove						0	0	50			35		85	
Wilson Groves %						0.1%	0.1%	1.0%			1.0%			
Wilson Groves						5	6	56			45		112	
Riverland/Kennedy %						0.1%	0.1%	1.0%			1.0%			
Riverland/Kennedy						7	7	73			71		158	
Western Grove %						0.1%	0.1%	0.7%			0.7%			
Western Grove						3	2	14			18		37	
Ravinia %	17.0%					23.0%	23.0%	35.0%	17.0%		36.0%			
Ravinia	13					18	10	18	7		28		92	
Frontera %		3.0%		25.0%	1.0%	35.0%	40.0%					60.0%		
Frontera		6		31	1	43	83					124	288	
Total	85	456	164	181	848	447	530	990	111	203	791	190	4943	

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,441	1,027
Village at Midway	725	1,824
LTC Ranch	2,320	2,970
Southern Grove	6,990	10,073
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061
Ravinia	77	44
Frontera	207	122



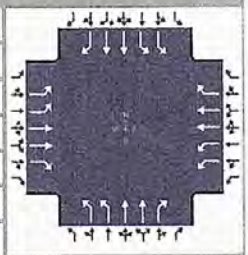
F-154

#8 w/o

HCS7 Signalized Intersection Results Summary

#8 w/o AM

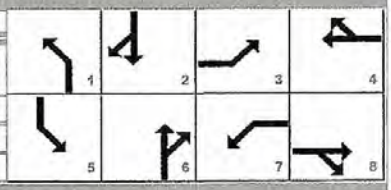
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - AM - 2035 w.o. Project - 7.9.20....		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	1.0	44.8	6.5	6.0	29.5	
Yellow	4.0	0.0	4.0	4.0	4.0	4.0	
Red	1.0	0.0	1.5	1.0	1.0	1.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.4	45.5	11.5	34.5	11.8	50.3	12.8	51.3
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	17.2	23.1	4.5	26.2	5.4		7.5	
Green Extension Time (g_e), s	0.2	4.1	0.1	3.3	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	0.92	1.00	0.97		1.00	
Max Out Probability	1.00	0.01	0.00	0.18	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	453	759	68	77	762	100	102	917	178	165	438	493
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g_s), s	15.2	21.1	3.5	2.5	24.2	6.0	3.4	25.5	9.3	5.5	10.2	32.7
Cycle Queue Clearance Time (g_c), s	15.2	21.1	3.5	2.5	24.2	6.0	3.4	25.5	9.3	5.5	10.2	32.7
Green Ratio (g/C)	0.15	0.34	0.34	0.05	0.25	0.25	0.06	0.37	0.37	0.06	0.38	0.38
Capacity (c), veh/h	510	1219	543	189	889	396	198	1351	601	228	1381	615
Volume-to-Capacity Ratio (X)	0.887	0.622	0.126	0.406	0.857	0.253	0.515	0.679	0.296	0.725	0.317	0.801
Back of Queue (Q), ft/ln (95 th percentile)	299.3	346.5	59.8	50	411.8	104.1	67	415.3	165.3	110.2	194.4	500.3
Back of Queue (Q), veh/ln (95 th percentile)	12.0	13.9	2.4	2.0	16.5	4.2	2.7	16.6	6.6	4.4	7.8	20.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	50.3	33.4	27.5	54.9	43.2	36.4	55.0	31.6	26.5	55.1	26.1	33.0
Incremental Delay (d_2), s/veh	14.3	0.3	0.0	0.5	4.9	0.1	0.8	2.8	1.3	1.7	0.6	10.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.6	33.7	27.6	55.4	48.1	36.5	55.8	34.3	27.7	56.7	26.7	43.6
Level of Service (LOS)	E	C	C	E	D	D	E	C	C	E	C	D
Approach Delay, s/veh / LOS	44.3	D		47.5	D		35.2	D		38.8	D	
Intersection Delay, s/veh / LOS	41.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.54	B	1.26	A	1.47	A	1.39	A

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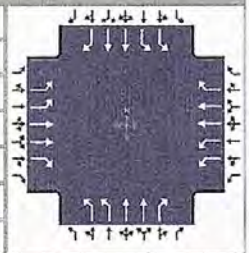
HCS7 Signalized Intersection Input Data

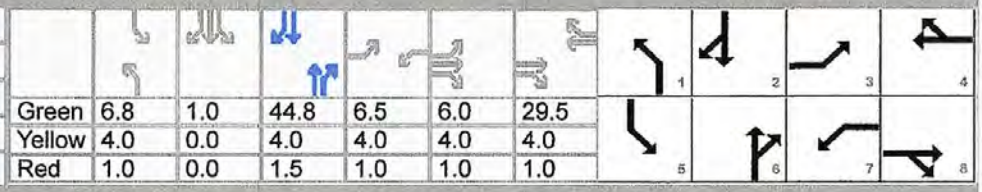
#8 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - 2035 w.o. Project - 7.9.2...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	6.8	1.0		44.8	6.5	6.0	29.5					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	1.0	0.0		1.5	1.0	1.0	1.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	24.0	40.0	24.0	40.0	20.0	36.0	20.0	36.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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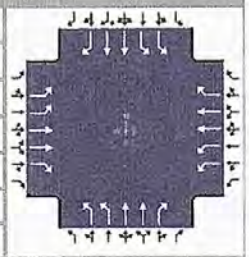
HCS7 Signalized Intersection Results Summary #8 w/o PM

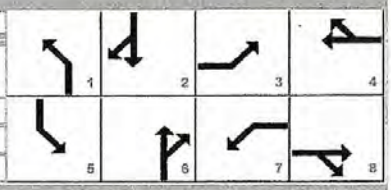
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - PM - 2035 w.o. Project - 7.21.2...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	0.9		48.3	10.8	9.2	38.5					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	1.0	0.0		1.5	1.0	1.0	1.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	30.0	57.7	15.8	43.5	11.8	53.8	12.7	54.7
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	23.7	37.3	10.4	32.3	5.5		7.4	
Green Extension Time (g_e), s	1.3	6.3	0.5	6.2	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		1.00	
Max Out Probability	0.00	0.00	0.00	0.01	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	558	1042	117	214	833	200	89	479	173	138	893	471
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g_s), s	21.7	35.3	6.8	8.4	30.3	14.4	3.5	14.0	11.0	5.4	29.8	37.5
Cycle Queue Clearance Time (g_c), s	21.7	35.3	6.8	8.4	30.3	14.4	3.5	14.0	11.0	5.4	29.8	37.5
Green Ratio (g/C)	0.18	0.38	0.38	0.08	0.28	0.28	0.05	0.35	0.35	0.05	0.35	0.35
Capacity (c), veh/h	627	1362	606	272	996	443	170	1248	556	192	1271	566
Volume-to-Capacity Ratio (X)	0.889	0.765	0.193	0.786	0.836	0.451	0.525	0.384	0.311	0.718	0.703	0.832
Back of Queue (Q), ft/ln (95 th percentile)	366.1	540	117.6	168.7	485.8	238.8	70.1	256.9	198	109.5	485.7	579.4
Back of Queue (Q), veh/ln (95 th percentile)	14.6	21.6	4.7	6.7	19.4	9.6	2.8	10.3	7.9	4.4	19.4	23.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	56.1	38.2	29.3	63.4	47.7	42.0	65.0	34.6	33.6	65.1	39.1	41.6
Incremental Delay (d_2), s/veh	1.8	0.3	0.1	1.9	0.7	0.3	0.9	0.9	1.5	1.9	3.3	13.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.9	38.6	29.4	65.4	48.5	42.2	66.0	35.5	35.1	67.0	42.4	55.0
Level of Service (LOS)	E	D	C	E	D	D	E	D	D	E	D	E
Approach Delay, s/veh / LOS	44.2	D		50.4	D		39.1	D		48.6	D	
Intersection Delay, s/veh / LOS	46.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.60	C	2.59	C	2.59	C
Bicycle LOS Score / LOS	1.90	B	1.52	B	1.10	A	1.73	B

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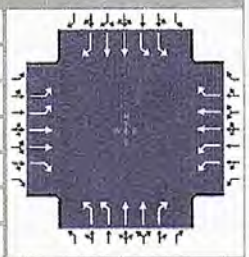
HCS7 Signalized Intersection Input Data

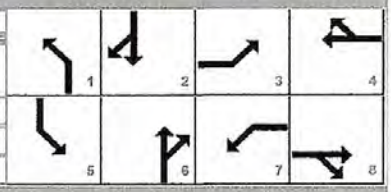
#8 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - PM - 2035 w.o. Project - 7.21.2...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447

Signal Information					EB			WB			NB			SB		
Cycle, s	140.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	6.8	0.9		48.3	10.8	9.2	38.5					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.5	1.0	1.0	1.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None		0	L	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	59.0	36.0	70.0	47.0	16.0	18.0	16.0	18.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l_1), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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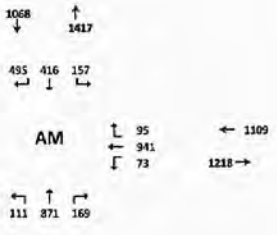
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: S 25th St
E/W STREET: Midway Rd
CONTROL: Signalized
FILENAME: Willow Lakes
COUNT DATE: 1/18/2020
DAY: Tuesday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2045

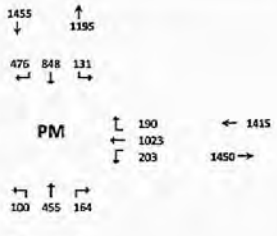
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	15	190	37	36	83	55	84	82	7	9	85	17	703	3007
7:15-7:30	15	201	35	23	101	68	91	104	9	20	104	19	790	2978
7:30-7:45	15	233	46	38	133	71	34	108	10	18	94	13	805	2853
7:45-8:00	23	180	39	16	62	47	50	124	9	21	126	7	709	2687
8:00-8:15	5	121	34	23	92	41	50	127	14	34	123	10	674	2595
8:15-8:30	18	159	55	25	87	39	50	91	18	40	101	12	695	
8:30-8:45	12	121	44	18	79	25	62	101	3	27	101	16	609	
8:45-9:00	12	133	35	21	104	36	58	103	4	23	72	16	617	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	68	807	157	105	384	241	259	418	35	68	409	56	3007	
Season Factor	68	807	157	105	384	241	259	418	35	68	409	56	3007	
Growth	73	870	169	113	414	260	279	450	38	73	441	60	3241	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	1%	0%	0%	0%	0%	2%	2%	16%	1%	0%	15%	0%		
PROJECT	14	0	0	0	0	27	31	170	11	0	217	0	460	
Midway %	0.4%					2.6%	2.6%	2.9%	0.4%		2.9%			
Village at Midway	6					38	36	17	2		42		121	
LTC Ranch %	0.8%					5.2%	5.2%	5.8%	0.8%		5.8%			
LTC Ranch Volume	15					95	84	94	13		106		407	
Southern Grove %								0.5%			0.5%			
Southern Grove								26			31		57	
Wilson Groves %						0.1%	0.1%	1.0%			1.0%			
Wilson Groves						4	4	38			39		85	
Riverland/Kennedy %						0.1%	0.1%	1.0%			1.0%			
Riverland/Kennedy						5	6	56			68		154	
Western Grove %						0.1%	0.1%	0.7%			0.7%			
Western Grove						1	2	15			9		28	
Ravinia %	17.0%					23.0%	23.0%	36.0%	17.0%		36.0%			
Ravinia	4					5	16	24	12		8		68	
Frontera %		3.0%		25.0%	1.0%	35.0%	40.0%					60.0%		
Frontera		2		44	2	61	33					35		
Total	111	871	169	157	416	495	451	892	75	73	941	95	4580	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

	Trips In	Trips Out
Willow Lakes	1,355	1,665
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,223
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,135
Ravinia	22	68
Frontera	58	124

15 Min Period Lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	11	97	42	22	122	56	42	132	19	43	114	15	715	2589
4:15-4:30	11	87	49	23	141	53	50	137	27	45	105	12	750	3009
4:30-4:45	20	134	48	20	171	62	41	130	14	31	98	14	743	3060
4:45-5:00	10	100	43	20	179	53	50	141	23	42	103	17	781	3332
5:00-5:15	14	90	24	25	166	48	42	148	18	50	108	6	735	3046
5:15-5:30	14	93	18	20	214	52	58	158	13	51	120	22	801	
5:30-5:45	9	134	47	28	227	63	54	108	16	45	88	16	825	
5:45-6:00	13	109	44	27	121	37	57	103	17	40	92	17	675	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Season Factor	47	416	152	93	786	216	204	515	67	188	407	61	3152	
Growth	51	448	164	100	847	233	220	555	72	203	439	66	3397	
In/Out	IN	-	-	-	-	IN	OUT	OUT	OUT	-	IN	-		
Percentage	1%	0%	0%	0%	0%	2%	2%	16%	1%	0%	13%	0%		
PROJECT	15	0	0	0	0	29	31	166	10	0	232	0	472	
Midway %	0.4%					2.6%	2.6%	2.9%	0.4%		2.9%			
Village at Midway	3					19	42	53	7		21		150	
LTC Ranch %	0.8%					5.2%	5.2%	5.8%	0.8%		5.8%			
LTC Ranch Volume	19					121	154	172	24		135		624	
Southern Grove %						0.0%	0.0%	0.5%			0.5%			
Southern Grove						0	0	50			35		85	
Wilson Groves %						0.1%	0.1%	1.0%			1.0%			
Wilson Groves						5	6	56			45		112	
Riverland/Kennedy %						0.1%	0.1%	1.0%			1.0%			
Riverland/Kennedy						7	7	73			71		158	
Western Grove %						0.1%	0.1%	0.7%			0.7%			
Western Grove						3	2	16			18		37	
Ravinia %	17.0%					23.0%	23.0%	36.0%	17.0%		36.0%			
Ravinia	13					18	10	16	7		26		92	
Frontera %		3.0%		25.0%	1.0%	35.0%	40.0%					60.0%		
Frontera		6		31	1	43	53					124	268	
Total	100	455	164	133	848	476	550	1156	121	203	1013	190	5415	



Seasonal Factor:	1
Growth Rate:	1.005
Years Grown:	15

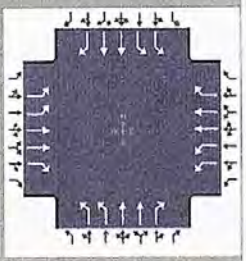
	Trips In	Trips Out
Willow Lakes	3,450	1,039
Village at Midway	726	1,824
LTC Ranch	2,330	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,629
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,063
Ravinia	77	44
Frontera	207	122

Exh 83 #

HCS7 Signalized Intersection Results Summary

#8 W/P AM

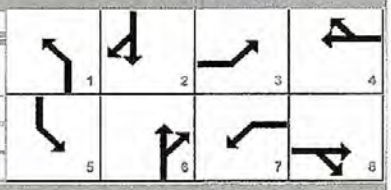
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - 2035 with Project - 7.9.2...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	451	892	75	73	941	95	111	871	169	157	416	495

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

	EB			WB			NB			SB		
Green	6.9	0.8		38.5	6.5	6.6	35.2					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	1.0	0.0		1.5	1.0	1.0	1.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	23.1	51.9	11.5	40.2	11.9	44.0	12.7	44.8
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	17.9	27.6	4.5	34.0	5.9		7.5	
Green Extension Time (g_e), s	0.2	5.5	0.1	1.3	0.1	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	0.92	1.00	0.98		1.00	
Max Out Probability	1.00	0.07	0.00	1.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	475	939	79	77	991	100	117	917	178	165	438	521
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g_s), s	15.9	25.6	3.8	2.5	32.0	5.6	3.9	27.7	10.1	5.5	11.1	38.6
Cycle Queue Clearance Time (g_c), s	15.9	25.6	3.8	2.5	32.0	5.6	3.9	27.7	10.1	5.5	11.1	38.6
Green Ratio (g/C)	0.15	0.39	0.39	0.05	0.29	0.29	0.06	0.32	0.32	0.06	0.33	0.33
Capacity (c), veh/h	530	1413	629	189	1062	473	201	1160	516	226	1186	528
Volume-to-Capacity Ratio (X)	0.896	0.665	0.126	0.406	0.933	0.212	0.582	0.790	0.345	0.732	0.369	0.987
Back of Queue (Q), ft/ln (95 th percentile)	315.1	404.6	62.8	50	553.3	96.2	77.1	460.7	183.5	110.3	211	678
Back of Queue (Q), veh/ln (95 th percentile)	12.6	16.2	2.5	2.0	22.1	3.8	3.1	18.4	7.3	4.4	8.4	27.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	50.0	30.1	23.4	54.9	41.2	31.9	55.2	37.1	31.1	55.1	30.9	40.1
Incremental Delay (d_2), s/veh	16.0	0.9	0.0	0.5	13.6	0.1	1.0	5.5	1.8	1.7	0.9	36.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.0	31.0	23.5	55.4	54.9	32.0	56.2	42.6	33.0	56.9	31.7	76.3
Level of Service (LOS)	E	C	C	E	D	C	E	D	C	E	C	E
Approach Delay, s/veh / LOS	41.8	D		53.0	D		42.5	D		56.1	E	
Intersection Delay, s/veh / LOS	47.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.72	B	1.45	A	1.49	A	1.42	A

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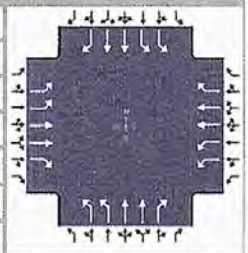
HCS7 Signalized Intersection Input Data

#8 w/p AM

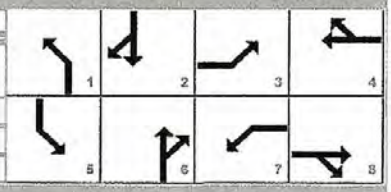
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - 2035 with Project - 7.9.2...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	451	892	75	73	941	95	111	871	169	157	416	495

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

	EB			WB			NB			SB		
Green	6.9	0.8		38.5	6.5	6.6	35.2					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	1.0	0.0		1.5	1.0	1.0	1.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	451	892	75	73	941	95	111	871	169	157	416	495
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_0), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	24.0	40.0	24.0	40.0	20.0	36.0	20.0	36.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (*l*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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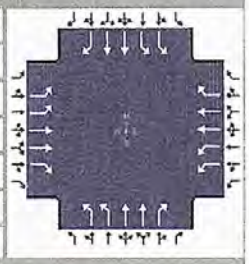
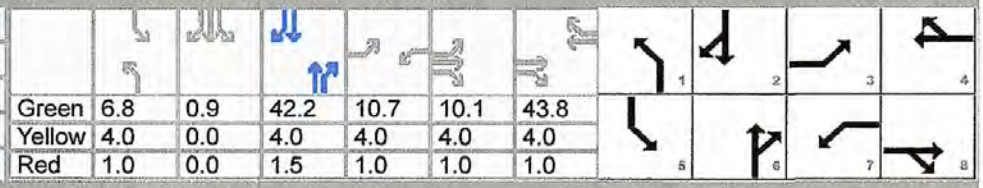
HCS7 Signalized Intersection Results Summary #8 w/P PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - PM - 2035 with Project - 7.21.2...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	6.8	0.9	42.2	10.7	10.1	43.8	
Yellow	4.0	0.0	4.0	4.0	4.0	4.0	
Red	1.0	0.0	1.5	1.0	1.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	30.9	63.9	15.7	48.8	11.8	47.7	12.7	48.5
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	24.5	43.1	10.4	42.8	5.5		7.4	
Green Extension Time (g_e), s	1.3	6.8	0.4	1.1	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		1.00	
Max Out Probability	0.00	0.25	0.00	1.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	579	1217	127	214	1077	200	89	479	173	138	893	501
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g_s), s	22.5	41.1	7.0	8.4	40.8	13.6	3.5	14.9	11.7	5.4	31.8	43.0
Cycle Queue Clearance Time (g_c), s	22.5	41.1	7.0	8.4	40.8	13.6	3.5	14.9	11.7	5.4	31.8	43.0
Green Ratio (g/C)	0.18	0.42	0.42	0.08	0.31	0.31	0.05	0.30	0.30	0.05	0.31	0.31
Capacity (c), veh/h	649	1523	678	269	1132	504	170	1090	485	192	1112	495
Volume-to-Capacity Ratio (X)	0.892	0.799	0.188	0.793	0.951	0.397	0.525	0.440	0.356	0.718	0.803	1.012
Back of Queue (Q), ft/ln (95 th percentile)	377.2	623.6	118.2	169	690.9	227.4	70.1	273.9	211.2	109.5	527.7	768.8
Back of Queue (Q), veh/ln (95 th percentile)	15.1	24.9	4.7	6.8	27.6	9.1	2.8	11.0	8.4	4.4	21.1	30.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	55.7	35.4	25.5	63.5	47.0	37.7	65.0	39.4	38.3	65.1	44.6	48.5
Incremental Delay (d_2), s/veh	1.8	2.8	0.0	2.0	16.0	0.2	0.9	1.3	2.0	1.9	6.2	43.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.5	38.2	25.5	65.6	63.0	37.9	66.0	40.7	40.3	67.0	50.7	92.0
Level of Service (LOS)	E	D	C	E	E	D	E	D	D	E	D	F
Approach Delay, s/veh / LOS	43.2	D		60.0	E		43.7	D		65.7	E	
Intersection Delay, s/veh / LOS	53.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.59	C	2.59	C
Bicycle LOS Score / LOS	2.07	B	1.72	B	1.10	A	1.75	B

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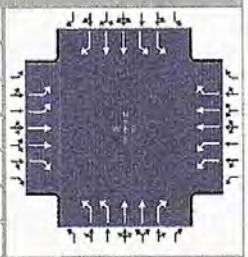
HCS7 Signalized Intersection Input Data #8 w/o PM

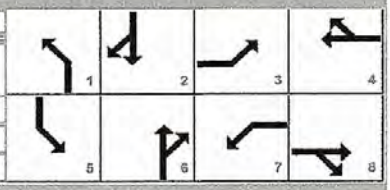
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - PM - 2035 with Project - 7.21.2...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	0.9		42.2	10.7	10.1	43.8					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	1.0	0.0		1.5	1.0	1.0	1.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None		0	L	
Heavy Vehicles (P_{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	55.0	51.0	29.0	25.0	35.0	15.0	45.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G_{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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TURNING MOVEMENT VOLUME COUNTS

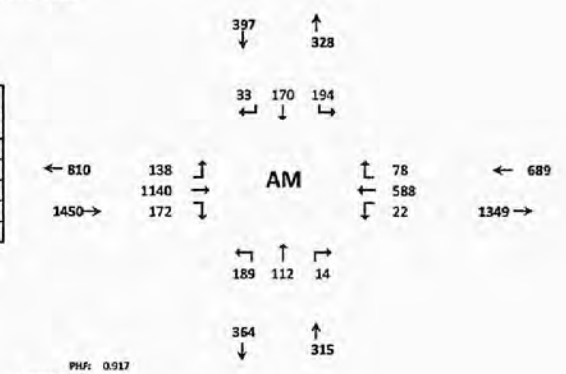
N/S STREET: Jenkins Rd. E/W STREET: Okeechobee Rd. CONTROL: Signal

FILENAME:

COUNT DATE: 5/15/2017 DAY: Wednesday CITY: Ft. Pierce

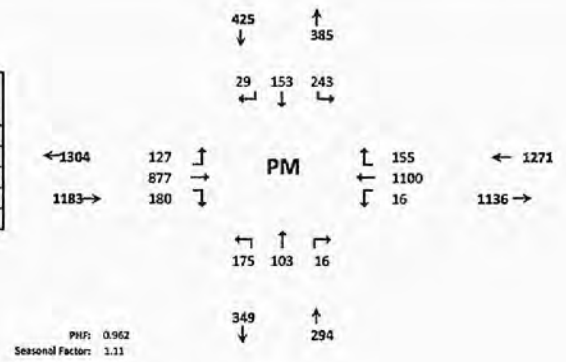
REPORT DATE: 5/5/2020 ANALYSIS YEAR: 2017

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	36	19	1	23	25	6	20	154	47	2	107	5	445	2349
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	18	590	2524
7:30-7:45	48	25	1	54	41	7	53	224	29	3	115	14	614	2568
7:45-8:00	48	31	5	36	43	8	25	306	37	6	141	14	700	2533
8:00-8:15	48	29	2	45	31	6	24	244	49	5	113	23	620	2410
8:15-8:30	26	16	5	39	38	9	22	253	40	6	161	19	634	
8:30-8:45	43	24	8	34	31	3	16	218	43	8	130	21	579	
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577	
AM PEAK HOUR IS FROM:			7:30 AM TO 8:30AM											
Volumes	170	101	13	175	153	30	124	1027	155	20	530	70	2568	
Season Factor	189	112	14	194	170	33	138	1140	172	22	588	78	2850	
Growth	189	112	14	194	170	33	138	1140	172	22	588	78	2850	
In/Out	-	-	-	Out	-	Out	In	-	-	-	-	In	-	
Percentage	0%	0%	0%	30%	0%	20%	20%	0%	0%	0%	0%	30%	0%	
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	189	112	14	194	170	33	138	1140	172	22	588	78	2851	



PHF: 0.917
Seasonal Factor: 1.11
Trips In 0
Trips Out 0
Growth Rate: 1.005
Years Grown:

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	45	19	3	57	31	11	20	180	30	6	210	35	647	2753
4:15-4:30	37	24	3	62	34	12	33	182	30	3	208	35	663	2870
4:30-4:45	35	23	0	50	32	10	36	228	52	8	240	28	742	2940
4:45-5:00	46	19	4	68	37	7	31	200	34	4	213	38	701	2940
5:00-5:15	41	18	6	54	45	8	22	223	49	5	264	29	764	2859
5:15-5:30	45	28	2	54	31	3	32	184	45	4	271	34	733	
5:30-5:45	38	24	2	65	28	8	37	195	35	3	268	39	742	
5:45-6:00	34	23	4	46	34	7	23	188	33	2	188	38	620	
PM PEAK HOUR IS FROM:			5:00PM TO 6:00PM											
Volumes	158	93	14	219	138	26	114	790	162	14	991	140	2859	
Season Factor	175	103	16	243	153	29	127	877	180	16	1100	155	3173	
Growth	175	103	16	243	153	29	127	877	180	16	1100	155	3173	
In/Out	-	-	-	Out	-	Out	In	-	-	-	-	In	-	
Percentage	0%	0%	0%	30%	0%	20%	20%	0%	0%	0%	0%	30%	0%	
Project	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	175	103	16	243	153	29	127	877	180	16	1100	155	3173	

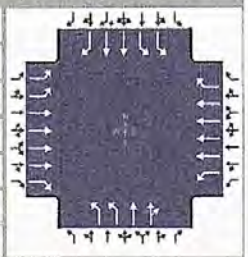


PHF: 0.962
Seasonal Factor: 1.11
Growth Rate: 1.005
Trips In:
Trips Out:
Years Grown:

F-164

HCS7 Signalized Intersection Results Summary #9 E AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - AM Existing 6.11.20 (...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	138	1140	172	22	588	78	189	112	14	194	170	33

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	6.5	3.4		96.9	11.7	0.2	15.0					
Yellow	4.3	0.0		4.3	4.3	0.0	4.3					
Red	2.0	0.0		2.0	2.5	0.0	2.5					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	16.3	106.6	12.8	103.2	18.5	21.8	18.7	22.1
Change Period, ($Y+R_c$), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g_s), s	8.8		4.1		11.3	7.7	11.5	9.9
Green Extension Time (g_e), s	0.6	0.0	0.1	0.0	0.4	1.3	0.4	1.3
Phase Call Probability	1.00		0.65		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.10	0.00	0.13	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	150	1239	187	24	639	85	205	69	68	211	185	36
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1798	1730	1781	1585
Queue Service Time (g_s), s	6.8	13.3	8.0	2.1	6.6	3.6	9.3	5.5	5.7	9.5	7.9	3.4
Cycle Queue Clearance Time (g_c), s	6.8	13.3	8.0	2.1	6.6	3.6	9.3	5.5	5.7	9.5	7.9	3.4
Green Ratio (g/C)	0.06	0.63	0.63	0.04	0.61	0.61	0.08	0.09	0.09	0.08	0.10	0.10
Capacity (c), veh/h	216	4259	994	73	4113	960	274	175	169	280	339	151
Volume-to-Capacity Ratio (X)	0.695	0.291	0.188	0.328	0.155	0.088	0.748	0.393	0.404	0.753	0.544	0.237
Back of Queue (Q), ft/ln (95 th percentile)	142	219.2	131.1	45.7	113.7	59.4	193.2	123	120.3	197.6	166.3	63
Back of Queue (Q), veh/ln (95 th percentile)	5.6	8.6	5.2	1.8	4.5	2.3	7.6	4.8	4.8	7.8	6.5	2.5
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	73.5	13.6	12.6	74.6	13.7	13.2	72.1	68.2	68.3	72.0	69.1	67.0
Incremental Delay (d_2), s/veh	4.0	0.2	0.4	2.6	0.1	0.2	4.1	1.4	1.6	4.3	1.4	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	77.5	13.8	13.0	77.2	13.8	13.3	76.2	69.6	69.8	76.3	70.4	67.8
Level of Service (LOS)	E	B	B	E	B	B	E	E	E	E	E	E
Approach Delay, s/veh / LOS	19.8	B		15.8	B		73.6	E		73.1	E	
Intersection Delay, s/veh / LOS	32.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.41	B	2.55	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.14	A	0.80	A	0.77	A	0.84	A

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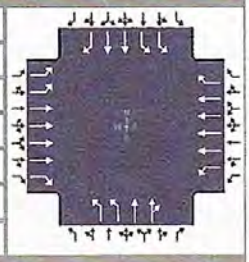
HCS7 Signalized Intersection Input Data

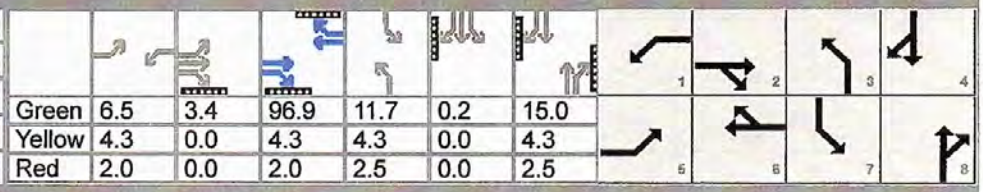
#9 EPM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - AM Existing 6.11.20....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	138	1140	172	22	588	78	189	112	14	194	170	33

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	6.5	3.4		96.9	11.7	0.2	15.0					
Yellow	4.3	0.0		4.3	4.3	0.0	4.3					
Red	2.0	0.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	138	1140	172	22	588	78	189	112	14	194	170	33
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (*Y*), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (*PT*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s		7.0		7.0		5.0		5.0
Pedestrian Clearance Time (*PC*), s		37.0		37.0		35.0		34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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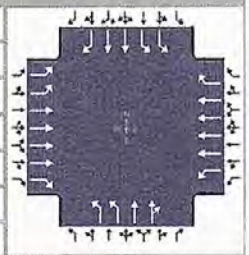
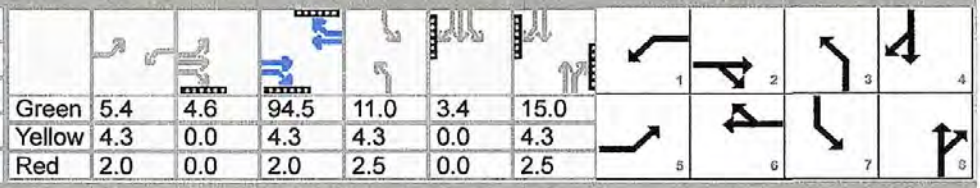
HCS7 Signalized Intersection Results Summary #9 E PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - PM Existing.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB		NB	
Green	5.4	4.6	94.5	11.0	3.4	15.0
Yellow	4.3	0.0	4.3	4.3	0.0	4.3
Red	2.0	0.0	2.0	2.5	0.0	2.5

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	16.3	105.4	11.7	100.8	17.8	21.8	21.1	25.2
Change Period, ($Y+R_c$), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g_s), s	8.2		3.5		10.6	7.4	14.0	8.9
Green Extension Time (g_e), s	0.5	0.0	0.0	0.0	0.4	1.2	0.4	1.2
Phase Call Probability	1.00		0.54		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.05	0.00	0.86	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	138	953	196	17	1196	168	190	65	64	264	166	32
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1784	1730	1781	1585
Queue Service Time (g_s), s	6.2	9.9	8.6	1.5	14.0	7.8	8.6	5.2	5.4	12.0	6.9	2.9
Cycle Queue Clearance Time (g_c), s	6.2	9.9	8.6	1.5	14.0	7.8	8.6	5.2	5.4	12.0	6.9	2.9
Green Ratio (g/C)	0.06	0.62	0.62	0.03	0.59	0.59	0.07	0.09	0.09	0.10	0.11	0.11
Capacity (c), veh/h	216	4206	981	60	4011	936	259	175	167	332	408	182
Volume-to-Capacity Ratio (X)	0.640	0.227	0.199	0.290	0.298	0.180	0.734	0.371	0.384	0.796	0.407	0.173
Back of Queue (Q), ft/ln (95 th percentile)	129.7	171.2	141.9	33.6	232.8	131	179.4	116	113.2	241.5	144.4	53.6
Back of Queue (Q), veh/ln (95 th percentile)	5.1	6.7	5.6	1.3	9.2	5.2	7.1	4.6	4.5	9.5	5.7	2.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	73.3	13.5	13.2	75.4	16.3	15.0	72.4	68.1	68.2	70.8	65.8	64.0
Incremental Delay (d_2), s/veh	3.1	0.1	0.5	2.6	0.2	0.4	4.0	1.3	1.4	8.4	0.7	0.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.4	13.6	13.7	78.1	16.5	15.4	76.4	69.4	69.6	79.1	66.4	64.4
Level of Service (LOS)	E	B	B	E	B	B	E	E	E	E	E	E
Approach Delay, s/veh / LOS	20.4	C		17.1	B		73.6	E		73.6	E	
Intersection Delay, s/veh / LOS	31.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.41	B	2.56	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.02	A	1.06	A	0.75	A	0.87	A

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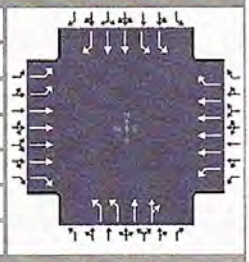
HCS7 Signalized Intersection Input Data

#9EPM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - PM Existing.xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.4	4.6		94.5	11.0	3.4	15.0					
Yellow	4.3	0.0		4.3	4.3	0.0	4.3					
Red	2.0	0.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		7.0		7.0		5.0		5.0
Pedestrian Clearance Time (PC), s		37.0		37.0		35.0		34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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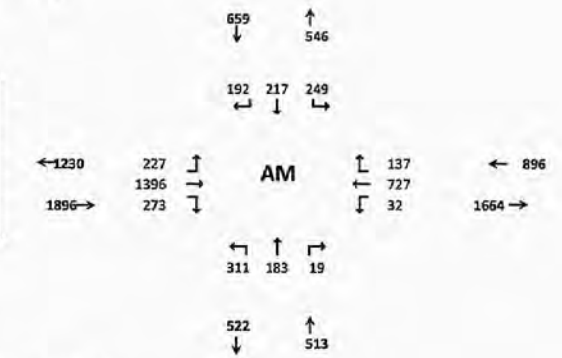
TURNING MOVEMENT VOLUME COUNTS

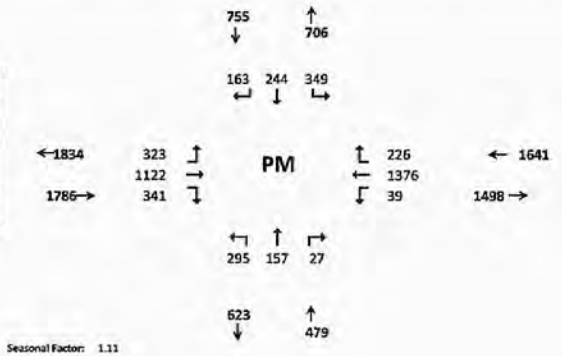
N/S STREET: Jenkins Rd. **E/W STREET:** Okeechobee Rd. **CONTROL:** Signal
FILENAME:
COUNT DATE: 6/15/2017 **DAY:** Wednesday **CITY:** Ft. Pierce
REPORT DATE: 5/5/2020 **ANALYSIS YEAR:** 2035

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	36	19	1	23	25	6	20	154	47	2	107	5	445	2349
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	18	590	2524
7:30-7:45	48	25	1	54	41	7	53	224	29	3	115	14	614	2568
7:45-8:00	48	31	5	36	43	8	25	306	37	6	141	14	700	2533
8:00-8:15	48	29	2	46	31	6	24	244	49	5	113	23	620	2410
8:15-8:30	26	16	5	39	38	9	22	253	40	6	161	19	634	
8:30-8:45	43	24	8	34	31	3	16	218	43	8	130	21	579	
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577	
AM PEAK HOUR IS FROM:			7:30 AM TO 8:30AM											
Volumes	170	101	13	175	153	30	124	1027	155	20	530	70	2568	
Season Factor	189	112	14	194	170	33	138	1140	172	22	588	78	2850	
Growth	206	123	16	212	186	36	151	1247	188	24	644	85	3118	
In/Out	-	-	-	-	-	-	-	-	-	-	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0		
Mariner Cove	36	8	16	0	2	0	0	0	7	3	0	0		
Camping World	0	0	0	4	0	2	8	0	0	0	0	13		
39 Acre Residential	36	7	3	0	1	0	0	0	8	1	0	0		
Whispering Oaks	0	5	0	17	17	35	9	0	0	0	0	5		
SLCC	0	28	0	5	5	0	0	5	0	0	28	28		
WaWa	11	3	0	4	3	0	0	18	5	4	12	4		
Palm Breezes	0	0	0	7	0	4	2	0	0	0	0	2		
Celebration Pointe	0	0	0	0	0	72	24	0	0	0	0	0		
Bent Creek	0	0	0	0	0	36	12	0	0	0	0	0		
Sedona	15	9	0	0	3	0	0	0	44	0	0	0		
Creekside	7	0	0	0	0	7	21	126	21	0	43	0		
Total	311	183	19	249	217	192	227	1396	273	32	727	137	3963	



Seasonal Factor: 1.11
Trips In
Trips Out
Growth Rate: 1.005
Years Grown: 18

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	45	19	3	57	31	11	20	180	30	6	210	35	647	2753
4:15-4:30	37	24	3	62	34	12	33	182	30	3	208	35	663	2870
4:30-4:45	35	23	0	50	32	10	36	228	52	8	240	28	742	2946
4:45-5:00	46	19	4	68	37	7	31	200	34	4	213	38	701	2940
5:00-5:15	41	18	6	54	45	8	22	223	49	5	264	29	764	2859
5:15-5:30	45	28	2	54	31	3	32	184	45	4	271	34	733	
5:30-5:45	38	24	2	65	28	8	37	195	35	3	268	39	742	
5:45-6:00	34	22	4	46	34	7	23	100	33	2	188	30	620	
PM PEAK HOUR IS FROM:			5:00PM TO 6:00PM											
Volumes	158	93	14	219	138	26	114	790	162	14	991	140	2859	
Season Factor	175	103	16	243	153	29	127	877	180	16	1100	155	3173	
Growth	192	113	17	266	168	32	138	959	197	17	1203	170	3472	
In/Out	-	-	-	-	-	-	-	-	-	-	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Project	0	0	0	0	0	0	0	0	0	0	0	0		
Mariner Cove	17	4	8	0	8	0	0	0	34	15	0	0		
Camping World	0	0	0	24	0	16	13	0	0	0	0	20		
39 Acre Residential	17	3	2	0	6	0	0	0	35	3	0	0		
Whispering Oaks	0	17	0	9	9	20	36	0	0	0	0	17		
SLCC	0	10	0	39	39	0	0	39	0	0	10	10		
WaWa	13	4	0	4	4	0	0	31	8	4	13	4		
Creekside	25	0	0	0	0	25	15	93	15	8	150	0		
Palm Breezes	0	0	0	7	0	3	5	0	0	0	0	5		
Sedona	31	6	0	0	10	0	0	0	52	0	0	0		
Bent Creek	0	0	0	0	0	22	38	0	0	0	0	0		
Celebration Pointe	0	0	0	0	0	45	78	0	0	0	0	0		
Total	296	157	27	349	244	163	323	1122	341	39	1376	226	4662	



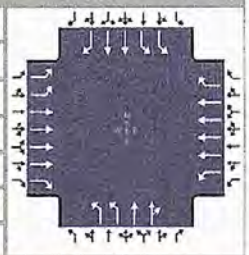
Seasonal Factor: 1.11
Growth Rate: 1.005
Trips In:
Trips Out:
Years Grown: 18

OM 6 #

HCS7 Signalized Intersection Results Summary

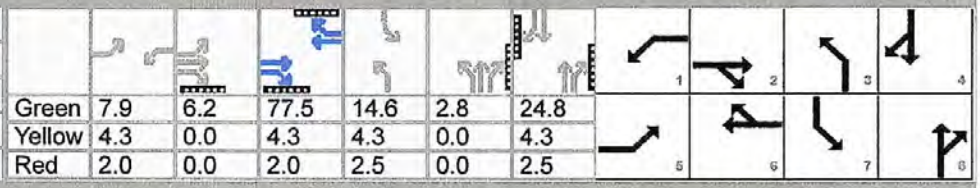
#9 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - Backgrou...		
Project Description	Background without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.9	6.2	77.5	14.6	2.8	24.8	
Yellow	4.3	0.0	4.3	4.3	0.0	4.3	
Red	2.0	0.0	2.0	2.5	0.0	2.5	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	20.4	90.0	14.2	83.8	24.3	34.4	21.4	31.6
Change Period, ($Y+R_c$), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (*MAH*), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g_s), s	13.2		5.0		17.3	10.5	14.3	22.5
Green Extension Time (g_e), s	0.9	0.0	0.1	0.0	0.1	2.5	0.4	2.2
Phase Call Probability	1.00		0.79		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	247	1517	297	35	790	149	338	111	109	271	236	209
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1809	1730	1781	1585
Queue Service Time (g_s), s	11.2	21.9	17.6	3.0	10.9	8.6	15.3	8.3	8.5	12.3	9.6	20.5
Cycle Queue Clearance Time (g_c), s	11.2	21.9	17.6	3.0	10.9	8.6	15.3	8.3	8.5	12.3	9.6	20.5
Green Ratio (*g/C*)	0.09	0.52	0.52	0.05	0.48	0.48	0.12	0.17	0.17	0.10	0.15	0.15
Capacity (*c*), veh/h	304	3554	829	88	3291	768	399	322	312	338	551	245
Volume-to-Capacity Ratio (*X*)	0.811	0.427	0.358	0.397	0.240	0.194	0.847	0.343	0.350	0.801	0.428	0.851
Back of Queue (Q), ft/ln (95 th percentile)	224.7	343.9	278.5	66	197.9	150.9	304.9	181.1	176.1	246.8	196.8	349.2
Back of Queue (Q), veh/ln (95 th percentile)	8.8	13.5	11.0	2.6	7.8	5.9	12.0	7.1	7.0	9.7	7.7	13.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	71.7	23.4	22.4	73.8	24.1	23.5	69.4	58.2	58.3	70.7	61.2	65.8
Incremental Delay (d_2), s/veh	5.2	0.4	1.2	2.9	0.2	0.6	14.6	0.6	0.7	8.9	0.5	10.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	76.8	23.8	23.6	76.7	24.2	24.0	84.0	58.9	59.0	79.5	61.7	76.0
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	E	E	E
Approach Delay, s/veh / LOS	30.1	C		26.1	C		74.1	E		72.6	E	
Intersection Delay, s/veh / LOS	42.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.57	C	2.98	C	3.10	C
Bicycle LOS Score / LOS	1.34	A	0.89	A	0.95	A	1.08	A

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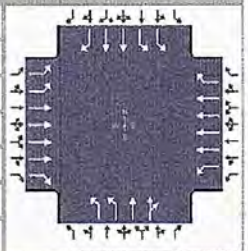
HCS7 Signalized Intersection Input Data

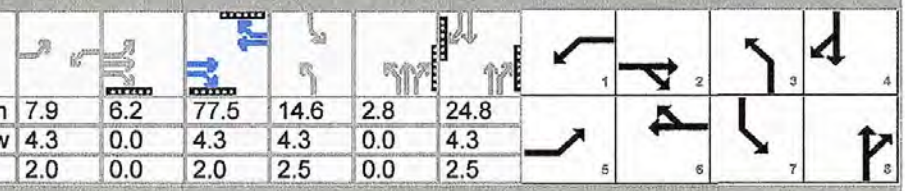
#9 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - Backgrou...		
Project Description	Background without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	7.9	6.2		77.5	14.6	2.8	24.8					
Yellow	4.3	0.0		4.3	4.3	0.0	4.3					
Red	2.0	0.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (*Y*), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (*lt*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (*PT*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (*PC*), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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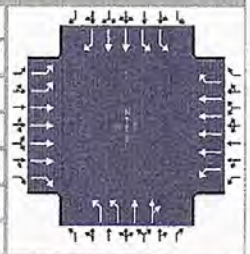
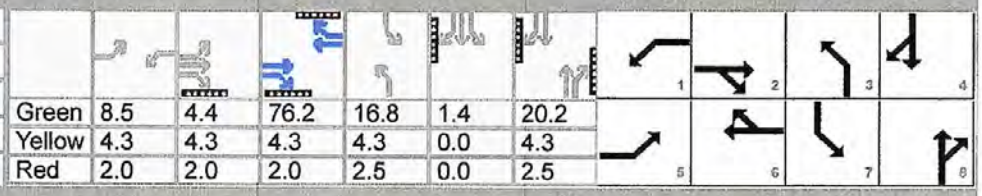
HCS7 Signalized Intersection Results Summary #9 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - Backgrou...		
Project Description	Background without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	323	1122	341	39	1376	226	295	157	27	349	244	163

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			NB			SB		
Green	8.5	4.4	76.2	16.8	1.4	20.2					
Yellow	4.3	4.3	4.3	4.3	0.0	4.3					
Red	2.0	2.0	2.0	2.5	0.0	2.5					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	25.5	93.2	14.8	82.5	23.6	27.0	25.0	28.5
Change Period, ($Y+R_c$), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g_s), s	17.9		5.7		16.5	10.3	19.3	19.4
Green Extension Time (g_e), s	1.3	0.0	0.1	0.0	0.2	2.4	0.0	2.3
Phase Call Probability	1.00		0.85		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	351	1220	371	42	1496	246	321	101	99	379	265	177
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1776	1730	1781	1585
Queue Service Time (g_s), s	15.9	16.0	22.3	3.7	23.7	15.4	14.5	8.0	8.3	17.3	11.1	17.4
Cycle Queue Clearance Time (g_c), s	15.9	16.0	22.3	3.7	23.7	15.4	14.5	8.0	8.3	17.3	11.1	17.4
Green Ratio (g/C)	0.12	0.54	0.54	0.05	0.48	0.48	0.11	0.13	0.13	0.12	0.14	0.14
Capacity (c), veh/h	415	3688	861	94	3233	754	384	237	225	415	483	215
Volume-to-Capacity Ratio (X)	0.846	0.331	0.431	0.449	0.463	0.326	0.835	0.427	0.441	0.914	0.549	0.825
Back of Queue (Q), ft/ln (95 th percentile)	295.5	264.4	336.7	80.4	371.6	253.6	289.6	175.8	170.3	352.9	222.4	301.7
Back of Queue (Q), veh/ln (95 th percentile)	11.6	10.4	13.3	3.2	14.6	10.0	11.4	6.9	6.8	13.9	8.8	11.9
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	69.0	20.4	21.8	73.5	28.2	26.0	69.7	64.5	64.6	69.6	64.6	67.3
Incremental Delay (d_2), s/veh	4.8	0.2	1.6	3.3	0.5	1.1	13.0	1.2	1.4	24.4	1.0	7.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.8	20.6	23.4	76.8	28.6	27.1	82.7	65.7	66.0	94.0	65.6	75.1
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	F	E	E
Approach Delay, s/veh / LOS	30.8	C		29.6	C		76.2	E		80.7	F	
Intersection Delay, s/veh / LOS	43.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.42	B	2.58	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.29	A	1.22	A	0.92	A	1.17	A

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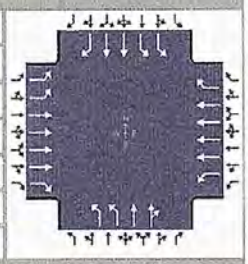
HCS7 Signalized Intersection Input Data

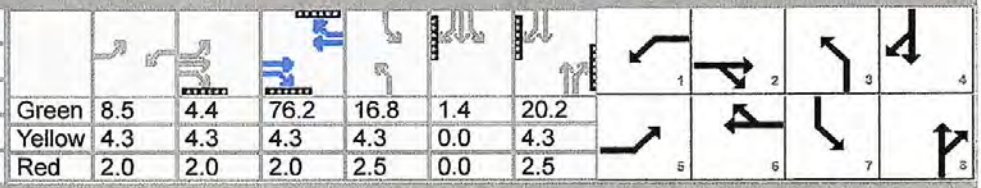
#9 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - Backgrou...		
Project Description	Background without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	323	1122	341	39	1376	226	295	157	27	349	244	163

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.5	4.4		76.2	16.8	1.4	20.2					
Yellow	4.3	4.3		4.3	4.3	0.0	4.3					
Red	2.0	2.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	323	1122	341	39	1376	226	295	157	27	349	244	163
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (*Y*), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (*PT*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (*PC*), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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TURNING MOVEMENT VOLUME COUNTS

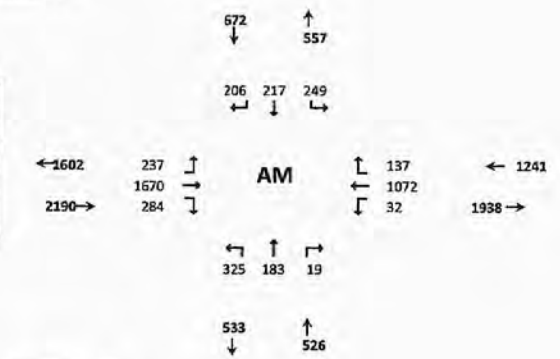
N/S STREET: Jenkins Rd. **E/W STREET:** Okeechobee Rd. **CONTROL:** Signal

FILENAME:

COUNT DATE: 6/15/2017 **DAY:** Wednesday **CITY:** Ft. Pierce

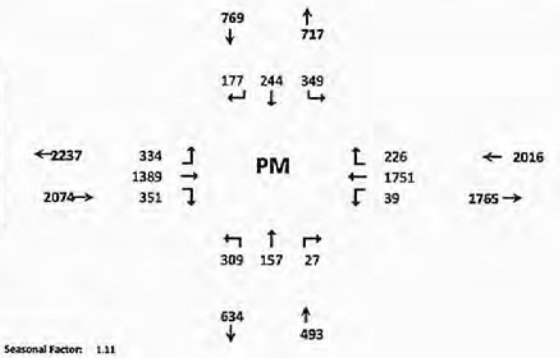
REPORT DATE: 5/5/2020 **ANALYSIS YEAR:** 2035

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	36	19	1	23	25	6	20	154	47	2	107	5	445	2349
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	18	590	2524
7:30-7:45	48	25	1	54	41	7	53	224	29	3	115	14	614	2568
7:45-8:00	48	31	5	36	43	8	25	306	37	6	141	14	700	2533
8:00-8:15	48	29	2	46	31	6	24	244	49	5	113	23	620	2410
8:15-8:30	26	16	5	39	38	9	22	253	40	6	161	19	634	
8:30-8:45	43	24	8	34	31	3	16	218	43	8	130	21	579	
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577	
AM PEAK HOUR IS FROM:	7:30 AM TO 8:30AM													
Volumes	170	101	13	175	153	30	124	1027	155	20	530	70	2568	
Season Factor	189	112	14	194	170	33	138	1140	172	22	588	78	2850	
Growth	206	123	16	212	186	36	151	1247	188	24	644	85	3118	
In/Out	In	-	-	-	-	In	Out	Out	Out	-	In	-		
Percentage	1%	0%	0%	0%	0%	1%	1%	26%	1%	0%	26%	0%		
PROJECT	13	0	0	0	0	13	11	274	11	0	345	0		
Mariner Cove	36	8	16	0	2	0	0	0	7	3	0	0		
Camping World	0	0	0	4	0	2	8	0	0	0	0	13		
39 Acre Residential	36	7	3	0	1	0	0	0	8	1	0	0		
Whispering Oaks	0	5	0	17	17	35	9	0	0	0	0	5		
SLCC	0	28	0	5	5	0	0	5	0	0	28	28		
WaWa	11	3	0	4	3	0	0	18	5	4	12	4		
Palm Breezes	0	0	0	7	0	4	2	0	0	0	0	2		
Celebration Pointe	0	0	0	0	0	72	24	0	0	0	0	0		
Bent Creek	0	0	0	0	0	36	12	0	0	0	0	0		
Sedona	15	9	0	0	3	0	0	0	44	0	0	0		
Creekside	7	0	0	0	0	7	21	126	21	0	43	0		
Total	325	183	19	249	217	206	237	1670	284	32	1072	137	4629	



Seasonal Factor: 1.11
Trips In 1327
Trips Out 1052
Growth Rate: 1.005
Years Grown: 18

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	45	19	3	57	31	11	20	180	30	6	210	35	647	2753
4:15-4:30	37	24	3	62	34	12	33	182	30	3	208	35	663	2870
4:30-4:45	35	23	0	50	32	10	36	228	52	8	240	28	742	2940
4:45-5:00	46	19	4	68	37	7	31	200	34	4	213	38	701	2940
5:00-5:15	41	18	6	54	45	8	22	223	49	5	264	29	764	2859
5:15-5:30	45	28	2	54	31	3	32	184	45	4	271	34	733	
5:30-5:45	38	24	2	65	28	8	37	195	35	3	268	30	742	
5:45-6:00	34	23	4	46	34	7	23	188	33	2	188	30	620	
PM PEAK HOUR IS FROM:	5:00PM TO 6:00PM													
Volumes	158	93	14	219	138	26	114	790	162	14	991	140	2859	
Season Factor	175	103	16	243	153	29	127	877	180	16	1100	155	3173	
Growth	192	113	17	266	168	32	138	959	197	17	1203	170	3472	
In/Out	In	-	-	-	-	In	Out	Out	Out	-	In	-		
Percentage	1%	0%	0%	0%	0%	1%	1%	26%	1%	0%	26%	0%		
Project	14	0	0	0	0	14	10	267	10	0	375	0		
Mariner Cove	17	4	8	0	8	0	0	0	34	15	0	0		
Camping World	0	0	0	24	0	16	13	0	0	0	0	20		
39 Acre Residential	17	3	2	0	6	0	0	0	35	3	0	0		
Whispering Oaks	0	17	0	9	9	20	36	0	0	0	0	17		
SLCC	0	10	0	39	39	0	0	39	0	0	10	10		
WaWa	13	4	0	4	4	0	0	31	8	4	13	4		
Creekside	25	0	0	0	0	25	15	93	15	0	150	0		
Palm Breezes	0	0	0	7	0	3	5	0	0	0	0	5		
Sedona	31	6	0	0	10	0	0	0	52	0	0	0		
Bent Creek	0	0	0	0	0	22	38	0	0	0	0	0		
Celebration Pointe	0	0	0	0	0	45	78	0	0	0	0	0		
Total	309	157	27	349	244	177	334	1389	351	39	1751	226	5353	



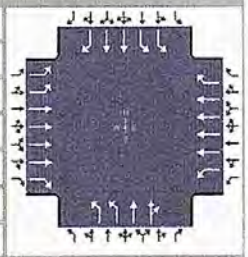
Seasonal Factor: 1.11

Growth Rate: 1.005
Trips In: 1441
Trips Out: 1027
Years Grown: 18

HCS7 Signalized Intersection Results Summary

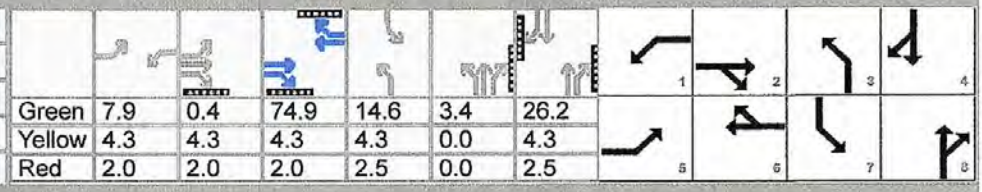
#9 W/B AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.9	0.4	74.9	14.6	3.4	26.2		
Yellow	4.3	4.3	4.3	4.3	0.0	4.3		
Red	2.0	2.0	2.0	2.5	0.0	2.5		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	20.9	88.0	14.2	81.2	24.9	36.4	21.4	33.0
Change Period, (*Y+R c*), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (*MAH*), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (*g s*), s	13.7		5.0		18.0	10.4	14.3	24.0
Green Extension Time (*g e*), s	0.9	0.0	0.1	0.0	0.0	2.6	0.4	2.2
Phase Call Probability	1.00		0.79		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.04

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	258	1815	309	35	1165	149	353	111	109	271	236	224
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1809	1730	1781	1585
Queue Service Time (*g s*), s	11.7	28.6	18.9	3.0	17.6	8.8	16.0	8.2	8.4	12.3	9.5	22.0
Cycle Queue Clearance Time (*g c*), s	11.7	28.6	18.9	3.0	17.6	8.8	16.0	8.2	8.4	12.3	9.5	22.0
Green Ratio (*g/C*)	0.09	0.51	0.51	0.05	0.47	0.47	0.12	0.19	0.19	0.10	0.16	0.16
Capacity (*c*), veh/h	315	3467	809	88	3182	742	412	347	335	338	584	260
Volume-to-Capacity Ratio (*X*)	0.817	0.524	0.382	0.397	0.366	0.201	0.857	0.319	0.325	0.801	0.404	0.862
Back of Queue (*Q*), ft/ln (95 th percentile)	232.3	430.8	297.4	66	292.3	156.4	318.5	177.6	172.8	246.8	194.9	375.7
Back of Queue (*Q*), veh/ln (95 th percentile)	9.1	17.0	11.7	2.6	11.5	6.2	12.5	7.0	6.9	9.7	7.7	14.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	71.4	26.2	23.8	73.8	27.3	24.9	69.1	56.4	56.5	70.7	59.9	65.1
Incremental Delay (*d 2*), s/veh	5.2	0.6	1.4	2.9	0.3	0.6	16.1	0.5	0.6	8.9	0.5	12.8
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	76.6	26.7	25.2	76.7	27.6	25.6	85.2	57.0	57.1	79.5	60.3	77.9
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	E	E	E
Approach Delay, s/veh / LOS	31.9	C		28.7	C		74.4	E		72.8	E	
Intersection Delay, s/veh / LOS	41.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.58	C	2.98	C	3.10	C
Bicycle LOS Score / LOS	1.47	A	1.04	A	0.96	A	1.09	A

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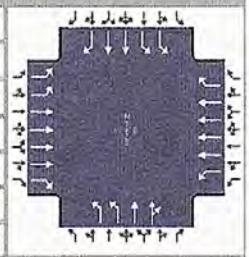
HCS7 Signalized Intersection Input Data

#9 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	7.9	0.4		74.9	14.6	3.4	26.2					
Yellow	4.3	4.3		4.3	4.3	0.0	4.3					
Red	2.0	2.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (*Y*), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (*lt*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (*PT*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (*PC*), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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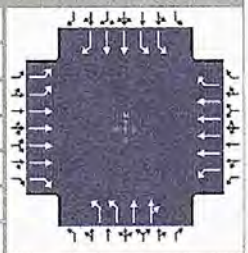
HCS7 Signalized Intersection Results Summary

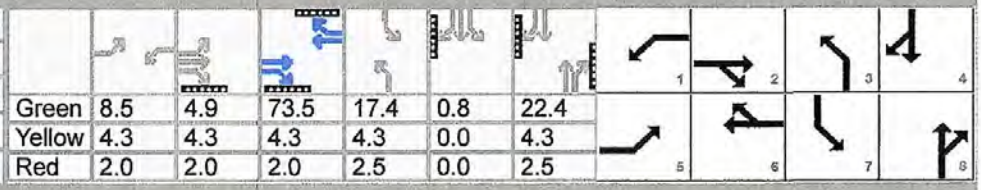
#9 WP PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.5	4.9	73.5	17.4	0.8	22.4			
Yellow	4.3	4.3	4.3	4.3	0.0	4.3			
Red	2.0	2.0	2.0	2.5	0.0	2.5			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	26.0	91.1	14.8	79.8	24.2	29.2	25.0	30.0
Change Period, (*Y+R c*), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (*MAH*), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (*g s*), s	18.4		5.7		17.2	10.1	19.3	20.9
Green Extension Time (*g e*), s	1.3	0.0	0.1	0.0	0.1	2.5	0.0	2.3
Phase Call Probability	1.00		0.85		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	363	1510	382	42	1903	246	336	101	99	379	265	192
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1776	1730	1781	1585
Queue Service Time (*g s*), s	16.4	21.5	23.9	3.7	33.7	15.9	15.2	7.9	8.1	17.3	11.0	18.9
Cycle Queue Clearance Time (*g c*), s	16.4	21.5	23.9	3.7	33.7	15.9	15.2	7.9	8.1	17.3	11.0	18.9
Green Ratio (*g/C*)	0.12	0.53	0.53	0.05	0.46	0.46	0.11	0.14	0.14	0.12	0.14	0.14
Capacity (*c*), veh/h	427	3598	840	94	3121	728	397	261	248	415	516	230
Volume-to-Capacity Ratio (*X*)	0.851	0.420	0.454	0.449	0.610	0.337	0.845	0.386	0.399	0.914	0.514	0.837
Back of Queue (*Q*), ft/ln (95 th percentile)	303.5	337.7	357.4	80.4	502.6	261.3	302.8	172.4	166.9	352.9	219.9	322.4
Back of Queue (*Q*), veh/ln (95 th percentile)	11.9	13.3	14.1	3.2	19.8	10.3	11.9	6.8	6.7	13.9	8.7	12.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	68.7	22.7	23.3	73.5	32.5	27.7	69.4	62.6	62.7	69.6	63.2	66.6
Incremental Delay (*d 2*), s/veh	4.9	0.4	1.8	3.3	0.9	1.3	14.4	0.9	1.0	24.4	0.8	7.9
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	73.6	23.1	25.1	76.8	33.4	28.9	83.8	63.5	63.7	94.0	64.0	74.4
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	F	E	E
Approach Delay, s/veh / LOS	31.6	C		33.7	C		76.3	E		80.0	E	
Intersection Delay, s/veh / LOS	43.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.58	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.42	A	1.39	A	0.93	A	1.18	A

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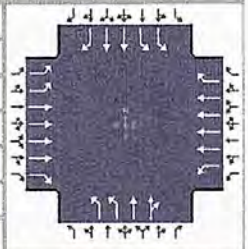
HCS7 Signalized Intersection Input Data

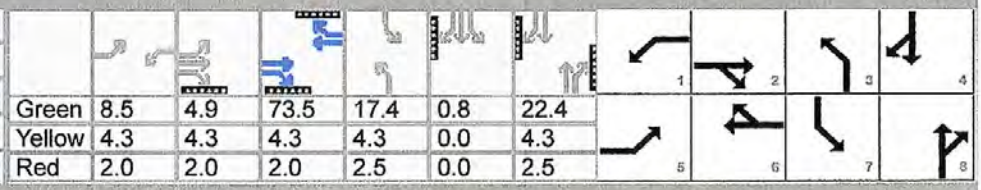
#9 w/ P PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.5	4.9		73.5	17.4	0.8	22.4					
Yellow	4.3	4.3		4.3	4.3	0.0	4.3					
Red	2.0	2.0		2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (*Y*), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G_{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (*PT*), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (*PC*), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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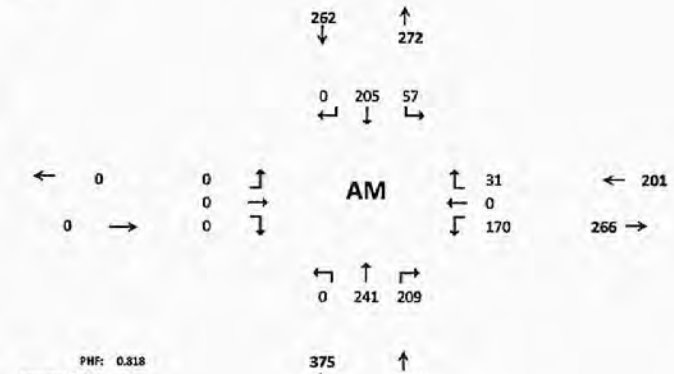
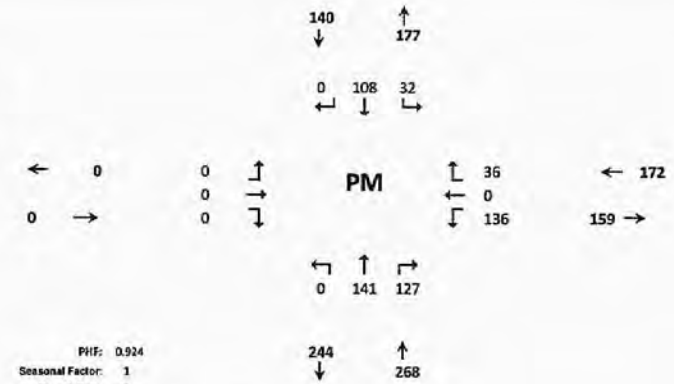
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Glades Cutoff Rd
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
REPORT DATE:
DAY: Thursday
ANALYSIS YEAR: 2020
E/W STREET: Commerce Centre Dr
CITY: St Lucie
CONTROL: TWSC

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	69	53	9	63	0	0	0	0	69	0	6	269	913
7:15-7:30	0	72	78	15	57	0	0	0	0	46	0	11	279	794
7:30-7:45	0	60	43	24	39	0	0	0	0	24	0	6	196	644
7:45-8:00	0	40	35	9	46	0	0	0	0	31	0	8	169	567
8:00-8:15	0	38	32	7	42	0	0	0	0	27	0	4	150	499
8:15-8:30	0	35	27	6	35	0	0	0	0	23	0	3	129	
8:30-8:45	0	37	27	8	21	0	0	0	0	20	0	6	119	
8:45-9:00	0	21	21	7	26	0	0	0	0	23	0	3	101	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	0	241	209	57	205	0	0	0	0	170	0	31	913	
Season Factor	0	241	209	57	205	0	0	0	0	170	0	31	913	
Growth	0	241	209	57	205	0	0	0	0	170	0	31	913	
In/Out	-	IN	-	-	OUT	-	-	-	-	-	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	241	209	57	205	0	0	0	0	170	0	31	913	



15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	32	20	11	21	0	0	0	0	25	0	8	117	524
4:15-4:30	0	33	18	14	34	0	0	0	0	19	0	12	130	564
4:30-4:45	0	35	24	7	26	0	0	0	0	28	0	21	141	564
4:45-5:00	0	21	34	6	30	0	0	0	0	29	0	16	136	580
5:00-5:15	0	36	31	9	31	0	0	0	0	40	0	10	157	547
5:15-5:30	0	39	24	3	22	0	0	0	0	35	0	7	130	
5:30-5:45	0	45	38	14	25	0	0	0	0	32	0	3	157	
5:45-6:00	0	22	29	4	20	0	0	0	0	23	0	5	103	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	0	141	127	32	108	0	0	0	0	136	0	36	580	
Season Factor	0	141	127	32	108	0	0	0	0	136	0	36	580	
Growth	0	141	127	32	108	0	0	0	0	136	0	36	580	
In/Out	-	IN	-	-	OUT	-	-	-	-	-	-	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	141	127	32	108	0	0	0	0	136	0	36	580	



St. Lucie County

ECONOLITE

00022 - MIDWAY RD @ GLADES CUT OFF - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	15	10	7	7	10	10	7	7	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	0	0	0	0	7	0	0	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	20	0	0	0	0	0	20	0	0	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	60	20	25	25	60	10	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

#10 E AM

HCS7 Two-Way Stop-Control Report

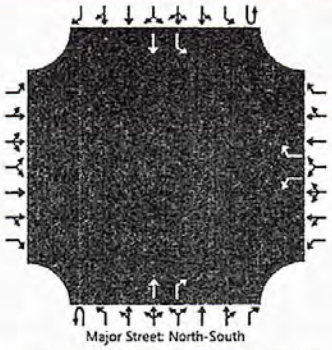
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2020
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Existing

Site Information

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	1	0	1	1	0
Configuration						L		R			T	R		L	T	
Volume (veh/h)						170		31			241	209		57	205	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No					No					
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						179		33						60		
Capacity, c (veh/h)						443		783						1083		
v/c Ratio						0.40		0.04						0.06		
95% Queue Length, Q_{95} (veh)						1.9		0.1						0.2		
Control Delay (s/veh)						18.5		9.8						8.5		
Level of Service (LOS)						C		A						A		
Approach Delay (s/veh)						17.2								1.9		
Approach LOS						C										

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HCS7 Two-Way Stop-Control Report

General Information

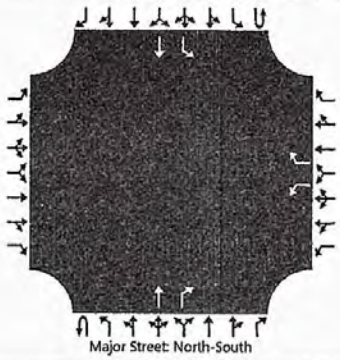
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Existing

Site Information

#10 E PM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	1	0	1	1	0
Configuration						L		R			T	R		L	T	
Volume (veh/h)						136		36			141	127		32	108	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						148		39						35		
Capacity, c (veh/h)						636		890						1265		
v/c Ratio						0.23		0.04						0.03		
95% Queue Length, Q_{95} (veh)						0.9		0.1						0.1		
Control Delay (s/veh)						12.4		9.2						7.9		
Level of Service (LOS)						B		A						A		
Approach Delay (s/veh)						11.7								1.8		
Approach LOS						B										

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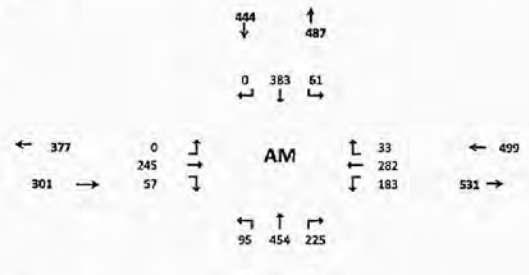
TURNING MOVEMENT VOLUME COUNTS

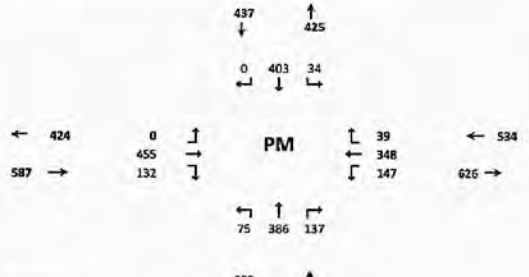
N/S STREET: Glades Cutoff Rd
E/W STREET: Commerce Centre Dr
CONTROL: TWSC
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
DAY: Thursday
CITY: St Lucie
REPORT DATE
ANALYSIS YEAR: 2035

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	68	53	9	63	0	0	0	0	69	0	6	269	913
7:15-7:30	0	72	78	15	57	0	0	0	0	46	0	11	279	794
7:30-7:45	0	60	43	24	39	0	0	0	0	24	0	6	196	644
7:45-8:00	0	40	35	9	46	0	0	0	0	31	0	8	169	567
8:00-8:15	0	38	32	7	42	0	0	0	0	27	0	4	150	499
8:15-8:30	0	35	27	6	35	0	0	0	0	23	0	3	129	
8:30-8:45	0	37	27	8	21	0	0	0	0	20	0	6	119	
8:45-9:00	0	21	21	7	26	0	0	0	0	23	0	3	101	
AM PEAK HOUR IS FROM:			7:00AM TO 8:00AM											
Volumes	0	241	209	57	205	0	0	0	0	170	0	31	913	
Season Factor	0	241	209	57	205	0	0	0	0	170	0	31	913	
Growth	0	260	225	61	221	0	0	0	0	183	0	33	984	
In/Out	IN	IN	-	-	OUT	-	-	-	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	4%	1%			1%			1%	4%		1%			
Village at Midway	58	15			6			6	24		15		123	
LTC Ranch %	2.0%	6.6%			6.6%			14.7%	2.0%		14.7%			
LTC Ranch Volume	36	120			107			239	32		268		803	
Southern Grove %		0.1%			0.1%									
Southern Grove		5			6								11	
Wilson Groves %		0.3%			0.3%									
Wilson Groves		11			12								23	
Riverland/Kennedy %		0.3%			0.3%									
Riverland/Kennedy		17			14								31	
Western Grove %		1.2%			1.2%									
Western Grove		26			16								42	
Total	95	454	225	61	383	0	0	245	57	183	282	33	2018	



		Trips In	Trips Out
Seasonal Factor	1		
Growth Rate	1.005		
Years Grown	15		
Willow Lakes		1,327	1,052
Village at Midway		1,451	603
LTC Ranch		1,823	1,624
Southern Grove		6,218	5,233
Wilson Groves		3,875	3,607
Riverland/Kennedy		4,791	5,568
Western Grove		1,352	2,115

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	32	20	11	21	0	0	0	0	25	0	8	117	524
4:15-4:30	0	33	18	14	34	0	0	0	0	19	0	12	130	564
4:30-4:45	0	35	24	7	26	0	0	0	0	28	0	21	141	564
4:45-5:00	0	21	34	6	30	0	0	0	0	29	0	16	136	580
5:00-5:15	0	36	31	9	31	0	0	0	0	40	0	10	157	547
5:15-5:30	0	39	24	3	22	0	0	0	0	35	0	7	130	
5:30-5:45	0	45	38	14	25	0	0	0	0	32	0	3	157	
5:45-6:00	0	22	20	4	20	0	0	0	0	23	0	5	103	
PM PEAK HOUR IS FROM:			4:45PM TO 5:45PM											
Volumes	0	141	127	32	108	0	0	0	0	135	0	36	580	
Season Factor	0	141	127	32	108	0	0	0	0	136	0	36	580	
Growth	0	152	137	34	116	0	0	0	0	147	0	39	625	
In/Out	IN	IN	-	-	OUT	-	-	-	-	-	IN	-		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PROJECT	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midway %	4.0%	1.0%			1.0%			1.0%	4.0%		1.0%			
Village at Midway	29	7			18			18	73		7		153	
LTC Ranch %	2.0%	6.6%			6.6%			14.7%	2.0%		14.7%			
LTC Ranch Volume	46	153			196			437	59		341		1233	
Southern Grove %		0%			0%									
Southern Grove		10			7								17	
Wilson Groves %		0%			0%									
Wilson Groves		12			14								31	
Riverland/Kennedy %		0%			0%									
Riverland/Kennedy		22			21								43	
Western Grove %		1%			1%									
Western Grove		25			30								55	
Total	75	386	137	34	403	0	0	455	132	147	348	39	2156	



		Trips In	Trips Out
Seasonal Factor	1		
Growth Rate	1.005		
Years Grown	15		
Willow Lakes		1,441	1,027
Village at Midway		726	1,824
LTC Ranch		2,320	2,970
Southern Grove		6,950	10,071
Wilson Groves		4,543	5,639
Riverland/Kennedy		7,055	7,277
Western Grove		2,510	2,061

F-183

HCS7 Two-Way Stop-Control Report

General Information

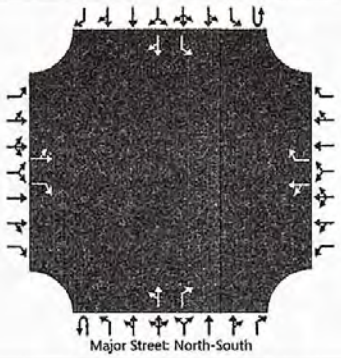
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	without Project

Site Information

#10 w/o AM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	1	1	0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR
Volume (veh/h)		0	245	57		183	282	33		95	454	225		61	383	0
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		258		60		489		35		100				64		
Capacity, c (veh/h)				645				585		1150				881		
v/c Ratio				0.09				0.06		0.09				0.07		
95% Queue Length, Q_{95} (veh)				0.3				0.2		0.3				0.2		
Control Delay (s/veh)				11.2				11.5		8.4				9.4		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										1.6				1.3		
Approach LOS																

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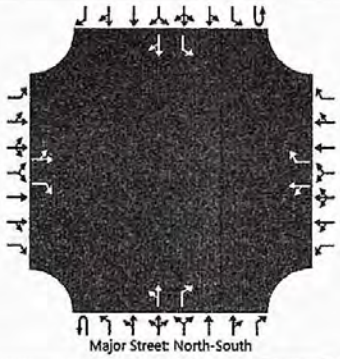
HCS7 Two-Way Stop-Control Report

General Information		Site Information	#10 w/o PM
Analyst	James Kemp	Intersection	Glades Cut Off & Commerce
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie
Date Performed	4/1/2020	East/West Street	Commerce Centre Dr
Analysis Year	2035	North/South Street	Glades Cut Off Rd
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	without Project		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	1	1	0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR
Volume (veh/h)		0	455	132		147	348	39		75	386	137		34	403	0
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		479		139		521		41		79				36		
Capacity, c (veh/h)				628				642		1130				1014		
v/c Ratio				0.22				0.06		0.07				0.04		
95% Queue Length, Q_{95} (veh)				0.8				0.2		0.2				0.1		
Control Delay (s/veh)				12.4				11.0		8.4				8.7		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										1.5				0.7		
Approach LOS																

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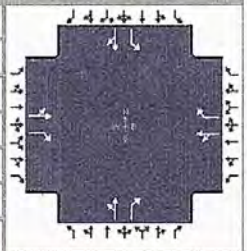
HCS7 Signalized Intersection Results Summary

#10 w/o +Imp AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 w.o. Pro...		
Project Description	without Project + Imp				

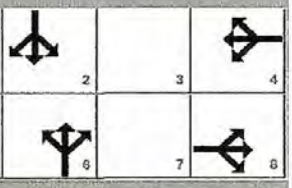


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	245	57	183	282	33	95	454	225	61	383	0

Signal Information			
Cycle, s	95.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	40.0	40.0	0.0	0.0	0.0	0.0	1	2	3	4		
Yellow	5.0	4.0	0.0	0.0	0.0	0.0						
Red	3.0	3.0	0.0	0.0	0.0	0.0	5	6	7	8		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		7.0		7.0		7.0		6.0
Phase Duration, s		47.0		47.0		48.0		48.0
Change Period, ($Y+R_c$), s		7.0		7.0		8.0		8.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.2		3.2
Queue Clearance Time (g_s), s		10.6		40.6		42.0		42.0
Green Extension Time (g_e), s		1.8		0.0		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		1.00		1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		0	60		489	35		578	237	64	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		0	1610		1197	1610		1263	1610	931	0	
Queue Service Time (g_s), s		0.0	2.1		30.0	1.2		25.2	9.5	0.0	0.0	
Cycle Queue Clearance Time (g_c), s		0.0	2.1		38.6	1.2		40.0	9.5	40.0	0.0	
Green Ratio (*g/C*)			0.42		0.42	0.42		0.42	0.42	0.42		
Capacity (*c*), veh/h			678		557	678		576	678	76		
Volume-to-Capacity Ratio (*X*)		0.000	0.089		0.879	0.051		1.003	0.349	0.847	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		0	34.2		479.3	20.6		660.4	152.8	117.7	0	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.0	1.4		19.2	0.8		26.4	6.1	4.7	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh			16.5		31.0	16.3		31.7	18.7	47.5		
Incremental Delay (d_2), s/veh		0.0	0.0		17.7	0.1		38.1	0.1	53.3	0.0	
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh			16.6		48.8	16.4		69.8	18.8	100.8		
Level of Service (LOS)			B		D	B		F	B	F		
Approach Delay, s/veh / LOS	18.1	B		46.6	D		55.0	D		31.5	C	
Intersection Delay, s/veh / LOS	42.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.01	A	1.35	A	1.83	B	1.26	A

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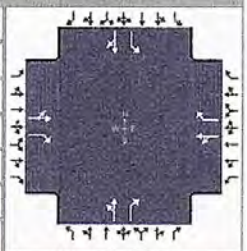
HCS7 Signalized Intersection Results Summary

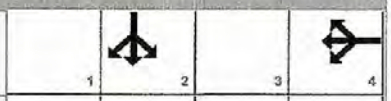
#10 w/o tmp PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off Commerce - PM - 2035 w.o. Proj...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	455	132	147	348	39	75	386	137	34	403	0

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

												
Green	40.0	45.0	0.0	0.0	0.0	0.0						
Yellow	5.0	4.0	0.0	0.0	0.0	0.0						
Red	3.0	3.0	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		7.0		7.0		7.0		6.0
Phase Duration, s		52.0		52.0		48.0		48.0
Change Period, ($Y+R_c$), s		7.0		7.0		8.0		8.0
Max Allow Headway (*MAH*), s		3.3		3.3		3.2		3.2
Queue Clearance Time (g_s), s		20.5		47.0		40.9		42.0
Green Extension Time (g_e), s		2.8		0.0		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		1.00		1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		0	139		521	41		485	144	36	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		0	1449		923	1610		1246	1610	995	0	
Queue Service Time (g_s), s		0.0	5.8		26.5	1.4		21.6	5.9	1.1	0.0	
Cycle Queue Clearance Time (g_c), s		0.0	5.8		45.0	1.4		38.9	5.9	40.0	0.0	
Green Ratio (*g/C*)			0.45		0.45	0.45		0.40	0.40	0.40		
Capacity (*c*), veh/h			652		462	725		540	644	83		
Volume-to-Capacity Ratio (*X*)		0.000	0.213		1.127	0.057		0.898	0.224	0.430	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		0	84.6		800.3	24.4		496.6	97.1	41	0	
Back of Queue (Q), veh/ln (95 th percentile)		0.0	3.4		32.0	1.0		19.9	3.9	1.6	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh			16.7		36.0	15.5		31.9	19.8	49.8		
Incremental Delay (d_2), s/veh		0.0	0.1		81.6	0.1		17.3	0.1	1.3	0.0	
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh			16.8		117.6	15.7		49.2	19.8	51.1		
Level of Service (LOS)			B		F	B		D	B	D		
Approach Delay, s/veh / LOS	19.8	B		110.1	F		42.5	D		25.9	C	
Intersection Delay, s/veh / LOS	49.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.51	B	1.42	A	1.53	B	1.25	A

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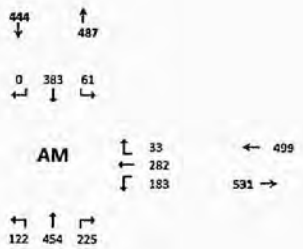
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Glades Cutoff Rd
E/W STREET: Commerce Centre Dr
CONTROL: TWSC
FILENAME: Willow Lakes
COUNT DATE: 2/20/2020
DAY: Thursday
CITY: St Lucie
REPORT DATE:
ANALYSIS YEAR: 2035

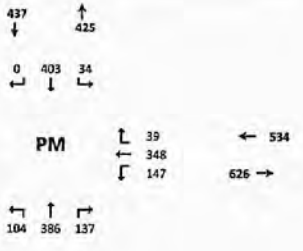
15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	69	53	9	63	0	0	0	0	60	0	6	259	913
7:15-7:30	0	72	78	15	57	0	0	0	0	46	0	11	279	794
7:30-7:45	0	60	43	24	39	0	0	0	0	24	0	6	196	644
7:45-8:00	0	40	35	9	46	0	0	0	0	31	0	8	169	567
8:00-8:15	0	38	32	7	42	0	0	0	0	27	0	4	150	499
8:15-8:30	0	35	27	6	35	0	0	0	0	23	0	3	129	
8:30-8:45	0	37	27	8	21	0	0	0	0	20	0	6	119	
8:45-9:00	0	21	21	7	26	0	0	0	0	23	0	3	101	
AM PEAK HOUR IS FROM:	7:00AM TO 8:00AM													
Volumes	0	241	209	57	205	0	0	0	0	170	0	31	913	
Season Factor	0	241	209	57	205	0	0	0	0	170	0	31	913	
Growth	0	260	225	61	221	0	0	0	0	183	0	33	984	
In/Out	IN	IN	-	-	OUT	IN	OUT	OUT	OUT	-	IN	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%		
PROJECT	27	0	0	0	0	0	0	0	21	0	0	0	48	
Midway %	4%	1%			1%			1%	4%		1%			
Village at Midway	58	15			6			6	34		15		123	
LTC Ranch %	2.0%	6.6%			6.6%			14.7%	2.0%		14.7%			
LTC Ranch Volume	36	120			107			239	32		268		801	
Southern Grove %		0.1%			0.1%									
Southern Grove		5			6								11	
Wilson Groves %		0.3%			0.3%									
Wilson Groves		11			12								23	
Riverland/Kennedy %		0.3%			0.3%									
Riverland/Kennedy		17			14								31	
Western Grove %		1.2%			1.2%									
Western Grove		26			16								42	
Total	122	454	225	61	383	0	0	245	78	183	282	33	2066	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,355	1,065
Village at Midway	1,451	603
LTC Ranch	1,823	1,624
Southern Grove	6,218	5,213
Wilson Groves	3,875	3,807
Riverland/Kennedy	4,791	5,568
Western Grove	1,352	2,133

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	32	20	11	21	0	0	0	0	25	0	8	117	574
4:15-4:30	0	33	18	14	34	0	0	0	0	19	0	12	130	564
4:30-4:45	0	35	24	7	26	0	0	0	0	28	0	21	141	564
4:45-5:00	0	21	34	6	30	0	0	0	0	29	0	16	136	580
5:00-5:15	0	36	31	9	31	0	0	0	0	40	0	10	157	547
5:15-5:30	0	39	24	3	22	0	0	0	0	35	0	7	130	
5:30-5:45	0	45	38	14	25	0	0	0	0	32	0	3	157	
5:45-6:00	0	22	29	4	20	0	0	0	0	23	0	5	103	
PM PEAK HOUR IS FROM:	4:45PM TO 5:45PM													
Volumes	0	141	127	32	108	0	0	0	0	136	0	36	580	
Season Factor	0	141	127	32	108	0	0	0	0	136	0	36	580	
Growth	0	152	137	34	116	0	0	0	0	147	0	39	625	
In/Out	IN	IN	-	-	OUT	IN	OUT	OUT	OUT	-	IN	-		
Percentage	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%		
PROJECT	29	0	0	0	0	0	0	0	21	0	0	0	50	
Midway %	4.0%	1.0%			1.0%			1.0%	4.0%		1.0%			
Village at Midway	29	7			18			18	73		7		153	
LTC Ranch %	2.0%	6.6%			6.6%			14.7%	2.0%		14.7%			
LTC Ranch Volume	46	153			196			437	59		341		1233	
Southern Grove %		0%			0%									
Southern Grove		10			7								17	
Wilson Groves %		0%			0%									
Wilson Groves		17			14								31	
Riverland/Kennedy %		0%			0%									
Riverland/Kennedy		22			21								43	
Western Grove %		1%			1%									
Western Grove		25			30								55	
Total	104	386	137	34	403	0	0	455	153	147	348	39	2206	



Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 15

	Trips In	Trips Out
Willow Lakes	1,450	1,036
Village at Midway	726	1,824
LTC Ranch	2,220	2,970
Southern Grove	6,990	10,071
Wilson Groves	4,543	5,639
Riverland/Kennedy	7,095	7,277
Western Grove	2,510	2,061

F-188

#10 with

HCS7 Two-Way Stop-Control Report

General Information

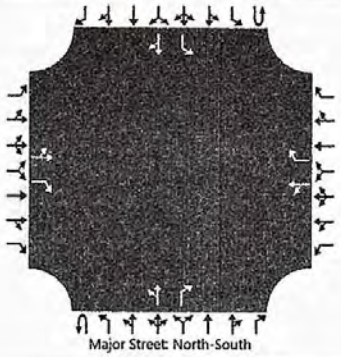
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	with Project

Site Information

#10 w/ PAM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	1	1	0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR
Volume (veh/h)		0	245	78		183	282	33		122	454	225		61	383	0
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		258		82		489		35		128				64		
Capacity, c (veh/h)				645				585		1150				881		
v/c Ratio				0.13				0.06		0.11				0.07		
95% Queue Length, Q_{95} (veh)				0.4				0.2		0.4				0.2		
Control Delay (s/veh)				11.4				11.5		8.5				9.4		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										2.0				1.3		
Approach LOS																

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HCS7 Two-Way Stop-Control Report

General Information

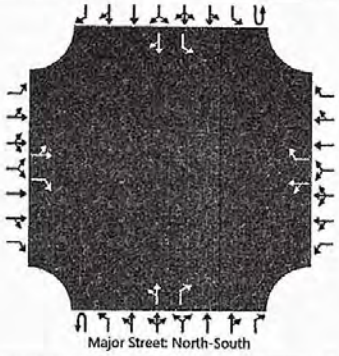
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	with Project

Site Information

#10 w/p PM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	1	1	0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR
Volume (veh/h)		0	455	153		147	348	39		104	386	137		34	403	0
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		479		161		521		41		109				36		
Capacity, c (veh/h)				628				642		1130				1014		
v/c Ratio				0.26				0.06		0.10				0.04		
95% Queue Length, Q_{95} (veh)				1.0				0.2		0.3				0.1		
Control Delay (s/veh)				12.7				11.0		8.5				8.7		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										2.1				0.7		
Approach LOS																

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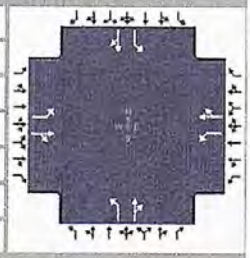
HCS7 Signalized Intersection Results Summary

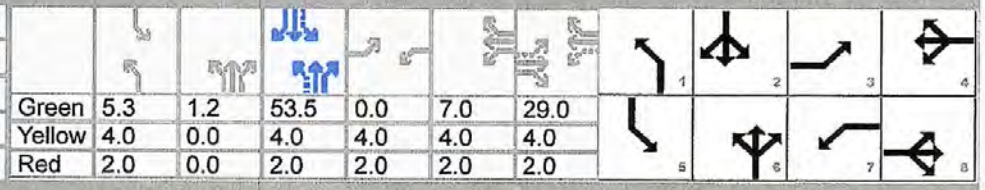
#10 W/P + IMP AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 with Pro...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	245	78	183	282	33	122	454	225	61	383	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.3	1.2		53.5	0.0	7.0	29.0					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	2.0	0.0		2.0	2.0	2.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	0.0	35.0	13.0	48.0	12.5	60.7	11.3	59.5
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	0.0	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (*g s*), s		22.9	9.0	18.9	6.6		4.3	
Green Extension Time (*g e*), s	0.0	0.9	0.0	1.3	0.0	0.0	0.1	0.0
Phase Call Probability		1.00	1.00	1.00	0.99		0.88	
Max Out Probability		0.23	1.00	0.00	1.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	0	340		193	332		128	715		64	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1821		1810	1865		1810	1793		1810	0	
Queue Service Time (*g s*), s	0.0	20.9		7.0	16.9		4.6	43.3		2.3	0.0	
Cycle Queue Clearance Time (*g c*), s	0.0	20.9		7.0	16.9		4.6	43.3		2.3	0.0	
Green Ratio (*g/C*)	0.19	0.24		0.32	0.35		0.50	0.46		0.49		
Capacity (*c*), veh/h	266	440		236	653		454	818		199		
Volume-to-Capacity Ratio (*X*)	0.000	0.773		0.815	0.508		0.283	0.874		0.323	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)	0	385.8		156.7	315.9		84.8	703.9		42.4	0	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.0	15.4		6.3	12.6		3.4	28.2		1.7	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Uniform Delay (*d 1*), s/veh	0.0	42.4		39.6	30.8		17.7	29.5		25.0		
Incremental Delay (*d 2*), s/veh	0.0	7.5		18.1	2.8		0.1	12.5		0.3	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	0.0	50.0		57.7	33.7		17.8	42.1		25.4		
Level of Service (LOS)		D		E	C		B	D		C		
Approach Delay, s/veh / LOS	50.0	D		42.5	D		38.4	D		25.3	C	
Intersection Delay, s/veh / LOS	38.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.93	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.05	A	1.35	A	1.88	B	1.26	A

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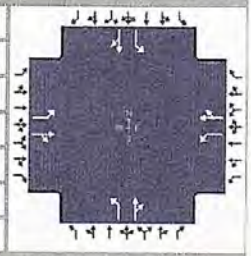
HCS7 Signalized Intersection Input Data

#10 w/P+IMP AM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 with Pro...		
Project Description	with Project + Improvements				

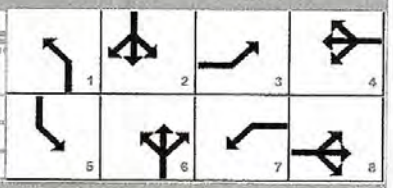


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	245	78	183	282	33	122	454	225	61	383	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.3	1.2		53.5	0.0	7.0	29.0					
Yellow	4.0	0.0		4.0	4.0	4.0	4.0					
Red	2.0	0.0		2.0	2.0	2.0	2.0					



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	245	78	183	282	33	122	454	225	61	383	0
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h	0	L			None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	13.0	35.0	13.0	35.0	15.0	16.0	56.0	57.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	7	6	7	6	10	6	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Max	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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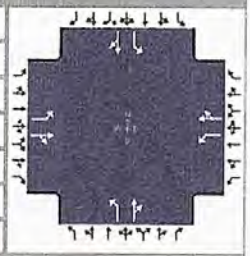
HCS7 Signalized Intersection Results Summary #10 WIP + 2nd PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off Commerce - PM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	455	153	147	348	39	104	386	137	34	403	0

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.5	2.5	44.0	0.0	9.6	55.5	1	2	3	4		
Yellow	4.0	0.0	4.0	4.0	4.0	4.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	0.0	61.5	15.6	77.0	13.0	52.5	10.5	50.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	0.0	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s		56.3	9.3	21.3	7.7		3.8	
Green Extension Time (g_e), s	0.0	0.0	0.3	2.2	0.0	0.0	0.0	0.0
Phase Call Probability		1.00	1.00	1.00	0.99		0.75	
Max Out Probability		1.00	0.00	0.00	1.00		0.99	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	0	640		155	407		109	551		36	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1636		1810	1866		1810	1814		1810	0	
Queue Service Time (g_s), s	0.0	54.3		7.3	19.3		5.7	40.7		1.8	0.0	
Cycle Queue Clearance Time (g_c), s	0.0	54.3		7.3	19.3		5.7	40.7		1.8	0.0	
Green Ratio (*g/C*)	0.35	0.40		0.48	0.51		0.36	0.33		0.35		
Capacity (*c*), veh/h	404	648		181	947		257	602		134		
Volume-to-Capacity Ratio (*X*)	0.000	0.987		0.853	0.430		0.426	0.914		0.266	0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)	0	893.4		151.4	339.6		114.6	728.8		37.3	0	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.0	35.7		6.1	13.6		4.6	29.2		1.5	0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	0.0	41.9		35.5	21.7		33.2	44.9		36.5		
Incremental Delay (d_2), s/veh	0.0	32.0		4.3	1.4		0.4	20.7		0.4	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	0.0	73.9		39.8	23.2		33.6	65.6		36.9		
Level of Service (LOS)		E		D	C		C	E		D		
Approach Delay, s/veh / LOS	73.9	E		27.7	C		60.3	E		48.6	D	
Intersection Delay, s/veh / LOS	53.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.91	B	1.94	B	1.94	B
Bicycle LOS Score / LOS	1.54	B	1.42	A	1.58	B	1.25	A

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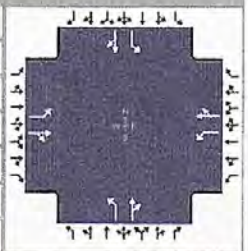
HCS7 Signalized Intersection Input Data #10 W/ + IMP PM

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - PM - 2035 with Pro...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	455	153	147	348	39	104	386	137	34	403	0

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.5	2.5	44.0	0.0	9.6	55.5	1	2	3	4		
Yellow	4.0	0.0	4.0	4.0	4.0	4.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	455	153	147	348	39	104	386	137	34	403	0
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		R	0		None			None			None	
Heavy Vehicles (P_{HV}), %	0	0		0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0		0	0		0	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	63.0	14.0	63.0	14.0	13.0	50.0	13.0	50.0
Yellow Change Interval (*Y*), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G_{min}), s	6	7	6	7	6	10	6	10
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Max	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50	No		0.50

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ORDINANCE NO. 20-0xx

AN ORDINANCE BY THE CITY COMMISSION OF THE CITY OF FORT PIERCE, FLORIDA; REZONING ONE (1) PROPERTY GENERALLY LOCATED AT OR NEAR THE NORTHWESTERN INTERCHANGE OF WEST MIDWAY ROAD AND INTERSTATE 95 FROM AG-2.5, AGRICULTURAL, 1 DU/2.5 AC (SAINT LUCIE COUNTY ZONING) TO PLANNED DEVELOPMENT (PD); PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR REPEAL OF ORDINANCES OR PARTS THEREOF IN CONFLICT HEREWITH; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the subject property is located at or near the northwestern interchange of West Midway Road and Interstate 95 within the City of Fort Pierce, Florida, representing approximately 200.3 acres of land; and

WHEREAS, Willow Lakes, LLC as owners of said property are rezoning the subject properties located at or near the northwestern interchange of West Midway Road and Interstate 95 from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD; and

WHEREAS, the proposed zoning atlas map amendment (rezoning) is consistent with the comprehensive plan, will not have an adverse effect on the ability of the city to satisfy land and water use needs; and meet transportation demands and provide community facilities and services, and will promote and protect the public health, safety and general welfare as required by City Code 125-136; and

WHEREAS, the City of Fort Pierce Planning Board, at their August 11, 2020, meeting, voted _____ to recommend approval of the request; and

NOW, THEREFORE BE IT ORDAINED by the City Commission of the City of Fort Pierce, Florida as follows:

SECTION 1. From and after the effective date hereof, the following described property is hereby rezoned as follows:

Parcel ID: 3302-212-0001-000-4

From and after the effective date hereof, the following property legally described as:

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF -WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID

SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF- WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF AN ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO I A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY) ; THENCE N89°52'26"W ALONG THE NORTH RIGHT -OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF- WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

TOGETHER WITH;

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR 1-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.

Said property being generally located at or near the northwestern interchange of West Midway Road and Interstate 95 in Fort Pierce, Florida shall be and the Zoning Designation is hereby changed from AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned

Development, PD, as depicted on Exhibit “A” and Exhibit “B,” attached hereto and incorporated herein.

SECTION 2. The provisions of this Ordinance are declared to be severable and if any section, sentence, clause, or phrase of this Ordinance shall, for any reason, be held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining sections, sentences, clauses, and phrases of this Ordinance but shall remain in effect, it being the legislative intent that this Ordinance shall stand notwithstanding the invalidity of any part.

SECTION 3. The Site Plan is conceptual in nature and depicted on Exhibit “C” is hereby approved with this Ordinance. Site Plans for phases of this Planned Development require Development Review and Design Review for conformance with Section 125-212(c)(2) shall be submitted for final approval by the City Commission.

SECTION 4. All ordinances or parts thereof that may be determined to be in conflict herewith are hereby repealed.

SECTION 5. This Ordinance shall be and become effective immediately upon final passage.

APPROVED AS TO FORM & CORRECTNESS:

_____
Peter J. Sweeney
City Attorney

STATE OF FLORIDA

COUNTY OF ST. LUCIE

WE, THE UNDERSIGNED, Mayor Commissioner and the City Clerk of the City of Fort Pierce, Florida, do hereby certify that the foregoing and above Ordinance No. 20-0xx was duly advertised by title only in the St. Lucie News Tribune on Sunday, September 6th, 2020; copy of said Ordinance was made available at the office of the City Clerk to the public upon request; said Ordinance was duly introduced, read by title only, and passed on first reading by the City Commission of the City of Fort Pierce, Florida, on September 21st, 2020; and was duly introduced, read by title only, and passed on second and final reading October 5th, 2020, by the City Commission of the City of Fort Pierce, Florida.

IN WITNESS HEREWITH, we hereunto set our hands and affix the Official Seal of the City of Fort Pierce, Florida, this 6th day of October, 2020.

_____
Linda Hudson
Mayor Commissioner

ATTEST:

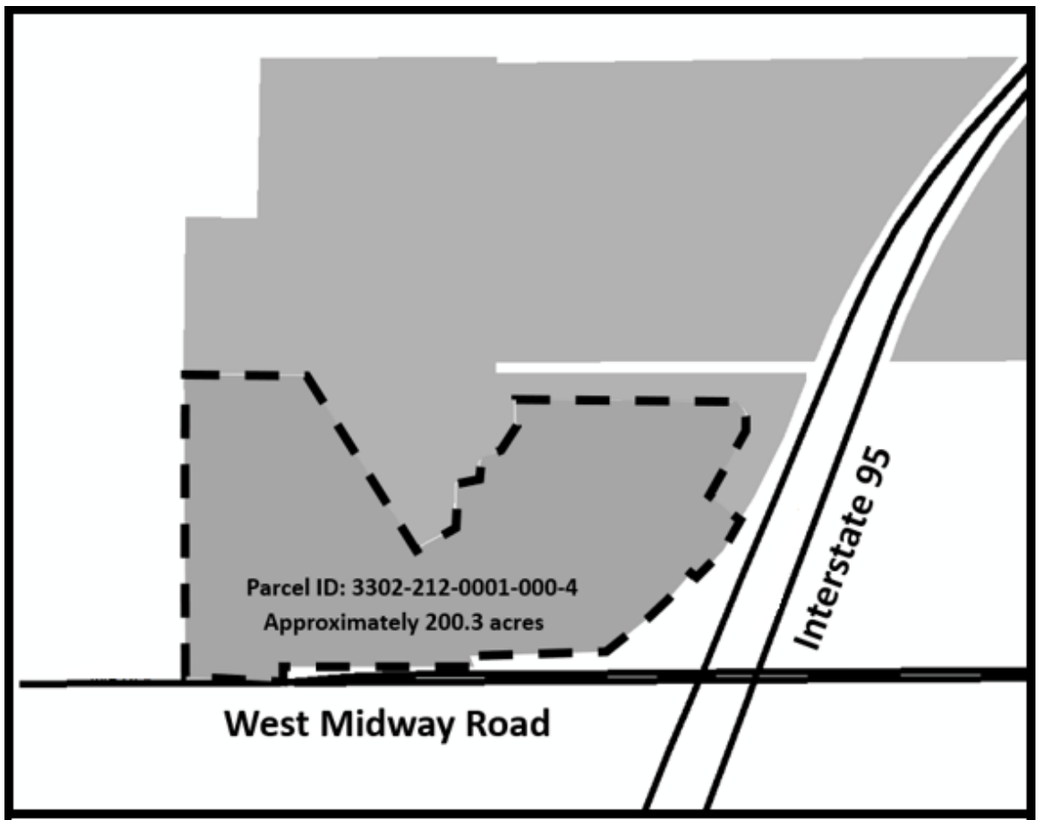
_____
Linda W. Cox
City Clerk

(CITY SEAL)

EXHIBIT A

Proposed Zoning Atlas Map Amendment

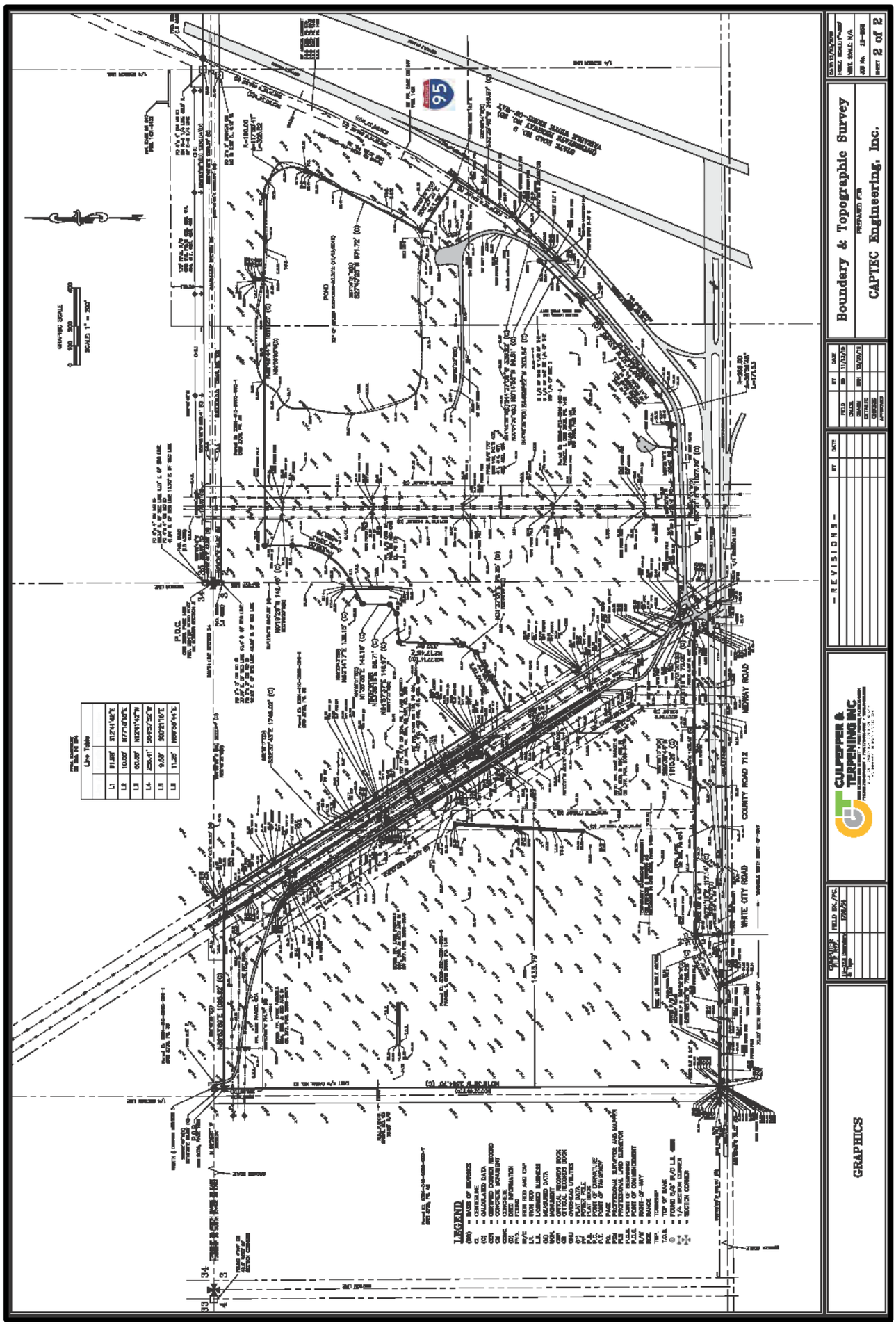
AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD



Parcel ID: 3302-212-0001-000-4

AG-2.5, Agricultural, 1 du/2.5 ac (Saint Lucie County Zoning) to Planned Development, PD

Exhibit B
Sketch and Legal Description



Parcel ID: 3302-212-0001-000-4

From and after the effective date hereof, the following properties legally described as:

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF -WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF- WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF AN ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO I A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY) ; THENCE N89°52'26"W ALONG THE NORTH RIGHT -OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF- WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

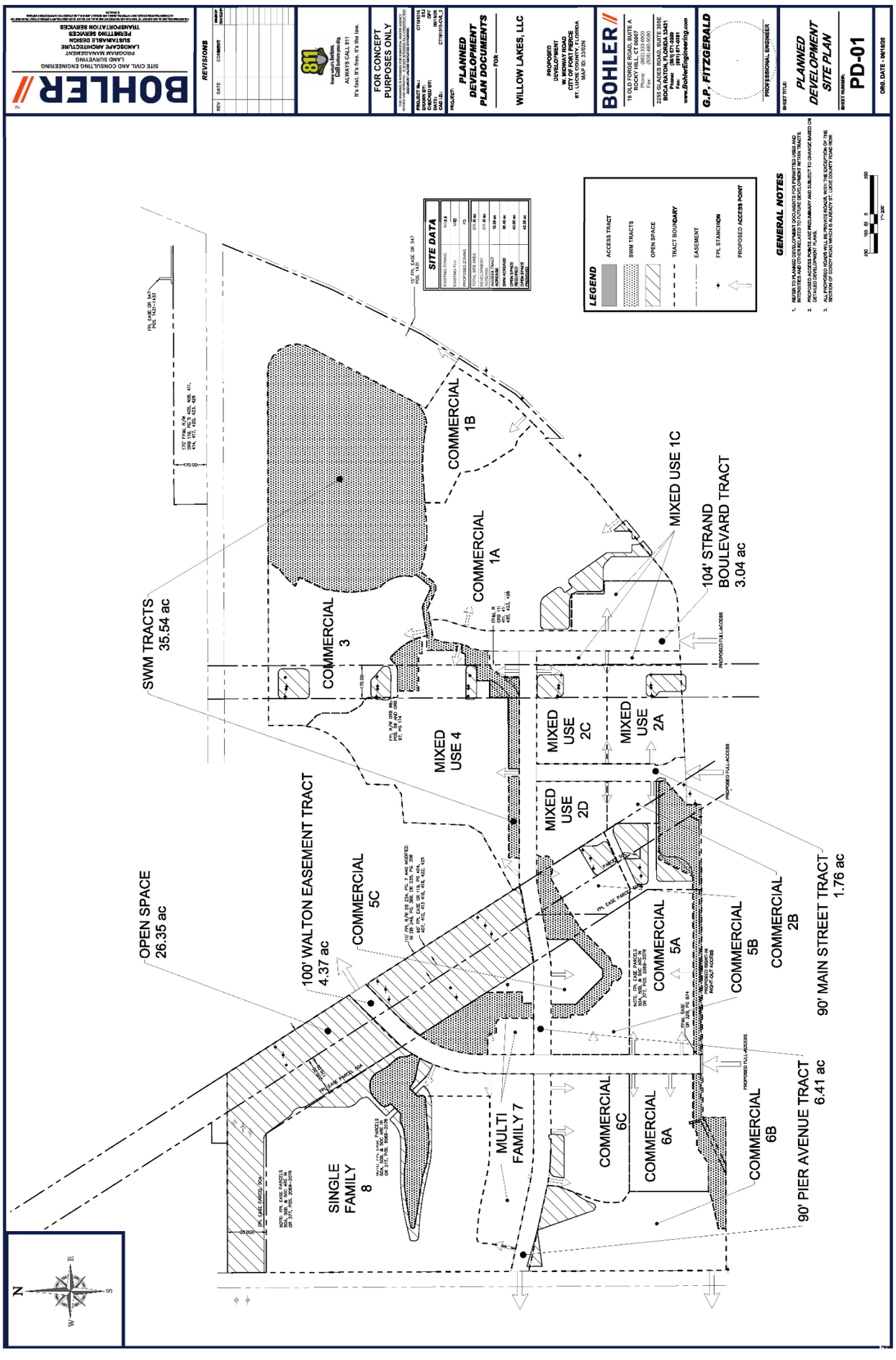
TOGETHER WITH;

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR 1-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.

Exhibit C
Conceptual Site Plan & Project Phasing



II. PROJECT PHASING

As proposed, initial infrastructure improvements will be constructed by the developer, which include excavation of the storm water management floways and ponds within the Storm Water Management Tracts; clearing and rough grading development tracts; construction of certain roads or segments thereof, and placement of structural fill where deemed necessary or desirable. Installation of common utilities such as water and wastewater lines, fiber optics and telecom among other general infrastructure improvements is yet to be determined. To provide for as much flexibility as possible in accommodating potential end-users, the developer reserves the right to implement construction on any one (1) or more phases at any such time it is deemed appropriate; i.e. based on market demand or other metrics utilized by the developer.

The Phase Schedule below provides for a general outline of the Phases of infrastructure construction. Please note that the timelines provided are estimates only and are subject to market conditions and approval timelines. It is anticipated that a Phase 1 submittal will be made within a year.

PHASE SCHEDULE

Estimated Duration of Construction of Phase	General Description of Improvements
Phase 1A (18 months)*	• Roadwork consisting of a full access signalized intersection at Midway Road and Gordy Road, Gordy Road Improvements, including roundabout at new Main Street. • Construction of pavement and landscaped median for Strand Boulevard Tract, and Main Street Tract from Gordy Road north to the intersection of Pier Avenue Tract. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of Pier Avenue subgrade for use as on-site construction haul road. • Rough site grading and excavation of Storm Water Management floways and ponds. • Placement of fill and preparation of subgrade on Wavegarden Surf Park parcel 1A. • Construction of Wavegarden Surf Park and associated commercial buildings, parking, drives, facilities, walks, landscaping and amenities. • Sidewalks and Street lighting along upper Strand Boulevard.
Phase 1B (8 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1B commercial development.

	• Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
Phase 1C (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1C commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Strand Boulevard. • Street Trees and Lighting along Strand Boulevard
Phase 2A (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2A commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2A
Phase 2B (18 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2B commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2B
Phase 2C (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2C mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2C

Phase 2D (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 2D mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2D
Phase 3 (12 months)*	• General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 3 commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Improvements along lakefront and shoreline, and completion of eastern floway system. • Completion of Phase 3 and Phase 4 private roads and drives.
Phase 4 (12 months)*	• Construction of Multifamily Residential development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
Future Phases TBD*	• Roadwork consisting of a full access signalized intersection at Midway Road and Walton Easement Road, and remaining Pier Avenue Improvements to western limits of Willow Lakes property. • Construction of pavement and landscaped median for Walton Easement Tract, and Pier Avenue Tract. • Completion of western side floway system. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of commercial tracts in Phase 5 and 6, and residential tracts in Phases 7 and 8. See PD Conceptual Site Plan.

* Subject to market conditions

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

May 21, 2020

Willow Lakes, LLC c/o Dean, Mead, Minton & Zwemer
1903 S. 25th Street, Suite 200
Fort Pierce, FL 34947

Subject: Willow Lakes – NW corner of W. Midway Rd. & I-95 – Technical Review Committee Comments for May 21, 2020 conference call

Dear Dean, Mead, Minton & Zwemer,

Below please find received comments from the City of Fort Pierce and applicable entities:

Fort Pierce Planning Department

1. The subject application is limited to the rezoning of the property from AG-2.5 to PD. As a PD requires a plan, Planning staff will be attaching the conceptual master plan to the approving Ordinance. With that said, the master plan shall include the proposed uses, maximum densities, intensities, height, lot coverage, impervious areas, and a general location where these uses are proposed on the master plan. A note shall be provided on the master plan that states that the plan is conceptual in nature.
2. Specific
3. A master sign program will be required.
4. Elaborate on the "future phasing" and include a more detail phasing.
5. Include a projected timeline for each phase.
6. Will the roadways be Public ROWs or Private Roads?
7. Please provide a sheet that superimposes the "The Village at Midway" project to the north to determine compatibility with uses.
8. Under the Allowed Uses section - Townhomes should only be called "Townhomes", not Single-Family Homes.
9. In Table 1.2, please divide Single-Family Medium Density Zone into "Single-Family Attached" and "Single-Family Detached".
10. Please include
11. Page 72, please remove sections: Conditional Use, Agricultural Use, & Commercial.
12. Page 72, please scale down your permitted uses to what you are

proposing. Your permitted uses should be compatible with City Code Section 22-22.

13. Our landscape code is currently under review. Your future submitted landscape plan will have to be consistent with the City's Landscape Code. Please meet with Planning staff and the City's Tree Arborist prior to preparing your landscape plan(s).
14. Correct Page 78 (g), it states "three (12) months after planting".
15. The proposed cross sections are being reviewed with the NACTO and FDOT complete streets standards. Comments will be provided in a separate letter.
16. Further comments may be forthcoming.
17. Each phase of development will require the following:

Master Sign Plan
Development and Design Review
Elevations
Color Boards (proposed colors & architectural elements)
Landscape Plan and tree list
Tree Mitigation Plan
Lighting Plan

Fort Pierce Engineering Department

1. This approval pertains to the Rezoning and FLU request only and not to any proposed site improvements. Site review will be conducted when detailed plans are submitted for review and approval.

2. There are numerous recorded FPL Right-of-Ways and FPL Easement parcels located throughout the site. The applicant shall provide proof of FPL approval for improvements within the limits of the rights-of-way and easements at the time of Planned Development site plan submittal.

Fort Pierce Utility Authority

- FPUA W/WW Engineering: Outside FPUA W/WW service area
- FPUA Electric & Gas Engineering: Outside FPUA Electric service area

Fort Pierce Building Department

1. Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

St. Lucie County Engineering/PW

No Comments

St. Lucie County Planning

• The applicant is proposing an alternative Tree Mitigation Plan, in the form of " excellence in urban village, pedestrian-oriented tree-lined streetscapes, in lieu of the mitigation requirements set forth in the City Code". o St. Lucie County provides for Alternative Mitigation Compliance Methods for development within its jurisdiction. One option, per SLC LDC Section 6.00.05 D. 3. b. 1. provides "If a site is consistent with the following minimum standards (subsections a.h.) , twenty-five percent (25%) of the existing native upland habitat can be preserved on site to take the place of all tree mitigation requirements."

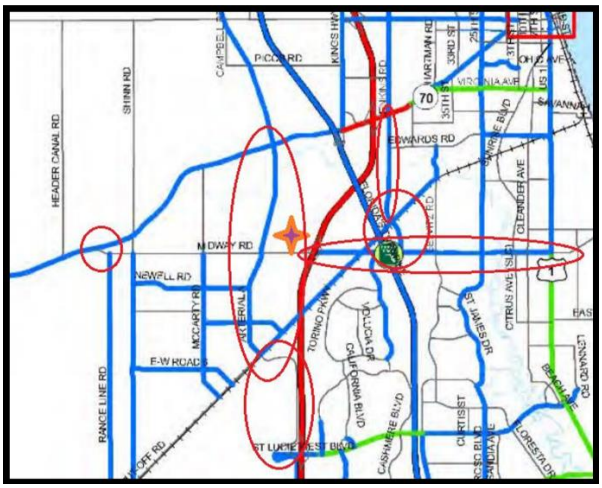
• The applicant is encouraged to preserve and provide buffering of existing wetlands where quality and feasibility exist.

• The City is encouraged to evaluate established height standards adjacent to I-95 interchanges throughout St. Lucie County in considering the 100ft. height standard proposed. (i.e. SR 70, Orange Avenue, Tradition, The Reserve, St. Lucie West, etc. A St. Lucie County Agricultural District exists (further) to the west of the project site.

• The applicant is encouraged to consider multi-modal links between the subject site and adjacent corridors (Midway, SR 70, etc.), further evaluating and providing Greenways & Trails connections where possible.

• Traffic Impact Report (Provided 5/13/2020) Review is underway. Staff may provide additional comments upon review completion. The eastern project entrance should be evaluated based upon current and future I-95 interchange conditions.

• The TPO's GO2040 Plan should be evaluated as it relates to projected roadway needs and considered links, accounting for vested trips and roadway assignment. Pedestrian connectivity and street lighting adjacent to the project should be considered.



• The applicant is encouraged to hold neighborhood meetings, if not already conducted. St. Lucie County has low density residential and agricultural/residential areas in proximity to the subject site(s).

• St. Lucie County owns and operates the St. Lucie County Landfill to the northeast at 6120 Glades Cut Off Rd. The applicant is encouraged to evaluate the long-term management plans for the landfill. The Tropicana – Fort Pierce processing plant is also situated to the east.

• The applicant should be advised of the applicability of both St. Lucie County & City of Fort Pierce Impact Fees – active.

St. Lucie County Fire District

No Comments

Planning Board - 2 PM **7. c.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Conditional Use - Fort Vacation Rental - 715 S. Ocean Drive, Unit F

LOCATION

715 S. Ocean Drive, Unit F

RESPONSIBLE STAFF

Vennis Gilmore, Planner
Technical Review Committee

RECOMMENDATION

The proposed use presents the provision of transient lodging accommodations to the general public, representing a limited commercial use that is compatible with the surrounding neighborhood, and is generally consistent with the City's Comprehensive Plan and Land Development Code with appropriate restrictions. Therefore, Staff recommends **APPROVAL** with the following five conditions:

1. The property manager for the vacation rental shall be available at all times to resolve complaints or violations of city code. Said manager shall reside in St. Lucie County and shall be registered with the City of Fort Pierce.
2. Guide booklets (available from Code Enforcement) shall be provided to renters regarding local rules and public service resources, to minimize conflicts.
3. The applicant shall file for and obtain St. Lucie County and City of Fort Pierce Business Tax Licenses within thirty (30) days of issuance of a license from the Florida Department of Business & Professional Regulation.
4. There shall be a limitation of no more than no two (2) vehicles at the site.
5. The City of Fort Pierce Business Tax License number shall be included on all advertising.

Attachments

Staff Report
Application & Supporting Documents
Aerial Map
Future Land Use Map
Zoning Map
TRC Comments

Form Review

Form Started By: Vennis Gilmore Started On: 08/03/2020 08:28 PM
Final Approval Date: 08/04/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director
FROM:	Vennis Gilmore, Planner
RE:	**Conditional Use Approval – Fort Vacation Rental** **715 S. Ocean Drive, Unit F**
BOARD DATE:	August 11, 2020

STAFF REPORT

Owner/Applicant:	**Augustus B. Fort Jr.** **49 Woodland Drive, #201** **Vero Beach, FL 32962**
Applicant's Request:	Approval of a Conditional Use to operate a Vacation Rental, offering lodging for less than 30 days. The minimum rental period is identified as two days.
Location(s):	715 S. Ocean Drive, Unit F
Parcel ID:	2401-504-0006-000-6
Future Land Use:	Hutchinson Island Residential (HIR)
Current Zoning:	Hutchinson Island Medium Density Residential Zone (R-4A)

Surrounding FLU:

North	East	South	West
HIR	HIR	HIR	HIR

Surrounding Zoning:

North	East	South	West
R-4A	R-4A	R-4A	R-4A

Utilities: Fort Pierce Utility Authority (FPUA)

Staff Analysis:
In accordance with Sections 125-187, 125-236, and 125-237 of the City Code, the applicant is requesting the review and approval of a Conditional Use to operate a Vacation Rental at Unit E of the Boardwalk Condominiums, located at 715 S. Ocean Drive. The subject condominium is a one (1)-bedroom and one (1)-bathroom unit with approximately 680 square feet. The proposed Conditional Use will offer lodging of less than six (6) months with a minimum stay of 2 days to guests.

The property is within the South Beach neighborhood, generally situated at the southwest corner South Ocean Drive and Gulfstream Avenue. The subject site is surrounded by multi-family residences to the north, west, east, and south. The subject property has a Future Land Use designation of Hutchinson Island Residential (HIR) with a compatible zoning classification of Hutchinson Island Medium Density Residential (R-4A).



Dwelling Rentals
Pursuant to City Code Section 125-3. – Definitions - Generally, the rental of any dwelling unit for less than six months, is classified as a "Dwelling Rental (dwelling unit)," and defined as follows: "One or more rooms connected together in a building, constituting a separate, independent housekeeping establishment, other than a motel/hotel, for purposes of rental on a daily, weekly or longer basis."

The State of Florida provides further classification of a dwelling that is rented for periods of less than one month. Pursuant to Florida State Statute 509.242, declaring the use a "Vacation Rental," defines such use as any unit that is also a transient public lodging establishment but that is not a timeshare project, which is rented to guests more than three times in a calendar year for periods of less than 30 days or one calendar month, whichever is less or which is advertised or held out to the public as a place regularly rented to guests.

A dwelling rental, as locally defined, is also a "Vacation Rental" if the duration of stays are less than 30 days. The rental of a dwelling for periods at a minimum of 31 days, but less than six months, is a "Dwelling Rental," but not a "Vacation Rental."

Table 1 presents general characteristics to clarify Dwelling Rentals and the transitioning threshold for Vacation Rentals.

Table 1 – Dwelling & Vacation Rental Definitions

	Dwelling Rental	**Vacation Rental**
Length of Stay	Less than 6 months	30 days or less
Lodging Type(s)	Non-Transient (more than 30 days)	Transient Lodging
State License Requirement	If rented 30 days or less (Vacation Rental)	Division of Hotels & Restaurants – Vacation
Public lodging establishment (ADA & Misc. Regulations)	If rented 30 days or less (Vacation Rental)	Public lodging establishment

Future Land Use and Zoning
The purpose and intent of the R-4A zoning district is to establish height and density regulations for lands located within the city which are situated east of the Indian River. The R-4A zone is compatible with the Medium Density Residential Hutchinson Island designation in the comprehensive plan. Permitted gross residential densities in this district may not generally exceed eight (8) units per acre. Bonus density of up to one additional unit per acre is available as provided for in this section. This district is established because Hutchinson Island is a sensitive barrier island which presents development considerations which are either unique to the area or are of added concern, such as environmental fragility, beach erosion, and hurricane evacuation.

Parking
Pursuant to City Code Section 125-315 (d)(2)b, motels, hotels and resort hotels shall provide 1.6 spaces for each unit 500 square feet or larger.

Conditional Use
As stated in City Code Section 125-235, the purpose of the Conditional Use process is to allow, when desirable, uses that would not be appropriate generally or without restriction throughout a particular zoning district, but which, if controlled as to number, area, location, or relation to the neighborhood, would not adversely affect the public health, safety, comfort, good order, appearance, convenience, and the general welfare.

Technical Review Committee
All affected departments have reviewed the proposed Conditional Use with regards to the requirements of the City Code. Findings from the review by corresponding departments and the associated responses by the applicant are provided.

Staff Recommendation
The proposed use presents the provision of transient lodging accommodations to the general public, representing a limited commercial use that is compatible with the surrounding neighborhood, and is generally consistent with the City's Comprehensive Plan and Land Development Code with appropriate restrictions. Therefore, Staff recommends **APPROVAL** with the following five (5) conditions:

1) The property manager for the vacation rental shall be available at all times to resolve complaints or violations of city code. Said manager shall reside in St. Lucie County and shall be registered with the City of Fort Pierce.

2) Guide booklets (available from Code Enforcement) shall be provided to renters regarding local rules and public service resources, to minimize conflicts.

3) The applicant shall file for and obtain St. Lucie County and City of Fort Pierce Business Tax Licenses within thirty (30) days of issuance of a license from the Florida Department of Business & Professional Regulation.

4) There shall be a limitation of no more than no two (2) vehicles at the site.

5) The City of Fort Pierce Business Tax License number shall be included on all advertising.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

Conditional Use – No New Construction

Property address or Location 715 SOUTH OCEAN DR. UNIT F

Parcel ID #(s) 2401-504-0006-000-6

Project description SHORT TERM CONDO RENTALS

AUGUSTUS B. FORT JR.
Property Owner(s)

49 WOODLAND DRIVE #201
Street Address

VERO BEACH, FL 32962
City State Zip

407-256-2299
Phone Number

GUSFORT@LIVE.COM
Email Address

Applicant/Representative, Title, Company

Street Address

City State Zip

Phone Number

Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein.*

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 31st day of July, 2019, by Augustus B. fort JR who is personally known to me or has produced Florida Drivers License as identification.

Signature of Notary (seal)

ANGELO KARL GRISETTI
Notary Public – State of Florida
Commission = GG 146115
My Comm. Expires Sep 26, 2021

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____

Intake Planner_____

Planner Assigned_____

Approved By_____ Date _____

Comments_____

Fees_____ Control #_____ B. Permit #_____

Intake Date Stamp

❑ CONDITIONAL USE: NO NEW CONSTRUCTION

Submit one original, seven (7) hard copies and one (1) CD of the following for initial submittal, subsequent submittals will be required:

- ❑ *If no site improvements are required:*
  - ❑ As-built survey
  - ❑ Floor plan of existing building(s)
- ❑ *If parking and drainage improvements are required:*
  - ❑ As-built survey;
  - ❑ Site plan, to scale, including existing improvements and proposed parking, driveways, landscaping & storm drainage;
  - ❑ Lighting plan
- ❑ Complete, notarized application

Application Type:

- ❑ Conditional Use: No new construction with no site improvements
- ❑ Conditional Use: No new construction with parking and drainage improvements

Site Information:

Building Size _____ Parking Spaces:_____

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West

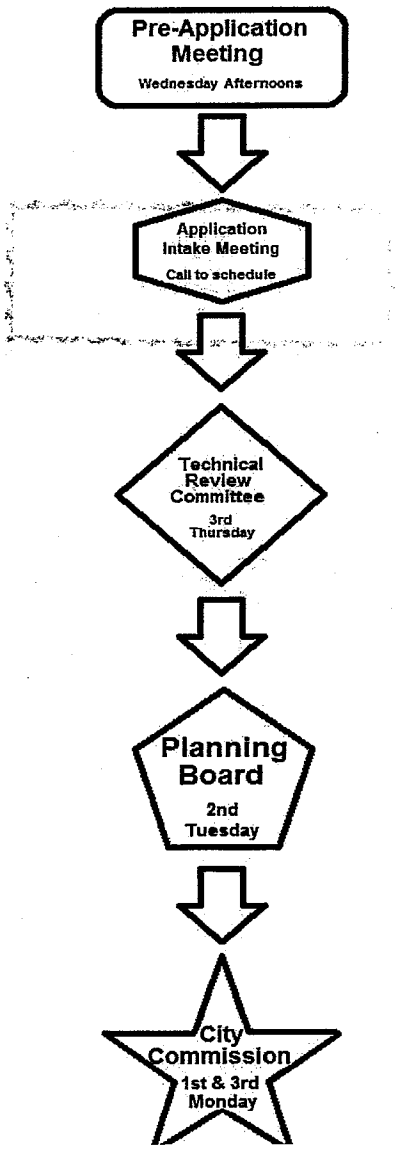
The application for conditional use with the application for site plan review, when not exempt in accordance with the requirements of section 22-75, shall be reviewed as a unit in accordance with the requirements of section 22-58 except that:

(1) The city commission shall hold a public hearing in accordance with the provisions of section 22-143 prior to acting on the application for conditional use.

(2) In the event the city planning board disapproved the application for conditional use or in case of a protest against said application signed by twenty (20) per cent of the owners within five hundred (500) feet of the area included in said application, such application shall not be approved except by a four-fifths vote by the city commission.

(3) In permitting a conditional use or the modification of an existing conditional use, the city commission may impose, in addition to those standards and requirements expressly specified in this chapter, any condition which it finds to be necessary to protect the best interest of the surrounding property of the city.

Application Outlook



Narrative of Property Objectives
715 South Ocean Drive Unit F, Fort Pierce, Florida 34949

1) Short term rentals with a minimum of two days to promote tourism in Fort Pierce and increase revenue to the city.

2) Short-term of 31 days or more during season to promote tourism in Fort Pierce and increase revenue to the city.

3) Offer gratis to national charities for respite care or fundraising.

4) Owner use of property for vacations

RULES & REGULATIONS of 715 South Ocean Drive Unit F, Fort Pierce, Florida 34949:

-Remove all trash and dispose of in the dumpster located in the back-parking lot

-Peaceful enjoyment of common areas at reasonable hours without excessive noise or music

-Pets need to remain in compliance with local leash and pet fecal disposal laws.

-Smoking is prohibited

-Park in assigned parking space labeled “F” or “Guest”

-Do not litter

-Wash sand off at the front hose to prevent drain clogs.

-Do not leave air conditioning on with windows open.

-Return A/C to 77 Degrees when check out occurs.

-Do not remove any property belonging to condo except beach towels, beach folding chairs, sand toys and umbrellas. The exception items need to be returned to the condo with the sand washed of prior to condo entry.

- Do not give out assigned door code to any party not staying in the condo.

-No Running in common areas or stairwells.

-Do not disturb or harass local wildlife such as sea turtles, manatees and any other wildlife.

-It is unlawful to walk on the sand dunes only use designated walkways.

-Use pedestrian crosswalks to cross the street to the beach.

-No illegal drugs allowed on property.

-No toxic chemicals allowed on property.

-Follow all local and state laws.

Are there any exceptions to the requirement that a Florida property manager have a broker's license?

YES. For example, if a property owner employs someone to manage their property, and that employee is paid a salary, as opposed to being paid a commission or on a transactional basis, a broker's license is not required.

For more information about these and other Florida property management requirements and exceptions, please contact the Florida Real Estate Commission.

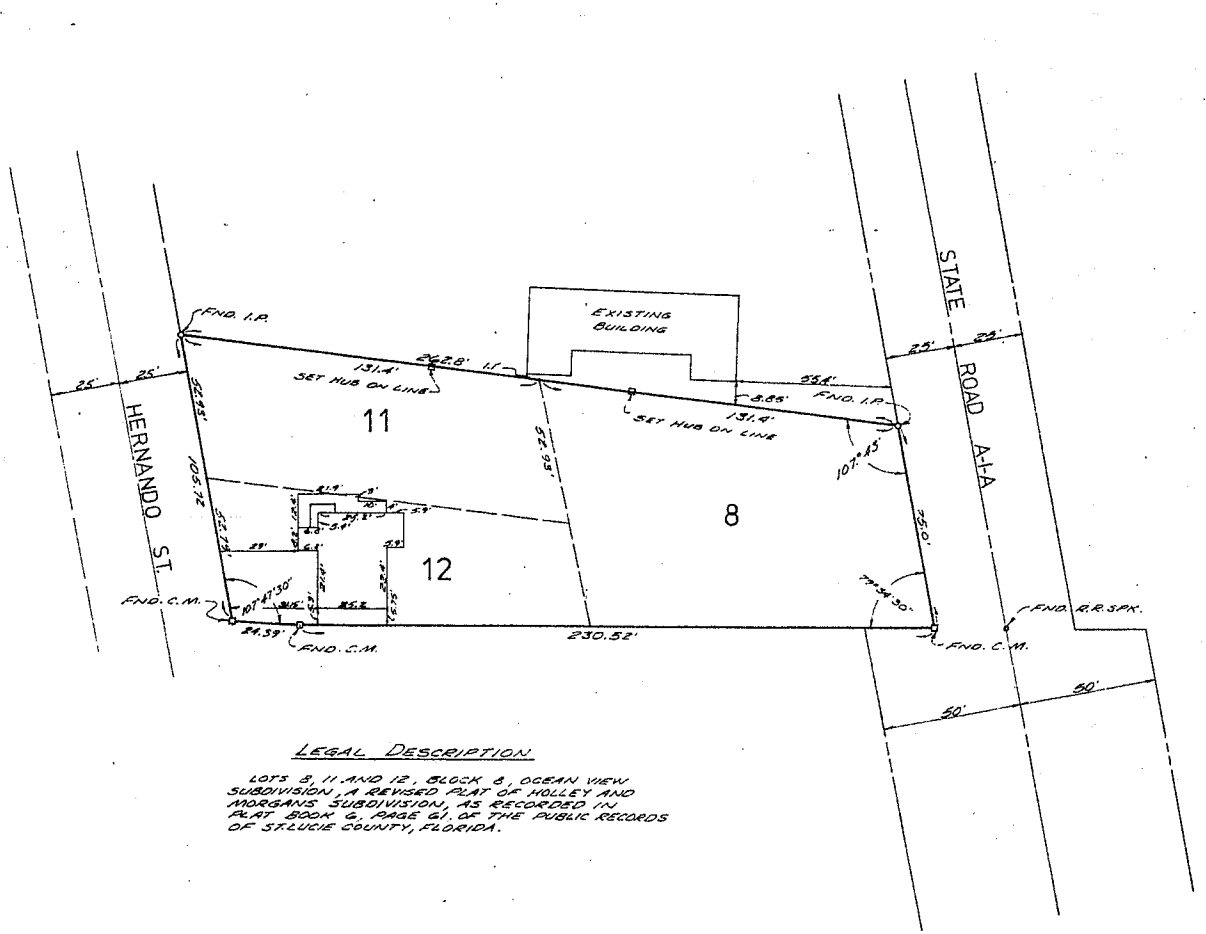
Before hiring a property manager to manage your Florida rental property, you should always check that he or she is licensed appropriately. You can check the license status of Florida property managers at the Florida Department of Business and Professional Regulation's Licensee Search webpage.

Florida Community Association Manager License Requirements

Florida community association manager licensing requirements include:

- Age: Must be at least 18 years of age
- Education: Must complete at least 18 hours of pre-licensure education from an approved provider
- Trustworthiness: Must be of good moral character; must have a background check and submit fingerprints
- Exam: Pass the CAM exam. The exam fee is $73.00
- License fee: $105
- Application: Complete and submit CAM license application which is available online

For more information about these and other Florida licensing requirements, please contact the Florida Real Estate Commission.



LEGAL DESCRIPTION

LOTS 8, 11 AND 12, BLOCK 8, OCEAN VIEW SUBDIVISION, A REVISED PLAT OF HOLLEY AND MORGANS SUBDIVISION, AS RECORDED IN PLAT BOOK 6, PAGE 61, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY, MADE UNDER MY DIRECTION, AND THAT SAID SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN.

SURVEY MADE FOR:
K.M. BROOKS AND L.M. SPARKS

SURVEYING SERVICES OF FLORIDA, INC.
LAND SURVEYORS
FORT PIERCE, FLORIDA

SCALE	1"=30'	DATE	3-30-77
FIELD	R.E.	BK.	PG.
OFFICE	A.L.A.	FILE NO.	
DR'N.	D.F.	JOB NO.	383

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	715 S OCEAN DR F
Parcel ID:	2401-504-0006-000-6
Account #:	15013
Map ID:	24/01G
Use Type:	0400
Zoning:	HI Medium
City/County:	Fort Pierce

Ownership

Augustus B Fort Jr
49 Woodland DR Apt 201
Vero Beach, FL 32962

Legal Description

BOARDWALK CONDOMINIUM UNIT F (OR 3767-816)

Total Areas

Finished/Under Air (SF):	
Gross Sketched Area (SF):	
Land Size (acres):	
Land Size (SF):	

Current Values

Just/Market Value:	$85,000
Assessed Value:	$78,540
Exemptions:	$0
Taxable Value:	$78,540

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this parcel: Download PDF

Sale History

Date:	Jul 9, 2015
Book/Page:	3767 / 0816
Sale Code:	0001
Deed:	WD
Grantor:	Butler Fred L
Price:	$92,000
Date:	Nov 25, 2013
Book/Page:	3582 / 1134
Sale Code:	0001
Deed:	WD
Grantor:	Gonzalez Jorge
Price:	$70,000
Date:	Oct 21, 2008
Book/Page:	3041 / 2694
Sale Code:	XX01
Deed:	SP

Grantor:	Indymac Bank FSB (TR)
Price:	$66,000
Date:	May 28, 2008
Book/Page:	2986 / 1054
Sale Code:	XX01
Deed:	CT
Grantor:	Sallabi Beatrice
Price:	$100
Date:	Jun 6, 2007
Book/Page:	2837 / 1147
Sale Code:	XX01
Deed:	QC
Grantor:	Sallabi Beatrice
Price:	$100
Date:	Jul 29, 2005
Book/Page:	2351 / 1609
Sale Code:	XX00
Deed:	WD
Grantor:	Jeffra Lisa A
Price:	$229,900
Date:	Jan 6, 2005
Book/Page:	2148 / 2879
Sale Code:	XX01
Deed:	QC
Grantor:	Jeffra Dennis I
Price:	$38,000
Date:	Jun 7, 2002
Book/Page:	1538 / 2672
Sale Code:	XX00
Deed:	WD
Grantor:	Baertl Otmar W
Price:	$79,500
Date:	Oct 1, 1992
Book/Page:	0809 / 2449
Sale Code:	XX00
Deed:	WD
Grantor:	Hoyt C Murphy
Price:	$58,500
Date:	Apr 1, 1987
Book/Page:	0540 / 2744
Sale Code:	XX01
Deed:	CV
Grantor:	
Price:	$0
Date:	Apr 1, 1987
Book/Page:	0540 / 2743
Sale Code:	XX01
Deed:	CV
Grantor:	
Price:	$0
Date:	Jun 1, 1983
Book/Page:	0405 / 0687
Sale Code:	XX01
Deed:	CV

Grantor:
Price: $59,900

Building Information (1 of 1)

Finished Area: 680 SF

Gross Sketched Area: 680 SF

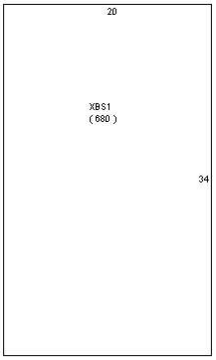
Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type: X019	Year Built: 1982	Frame:
Grade: X19B	Effective Year: 1982	Primary Wall: CB Stucco
Story Height: 1 Story	No. Units: 1	Secondary Wall:

Interior Data

Bedrooms: 1	Electric:	Primary Int Wall:
Full Baths: 1	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: 0%	Sprinkled %: 0%





Special Features and Yard Items

Current Year Values

Current Values Breakdown

Building:	$85,000
Land:	$0
Just/Market:	$85,000
Ag Credit:	$0
Save Our Homes or 10% Cap:	$6,460
Assessed:	$78,540
Exemption(s):	$0
Taxable:	$78,540

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
1999	0041	0.6	Fort Pierce Stormwater Charge	$41.40

This does not necessarily represent the total Special Assessements that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office.

Historical Values

Permits

Number:	F93-001575
Issue Date:	Dec 6, 1993
Description:	Roof
Amount:	$9,400
Fee:	$9,400

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in Fort Pierce

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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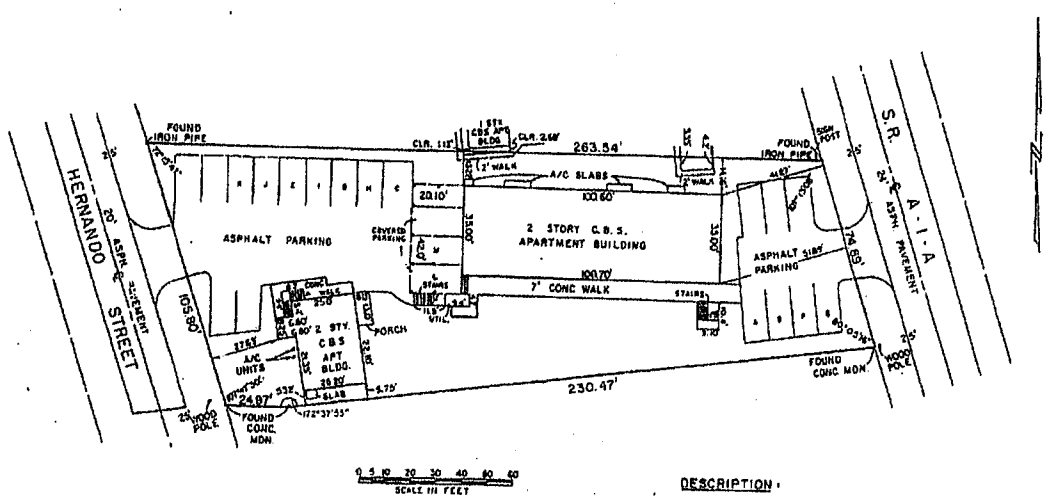
NOTES:

1. ALL IMPROVEMENTS SHOWN ARE EXISTING.
2. ALL AREAS OUTSIDE OF CONDOMINIUM UNIT BOUNDARIES ARE COMMON AREAS OR LIMITED COMMON AREAS.



BOARDWALK CONDOMINIUM

EXHIBIT B(1) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

DESCRIPTION:

LOTS 8, 11 AND 12, BLOCK 6, OCEAN VIEW, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 8, PAGE 61, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CERTIFICATION

THE UNDERSIGNED, A SURVEYOR, DULY AUTHORIZED TO PRACTICE UNDER THE LAWS OF THE STATE OF FLORIDA HEREBY CERTIFIES THAT THE CONSTRUCTION OF THE IMPROVEMENTS DESCRIBED IS COMPLETE SO THAT SUCH MATERIAL, I.E. EXHIBIT B (1), TOGETHER WITH THE PROVISIONS OF DECLARATION, DESCRIBING THE CONDOMINIUM PROPERTY, IS AN ACCURATE REPRESENTATION OF THE LOCATION AND DIMENSIONS OF THE IMPROVEMENTS, AND THE IDENTIFICATION, LOCATION AND DIMENSIONS OF THE COMMON ELEMENTS AND OF EACH UNIT CAN BE DETERMINED FROM THESE MATERIALS.

ARTHUR V STROCK & ASSOCIATES, INC.

CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

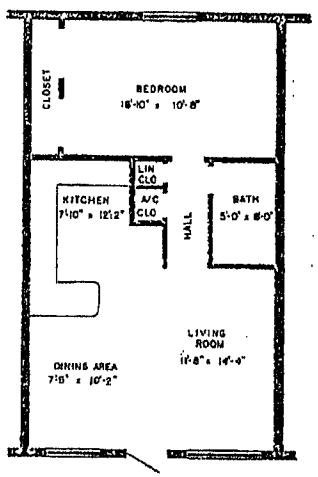
Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM

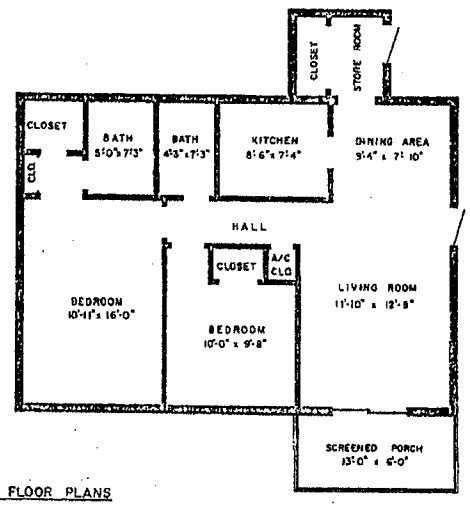
DRAWING NUMBER: DATE: 5-18-82 | 345 PG. 1

DRAWN BY: Pd
CHECKED BY:
SHEET OF 5
DWG. NO. 7AC6 00

EXHIBIT B(1)



UNITS: B, D, G, I & K (AS SHOWN)
UNITS: A, C, E, F, H & J (REVERSED)



TYPICAL FLOOR PLANS

0 1 2 3 4 5 10
SCALE IN FEET

UNITS: L & M

BOARDWALK CONDOMINIUM

ARTHUR V. STROCK & ASSOCIATES, INC.

CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

EXHIBIT B(v) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM

DRAWING NUMBER: 345 PL 1

DATE: 5-18-82

DRAWN BY: Ele

CHECKED BY:

SHEET: 5 OF 5

FILE NO. 7606.00

EXHIBIT B (v)

Property Management Agreement

This Agreement is entered between Augustus B Fort Jr.(Owner) and Alex Saffron (Property Manager) for the property management of 715 S. Ocean Drive, Unit F, Fort Pierce, FL 34949. Alex Saffron agrees to go on record with City of Fort Pierce as the Property Manager and carry out the duties as needed.

As Property Manager, the following responsibilities are included:

1. Ensure proper response and resolution to complaints and violations of city code.
2. Make basic repairs as needed and/or coordinate the appropriate repair company.
3. Respond to emergencies of guests. Phone number will be displayed in unit.
4. General safety maintenance — i.e… check fire alarms, change filters
5. Notify owner if out of town during a guest stay.
6. Assist with check in/check out as needed.

In exchange for these duties, Property Manager will be paid for services and any materials. These payments will be mutually agreed on prior to the services rendered.

Signed on: June 21, 2020

Augustus B. Fort signed electronically 6/21/2020 11:55am

Augustus B. Fort (Owner)
49 Woodland Drive, #201
Vero Beach, FL 34949



Alex Saffron (Property Manager)
7402 Santa Rosa Pkwy.
Fort Pierce, Fl 34951

VACATION RENTAL SHORT TERM LEASE AGREEMENT

This Vacation Rental Short Term Lease Agreement (this "Agreement") is made by and between Augustus B Fort Jr.("Owner") and _____ ("Guest") as of the date last written on the signature page of this Agreement. Owner and Guest may be referred to individually as "Party" and collectively as "Parties." For good and valuable consideration, the sufficiency of which is acknowledged, the Parties agree as follows:

1. Property. The property is described as a condominium with one (1) bedrooms and one (1) bathrooms located at 715 South Ocean Dr Unit F, Fort Pierce, FL 34949 (the "Property"). The Property is owned by Owner. The Property is fully furnished by Owner and equipped for light housekeeping. The following amenities are included in the Property:

- microwave, stove, refrigerator
- small kitchen appliances, pots/pans, cooking utensils, dishes, silverware
- wifi
- bed and bath linens
- Beach towels, chairs, umbrellas
- books and games

A starter supply of household cleaning and hygiene products may be available in the Property for use. Guest is responsible for purchasing any additional supplies and all food and beverages.

2. Rental Party. All persons in the rental party will be bound by the terms of this Agreement. Only persons listed on this Agreement may stay in the Property. "Rental Party" means Guest plus the following persons:

First Name & Last Name	Relationship to Guest
_____	_____
_____	_____
_____	_____

The total number of adults in the Rental Party will be _____2___. The total number of children in the Rental Party will be ____0_____.

3. Maximum Occupancy. The maximum number of persons allowed to stay in the Property is limited to two (2), unless the Owner gives its prior written consent. A charge of _____NA_____ per person per night will be assessed for each person who stays in the Property in addition to the Rental Party. Guest will be charged without notice for additional persons staying in the Property and not disclosed to Owner.

4. Visitors. A visitor is an occupant of the Property who is not staying overnight. The total number of persons permitted in the Property at any given time, including visitors, is five (5). Any visitor staying

overnight is subject to additional charges. No visitor will be allowed to use the common facilities, when Guest is not on the Property.

5. Rental Period & Check-In. The term of this lease will be from _____("Arrival Date") to _____("Departure Date"). The Property will be ready for Guest's occupancy beginning at 3pm on the Arrival Date and the Property must be vacated by 11am on the Departure Date, unless otherwise agreed by Owner. If Guest or any member of the Rental Party remains on the Property beyond the Departure Date, Guest will be responsible to pay the rental rate prescribed in Section 8 below for the period of time between Departure Date and the actual date Guest and all members of the Rental Property vacate the Property. The Property requires a two (2) night minimum stay.

6. Keys & Access Codes. Owner will provide Guest with door access codes to the rental. The code is _____.

7. Rental Rules & Restrictions. Guest agrees to abide by the Rules and Regulations of Boardwalk Condominium and any other restrictions imposed by Owner (the "Rules"), attached to this Agreement as Exhibit A, at all times while on the Property and will cause all persons in the Rental Party and any visitors that Guest permits on the Property to abide by the Rules while on the Property. In addition, Guest agrees to abide by the following restrictions by Owner:

(A) Follow all city, state, and federal laws.
(B) No smoking in unit
(C) Pets only with approval

If any person in the Rental Party fails to follow any of the Rules, the Rental Party may be asked to vacate the Property and Guest will forfeit all rent paid.

8. Reservation Deposit and Payment. Guest agrees to pay the rent and fees described below (the "Total Amount Due"). A deposit in the amount of _____ (the "Reservation Deposit") is due and payable upon return of this signed Agreement in order to secure Guest's reservation. The Reservation Deposit is non-refundable and will be applied toward the rental rate. Payment in full of the following fees, less the Reservation Deposit, will be due within _____ days before the Arrival Date.

Rental rate:	_____
Cleaning service fee:	_____
Security Deposit:	_____
State and local sales/rental taxes: ☐ EXEMPT	_____
Total Amount Due	**_____**
(Less reservation deposit due upon receipt)	(_____)
Total Balance Due	**_____**

Acceptable payment methods are:

☐ Electronic payment (PayPal, Zelle,Venmo) Major Credit Cards or cashiers check.

☐ Payment through Website; _____

Checks should be made payable to: Augustus B Fort Jr. and sent to: 49 Woodland Drive #201, Vero Beach, FL 32962. A fee of $50.00 will be charged to Guest for Insufficient Funds.

9. Security Deposit. Owner reserves the right, at its discretion, to charge a security deposit at the time of reservation in the amount of $_____. This deposit will be refunded after Guest's departure and an inspection of the Property by Owner, less any deductions for damage to the Property or furnishings, excessive mess requiring additional cleaning or other costs incurred outside the normal course due to Guest's stay.

10. Cancellation. If Guest cancels the reservation less than three (3) days before the Arrival Date, the Total Amount Due will be forfeited.

11. Cleaning. Daily housekeeping services are not included in the rental rate. Throughout the rental period, Guest will be responsible for keeping the Property clean and in good condition. Any unsafe or dangerous condition must be reported to Owner immediately. Guest acknowledges that on the Arrival Date, the Property is in good condition, except for any defect Guest may report to Owner by the end of the day of the Arrival Date. The Property should be left in the same condition as it was found by Guest on the Arrival Date. Guest promises to leave the Property in good repair. A cleaning fee of $200 will be charged to the Guest if it is left in poor condition.

12. Furnishings. The following furnishings will be provided with the Property:

- Fully furnished and equipped condo

Furnishings are subject to change without notice. Furniture, bedding, kitchen equipment, utensils, and any other personal property supplied with the Property must not be removed from the Property. Loss of any items within the Property or damage to the Property or furnishings in excess of normal wear and tear will be charged to Guest. The Property will be inspected by Owner after Guest's departure. All contents of the Property are the property of Owner. If an item should break, Guest must notify the Owner immediately. Guest is not permitted to alter the wiring of any television, computer, or gaming equipment provided by the owner.

13. Parking. Parking is limited to one (1) space. Guest may only park in designated parking spot marked "F". Any illegally parked cars may be subject to towing and/or fines.

14. Mechanical Failures. Owner attempts to properly maintain the Property. While all electrical and mechanical equipment within the Property are in good working order, Owner cannot guarantee against mechanical failure of electrical service, stopped plumbing, water supply, heating, air conditioning, audio visual equipment, internet access, cable service, or appliances, etc. Guest agrees to report any inoperative equipment or other maintenance problem to Owner immediately. Owner will make every reasonable effort to have repairs done quickly and efficiently. Guest will allow Owner or a person permitted by Owner access to the Property for purposes of repair and inspection. Owner is not responsible for any inconvenience that may occur and no refunds or rent reductions will be made due to failure of such items.

15. Acts of God. If there is a storm or severe weather and a mandatory evacuation order is issued by state or local authorities, Guest shall be entitled to a prorated refund for each night Guest is unable to occupy the Property. Owner will not be liable or deemed in default under this Agreement for any failure to perform or delay in performing any of its obligations due to or arising out of any act not within its control, including, without limitation, acts of God.

16. Limitation on Liability. Owner is not responsible for any accidents, injuries or illness that occur to any member of the Rental Party or Guest visitors while on the Property. Owner is not responsible for loss of personal belongings or valuables belonging to any member of the Rental Party or any of Guest's visitors. Guest agrees to assume the risk of any harm arising from use of the Property. UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, TORT, CONTRACT, STRICT LIABILITY, OR OTHERWISE, SHALL OWNER BE LIABLE TO GUEST OR ANY OTHER PERSON FOR ANY DAMAGES OF ANY NATURE WHATSOEVER INCLUDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR GUEST'S RENTAL OF THE PROPERTY OR USE OF THE PROPERTY. IN NO EVENT WILL OWNER BE LIABLE FOR ANY DAMAGES IN CONNECTION WITH THIS AGREEMENT, EVEN IF OWNER SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGE.

17. Indemnification. Guest acknowledges that the use of the Property by the Rental Party and Guest's visitors is entirely at their own risk. Guest will indemnify and hold harmless Owner from any and all expenses, costs, damages, suits, actions, or liabilities whatsoever arising from or related to any and all loss of or damage to personal property, injury or death resulting from the use or occupancy of the Property or the failure of any member of Rental Party or Guest's visitors to observe the Rules and restrictions set forth in Paragraph 7.

18. Violation of Agreement. If Guest or any member of the Rental Party violates any of the terms of this Agreement, including but not limited to maximum occupancy, visitors and rental rules and restrictions, Owner may evict Guest and the Rental Party from the Property and Guest will forfeit all rent and security deposit paid.

19. Governing Law. This Agreement and all transactions contemplated by this Agreement will be governed by, and constructed and enforced in accordance with the laws of the State of Florida (not including its conflicts of laws provisions). Any dispute arising from this Agreement shall be resolved through mediation. If the dispute cannot be resolved through mediation, then the dispute will be resolved through binding arbitration conducted in accordance with the rules of the American Arbitration Association.

20. Amendments. This Agreement may be amended or modified only by a written agreement signed by both Owner and Guest.

21. No Waiver. Neither Owner nor Guest shall be deemed to have waived any provision of this Agreement or the exercise of any rights held under this Agreement unless such waiver is made expressly and in writing.

22. Severability. If any provision of this Agreement is held to be invalid or unenforceable in whole or in part, the remaining provisions shall not be affected and shall continue to be valid and enforceable as though the invalid or unenforceable parts had not been included in this Agreement.

23. Notices. Any notice or communication under this Agreement must be in writing and sent via:
- electronic email transmission

24. Successors and Assigns. This Agreement will inure to the benefit of and be binding upon Owner, its successors and assigns, and upon Guest and its permitted successors and assigns.

25. Entire Agreement. This Agreement and Exhibit A represents the entire understanding and agreement between the Parties with respect to the subject matter of this Agreement and supersedes all other negotiations, understandings and representations (if any) made by and between the Parties.

SIGNATURES

Owner Signature	**Guest** Signature
Augustus B Fort Jr.	
Owner Name	**Guest** Name
Date	Date

EXHIBIT A
RULES & REGULATIONS
of
715 South Ocean Drive Unit F, Fort Pierce, Florida 34949

-Remove all trash and dispose of in the dumpster located in the back-parking lot

-Peaceful enjoyment of common areas at reasonable hours without excessive noise or music

-Pets need to remain in compliance with local leash and pet fecal disposal laws.

-Smoking is prohibited

-Park in assigned parking space labeled “F” or “Guest”

-Do not litter

-Wash sand off at the front hose to prevent drain clogs.

-Do not leave air conditioning on with windows and or doors open.

-Do not set A/C lower than 69 Degrees and return A/C to 77 Degrees when check out occurs.

-Do not remove any property belonging to condo except beach towels, beach folding chairs, sand toys and umbrellas. The exception items need to be returned to the condo with the sand washed of prior to condo entry.

- Do not give out assigned door code to any party not staying in the condo.

-No Running in common areas or stairwells.

-Do not disturb or harass local wildlife such as sea turtles, manatees and any other wildlife.

-It is unlawful to walk on the sand dunes only use designated walkways.

-Use pedestrian crosswalks to cross the street to the beach.

-No illegal drugs allowed on property.

-No toxic chemicals allowed on property.

-Follow all local and state laws.

Helpful Hints:

1. You enter the access code to unlock the door and when leaving just press the lock icon to lock. The door code will be set to the last four digits of your phone number.

2. The kitchen is fully equipped, please feel free to use pots, pans, dishes, appliances (toaster, waffle maker, George Foremen grill, blender, etc under cabinet). Help yourself to coffee -there is usually creamer available.

3. There are games in the linen closet. Also, you may help yourself to any of the books in the condo.

4. Bath towels are available in the linen closet. Soap, shampoo and conditioner are also provided. Extra blankets are in bedroom basket and closet.

5. The bedroom closet has beach chairs, umbrellas, beach towels, and blankets for your use. Please do not take the bath towels onto the beach.

6. Please leave dirty laundry in hamper in closet.

7. If you are a great cook (like me) and burn something, open door to air out!

8. Contact me when checking out so that I may reset the door code, ordering cleaning, and send back the deposit.

Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards

Lead Warning Statement

Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention.

Owner's Disclosure

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

i) ____ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).
(ii) _x___ Owner has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the Owner (check (i) or (ii) below):

(i) ____ Owner has provided Guest with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).
(ii) _x___ Owner has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

Guest's Acknowledgment (initial)

(c) _____ Guest has received copies of all information listed above.

(d) _____ Guest has received the pamphlet Protect Your Family from Lead in Your Home.

Certification of Accuracy

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

	Augustus B Fort Jr.	
Signature of **Owner**	Name of **Owner**	Date
Signature of **Guest**	Name of **Guest**	Date

RULES & REGULATIONS
of
715 South Ocean Drive Unit F, Fort Pierce, Florida 34949

-Remove all trash and dispose of in the dumpster located in the back-parking lot

-Peaceful enjoyment of common areas at reasonable hours without excessive noise or music

-Pets need to remain in compliance with local leash and pet fecal disposal laws.

-Smoking is prohibited

-Park in assigned parking space labeled “F” or “Guest”

-Do not litter

-Wash sand off at the front hose to prevent drain clogs.

-Do not leave air conditioning on with windows and or doors open.

-Do not set A/C lower than 69 Degrees and return A/C to 77 Degrees when check out occurs.

-Do not remove any property belonging to condo except beach towels, beach folding chairs, sand toys and umbrellas. The exception items need to be returned to the condo with the sand washed of prior to condo entry.

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-Do not disturb or harass local wildlife such as sea turtles, manatees and any other wildlife.

-It is unlawful to walk on the sand dunes only use designated walkways.

-Use pedestrian crosswalks to cross the street to the beach.

-No illegal drugs allowed on property.

-No toxic chemicals allowed on property.

-Follow all local and state laws.

Helpful Hints:

1. You enter the access code to unlock the door and when leaving just press the lock icon to lock. The door code will be set to the last four digits of your phone number.

2. The kitchen is fully equipped, please feel free to use pots, pans, dishes, appliances (toaster, waffle maker, George Foremen grill, blender, etc under cabinet). Help yourself to coffee -there is usually creamer available.

3. There are games in the linen closet. Also, you may help yourself to any of the books in the condo.

4. Bath towels are available in the linen closet. Soap, shampoo and conditioner are also provided. Extra blankets are in bedroom basket and closet.

5. The bedroom closet has beach chairs, umbrellas, beach towels, and blankets for your use. Please do not take the bath towels onto the beach.

6. Please leave dirty laundry in hamper in closet.

7. If you are a great cook (like me) and burn something, open door to air out!

8. Contact me when checking out so that I may reset the door code, ordering cleaning, and send back the deposit.

ADDITION TO THE BY - LAWS

Amendment to DECLARATION OF CONDO OF
BOARDWALK CONDOMINIUM ASSOCIATION, INC.

19. USE AND OCCUPANCY RESTRICTIONS

19.12 **Parking Restrictions.**
Only automobiles will be parked in the parking areas of the condominium property. No other vehicles and objects, including but not limited to trailers, boats, motor homes and trucks over 3/4 ton may be parked or placed upon any of the condominium property.

Exceptions: Moving vans shall be permitted to park, but not on the grass for the purpose of loading and unloading; **Vehicles**, regardless of classification, necessary for the **maintenance, care or protection** of the Properties; **Service and delivery vehicles**, regardless of classification, during regular business hours; **Vehicles for handicapped persons; Police and fire safety vehicles**

The following restrictions also apply:

No repair (including changing of oil) of a vehicle shall be made within the Condominium except for minor repairs necessary to permit removal of a vehicle. However, washing or waxing of a vehicle is permitted.
No motor vehicle, including moving vans, shall be parked at any time on the grass/swales within the Condominium.
Except where safety dictates otherwise, horns shall not be used or blown while a vehicle is parked, standing in or driving through parking areas. Racing engines and loud exhausts shall be prohibited. No vehicle shall be parked with motor running.

Remedy of Towing. If upon the Association's provision of that notice required by Section 715.07, Florida Statutes, and any applicable County Ordinances, amended from time to time, an offending vehicle Owner does not remove a prohibited or improperly parked vehicle from the Condominium, the Association shall have the option and right to have the vehicle towed away at the vehicle Owner's expenses. By this provision, each Owner and vehicle Owner provides the Association with the necessary consent to effect the tow.

STATE OF FLORIDA
ST. LUCIE COUNTY

THIS IS TO CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF THE ORIGINAL.

JOANNE HOLMAN, CLERK

By [signature]

Date 4-25-2002

Return:
Olmar W. Baertl
715 So Ocean Drive, Unit 111
Fort Pierce Fl 34949

JOANNE HOLMAN, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
File Number: 2033769 OR BOOK 1518 PAGE 2617
Recorded:04/24/02 11:19

BOARDWALK CONDOMINIUM

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BOARDWALK CONDOMINIUM ASSOCIATION, INC.

715 South Ocean Dr.
Ft. Pierce, FL 34949

TO WHOM IT MAY CONCERN

ADDITION TO THE BY-LAWS

The following attached addition to the By Laws was unanimously approved by all members and the Board of Directors on April 17th, 2002

William J Wilkinson
(President)

Otmar W. Baertl
(Secretary/Treasurer)

OR BOOK 1518 PAGE 2619

Notary Public

STATE OF FLORIDA, COUNTY OF ST LUCIE

The attached instrument was acknowledged before me this 4/24/02 (date) by Dr./Mrs./Ms. William J Wilkinson Otmar Baertl (name of person acknowledging), who is personally known to me or who has produced Florida Driver License Driver License TYPE OF I.D. as identification and who did/did not take an oath.

Dorothy M. Davis (Signature of Notary)

Dorothy M. Davis (Name of Notary, Typed, Printed or Stamped)

Notary (Title)

(Commission Serial Number)

OFFICIAL NOTARY SEAL
DOROTHY M DAVIS
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. DD039615
MY COMMISSION EXP. JULY 5,2005

2.1 Assessment means a share of the funds required for the payment of common expenses, which from time to time is assessed against the unit owners.

2.2 Association means BOARDWALK OWNERS ASSOCIATION, INC., the entity responsible for the operation of this Condominium.

2.3 Board of Directors means the representative body responsible for the management of the Condominium and business of the Association.

2.4 By-Laws means the By-Laws of the Association, as they exist from time to time. A copy of the By-Laws is attached hereto as Exhibit E, and incorporated herein by reference.

2.5 Common Elements means the portions of the condominium property (including the tangible personal property required for the maintenance and operation of the condominium property) not included in the units.

2.6 Common Expenses means all expenses and assessments properly incurred by the Association for the Condominium and includes, but is not limited to: the expenses of administration and maintenance, operation, repair and replacement of the common elements and of the portions of units to be maintained by the Association; taxes, special assessments and insurance for the common elements; other expenses declared to be common expenses herein and in the By-Laws; and any other valid charge against the Condominium as a whole.

2.7 Common Surplus means the excess of all receipts of the Association, including but not limited to, assessments, rents, profits and revenues on account of the common elements, over the amount of common expenses.

2.8 Condominium means all of the condominium property as a whole when the context so permits, as well as that form of ownership of real property which is comprised of units that may be owned by one or more persons, and in which there is appurtenant to each unit an undivided share in the common elements.

2.9 Condominium Act means Chapter 718, Florida Statutes, in existence as of the date of this Declaration.

2.10 Condominium Parcel means a unit, together with the undivided share in the common elements which is appurtenant to the unit.

2.11 Condominium Property means and includes the land hereby submitted to the condominium form of ownership, all improvements thereon, and the common elements; and all easements and rights appurtenant thereto.

2.12 Declaration or Declaration of Condominium means this intrument as it may from time to time be amended.

2.13 Developer means K. M. BROOKS and LOUISE M. SPARKS, their heirs, personal representatives and assigns, and whoever offers for sale condominium parcels created herein in the ordinary course of business; except the term shall not include the owners of units who have not acquired all the right, title and interest of K. M. BROOKS and LOUISE M. SPARKS, in the condominium property.

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2.14 Institutional Mortgagee means a bank, bank holding company, or subsidiary thereof, savings and loan association, insurance company, union pension fund, mortgage company approved by Developer, its successor, grantees or assigns, agency of the United States Government, or Developer, its grantees, successors and assigns holding a first mortgage of public record on a condominium parcel or on any portion of the condominium property.

2.15 Land means the real property in St. Lucie County, Florida, which is being submitted to condominium ownership, and is more particularly described in the introductory paragraph hereof.

2.16 Limited Common Elements means those common elements which are reserved for the use of a certain unit to the exclusion of other units, and for all purposes herein shall be treated as common elements as to the unit for which they are reserved.

2.17 Occupant means the person or persons, other than the unit owner, in possession of a unit or limited common elements.

2.18 Special Assessment means a share of the funds required for payment of common expenses which are unbudgeted or for which insufficient provision is made in the budget, occasioned for unforeseeable and fortuitous events, which from time to time may be assessed against the unit owners.

2.19 Unit or Residential Unit means a part of the condominium property which is subject to private ownership, to be used as a single family residence and as designated on the exhibits attached to this Declaration.

2.20 Unit Owner means the owner of a condominium parcel.

2.21 Singular, Plural, Gender. Whenever the context so permits, the use of the singular shall include the plural and the plural shall include the singular, and the use of any gender shall be deemed to include all genders.

3. DEVELOPMENT PLAN AND IDENTIFICATION OF UNITS. The condominium property consists of the land, all easements and rights appurtenant thereto, and the buildings constructed thereon, comprising in total the units, common elements and limited common elements. The improvements on the land consist of two (2) 2-story buildings in which all of the units are located. One building, containing eleven (11) units, possesses five (5) units on the first floor (Units A through E, inclusive), and six (6) units on the second floor (Units F through K, inclusive). The second 2-story building contains two (2) units, Unit M on the first floor, and Unit L on the second floor. The condominium has thirteen (13) units in total.

The units have been created through the conversion of existing improvements to the condominium form of ownership. All units have been previously occupied, for the most part by transient tenants as vacation or seasonal residences.

3.1 Designation of Units. Each unit in the two (2) buildings of the condominium is designated alphabetically by letter, A through M, inclusive, for a total of thirteen (13) units. No unit bears the same alphabetical designation as any other unit.

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3.2 Unit Boundaries.

(a) Each unit shall have as its boundary lines the interior unpainted finished surfaces of the ceiling, floor, and perimeter walls. All weight bearing walls and solid concrete columns located within a unit constitute part of the common elements up to the unpainted finished surface of the walls and columns. All doors, glass or otherwise, and screening which are part of or in the perimeter walls of a unit shall be deemed a part of the unit up to the exterior unfinished surface thereof.

(b) All pipes, wires, conduits and other utility lines, regardless of location, constitute part of the common elements, up to their outlets.

(c) The screened porch of any unit is a part of that unit. The boundary lines of each such screened porch are the interior vertical and horizontal surfaces thereof, and the exterior unpainted finished surface of the perimeter baluster or wall of any screened porch, but the Association, and not the unit owners, shall maintain and repair the exterior baluster or wall of any screened porch. The planes of all boundaries shall be extended to the point of intersection with other boundaries, if necessary.

(d) The ventilation chases and plumbing chases located within a unit are common elements. The boundary lines of each chase shall be the exterior unpainted surfaces thereof.

4. COMMON ELEMENTS. The common elements of the condominium consist of the Land and all other parts of the Condominium Property not within the apartments, including all tangible personal property used in the maintenance and operation of the condominium. Included within the meaning of Common Elements are the following:

(a) The ventilation chases, plumbing chases, and concrete columns within the units;

(b) Easements through units for conduits, ducts, plumbing, wiring and other facilities for the furnishing of utility services to units and the common elements;

(c) An easement of support in every portion of a unit which contributes to the support of the building;

(d) Installations for the furnishing of utility and other service to more than one unit or to the common elements or to a unit other than the unit containing the installation; and

(e) The condominium property which is not included within the units.

5. LIMITED COMMON ELEMENTS. Those areas reserved for the use of a certain unit to the exclusion of other units are designated as limited common elements, and are shown and located on Exhibit B, attached hereto. The limited common elements include the parking space serving a unit, air-conditioning and heating equipment servicing a unit and located outside of that unit, including air-conditioning compressors and ducts located outside the unit served.

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5.1 Responsibility of Unit Owners. The unit owner who has the right to the exclusive use of a limited common element, other than paved parking spaces, shall be responsible, at his cost and expense, for the maintenance, care, and preservation of the limited common element. The Association shall maintain and repair the exterior of the balusters or walls of the screened porches.

5.2 Responsibility of Association. Except as provided in 5.1 above and as elsewhere provided herein, any expense for the maintenance, repair or replacement relating to common elements shall be treated and paid for as a part of the common expenses of the Association. Should any maintenance, repair or replacement be caused by the negligence or misuse by a unit owner, his family, guests, employees, and licensees, he shall be responsible therefor, and the Association shall have the right to levy an assessments against the owner's unit, which assessment shall have the same force and effect as all other assessments.

6. SURVEY, SITE PLAN AND GRAPHIC DESCRIPTION OF IMPROVEMENTS. Attached hereto as composite Exhibit B is a survey of the Land, graphic descriptions of the improvements in which units are located, a Plot Plan locating the common elements and limited common elements, and floor plans and cross sections for the units in the Condominium.

6.1 Surveyor's Certificate. Attached hereto as Exhibit A and incorporated herein by reference is the certificate of a surveyor authorized to practice in Florida certifying that the construction of the improvements is substantially complete so that Composite Exhibit B, together with the provisions of this Declaration describing the condominium property, is an accurate representation of the location and dimensions of the improvements, and that the identification, location and dimensions of the common elements and of each unit can be determined from these materials.

7. POSSESSION AND ENJOYMENT OF CONDOMINIUM PARCELS AND APPURTENANCES.

7.1 Condominium Parcels. Each condominium parcel is a separate parcel of real property, the ownership of which shall be in fee simple. Each condominium parcel includes the unit, the undivided share of the common elements which is appurtenant to that unit, and the interest of the unit in the limited common elements appurtenant thereto.

7.2 Appurtenances. There shall pass with each unit as appurtenances thereto, the following:

(a) An undivided share in the common elements;

(b) An undivided share in common surplus;

(c) An exclusive easement for the use of air space occupied by the unit as it exists at any particular time and as the unit may lawfully be altered or reconstructed from time to time, which easement shall be terminated automatically in any air space which is vacated from time to time;

(d) Membership of each unit owner in the Association and the interests of each unit in the funds and assets held by the Association;

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(e) The right to use all of the common elements for their intended purposes, subject to the provisions of the Declaration, the By-Laws, and such reasonable rules and regulations as may from time to time be established by the Association; but no use shall hinder or encroach upon the lawful rights of other unit owners;

(f) The exclusive right to use such portion of the common elements as may be provided by this Declaration to be limited common elements appurtenant exclusively to the unit.

8. RESTRAINT UPON SEPARATION AND PARTITITION OF COMMON ELEMENTS AND LIMITED COMMON ELEMENTS. The undivided share in the common elements and limited common elements which is appurtenant to a unit shall not be separated therefrom and shall pass with the title to the unit, whether or not separately described.

(a) A share in the common elements and limited common elements appurtenant to a unit may not be conveyed or encumbered except together with the unit;

(b) The shares in the common elements and limited common elements appurtenant to the units shall remain undivided, and no action for partition of the common elements or limited common elements shall lie.

9. PERCENTAGE OWNERSHIP OF COMMON ELEMENTS AND SHARING OF COMMON EXPENSES AND COMMON SURPLUS. The undivided share in the common elements appurtenant to each unit and the percentage of sharing common expenses and of owning common surplus attributable to each unit is shown on Exhibit C attached hereto and incorporated herein by reference. The respective undivided interests as set forth in Exhibit C have been carefully established, giving effect to numerous criteria, and cannot be changed, altered or amended except as provided in this Declaration and the Condominium Act.

10. TAX ASSESSMENTS. For the purposes of ad valorem taxation, the interest of the owner of a condominium parcel in his condominium unit and in the common elements shall be considered as a unit. The value of the unit shall be equal to the percentage of the value of the entire condominium, including land and improvements, as has been assigned to the unit as its undivided share of the common elements by this Declaration. The total of all of the percentages equals 100% of the value of all of the land and improvements thereon.

11. EASEMENTS. The following easements are hereby granted or reserved:

11.1 Easements for Unintentional Encroachments. Perpetual easements are granted and reserved for encroachments presently existing or which may hereafter be caused by settlement or movement of the building or minor inaccuracies in construction, which easements shall continue until such encroachments no longer exist. If any part of the condominium property is destroyed and then rebuilt, encroachments due to construction shall be permitted and a valid easement for said encroachments and the maintenance thereof shall exist.

11.2 Utility Easements. Easements are hereby granted and reserved for the Developer, unit owners, and the Association through the condominium property as may be required for utility service in order to serve the Condominium.

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11.3 Ingress and Egress. An easement is hereby granted and reserved to Developer, its successors or assigns, for pedestrian and vehicular traffic over, through, and across such portions of the common elements as may from time to time be intended and designated for such uses and purposes, for the use and benefit of the unit owners, their families and invitees, in obtaining ingress and egress for all such units to public rights of way.

12. MEMBERSHIP IN ASSOCIATION AND VOTING RIGHTS.

12.1 Membership. Every owner of a unit, whether he has acquired title by purchase from Declarant, Declarant's grantees, successors or assigns, or by gift, conveyance or operation of law, is bound to and hereby agrees that he shall accept membership in the Association and does hereby agree to be bound by this Declaration, the By-Laws of the Association and the rules and regulations enacted pursuant thereto, and the provisions and requirements of the Condominium Act and lawful amendments thereto. Membership is automatic upon acquisition of a unit and approval by the Association, and may not be transferred apart and separate from a transfer of the ownership of a unit. Membership shall automatically terminate upon sale or transfer of the unit, whether voluntary or involuntary.

12.2 Voting Rights. There shall be one person with respect to each unit who shall be entitled to vote at any meeting of the unit owners. If a unit is owned by more than one individual, the owners of said unit shall designate one of them as the voting member. If a unit is owned by a corporation, the Board of Directors of the corporation by duly passed resolution shall designate one of its officers or employees as the voting member. If a unit is owned by a partnership all of the partners by an appropriate resolution shall designate one of the partners as the voting member. If a unit is owned by more than one trustee, all of the trustees shall designate one of the trustees as the voting member. The By-Laws of the Association shall govern the proceedings to follow in designating an individual as the voting member of the unit. If one individual owns more than one unit, he shall have as many votes as the number of units that he owns. The vote of a unit is not divisible.

13. THE ASSOCIATION. The operation and management of the condominium property shall be by BOARDWALK OWNERS ASSOCIATION, INC., a corporation not for profit under the laws of the State of Florida. The Association shall have all of the powers and duties set forth in the Condominium Act, and all of the powers and duties granted to or imposed upon it by this Declaration, the Articles of Incorporation, and the By-Laws of the Association. A copy of the Articles of Incorporation and By-Laws of the Association are attached hereto as Exhibits D and E, respectively, and incorporated herein by reference.

13.1 Limitation Upon Liability of Association. Notwithstanding the duty of the Association to maintain and repair parts of the condominium property, the Association shall not be liable to unit owners for injury or damage, other than the cost of maintenance and repair, caused by any latent condition of the property to be repaired and maintained by the Association or caused by the elements or other unit owners or persons.

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13.2 Notice of Contingent Liability. In any legal action in which the Association may be exposed to liability in excess of insurance coverage protecting it and the unit owners, the Association shall give notice of the exposure within a reasonable time to all unit owners who may be exposed to the liability and they shall have the right to intervene and defend. A copy of each insurance policy obtained by the Association shall be made available for inspection by unit owners at reasonable times.

13.3 Control of the Association. The first Board of Directors of the Association shall remain in office, and Developer shall control the Association until all units in the condominiums have been sold and closed, or until Developer elects to turn over control, whichever shall first occur; provided, however, such term of office of the original Directors shall in no event extend beyond three (3) years after fifty per cent (50%) of said units have been sold and closed, or three (3) months after ninety per cent (90%) of such units have been sold and closed. Upon sale and closing of at least fifteen per cent (15%) of the units of this condominium, the unit owners other than Developer shall be entitled to elect one-third (1/3) of the members of the Board of Directors. Upon the occurrence of any of said events, a special meeting for the purpose of electing interim Directors will be held upon due and proper notice being given to all unit owners in accordance with applicable law and the By-Laws of the Association. The interim election and all subsequent elections shall take place in accordance with the procedures set forth in the By-Laws as applicable to regular meetings. An employee or an agent of a business entity owner, such as Developer, shall be eligible to serve as a Director of the Association. Developer shall be entitled to elect at least one member of the Board of Directors of the Association as long as Developer holds at least one (1) of the units in the condominium for sale in the ordinary course of business.

14. BY-LAWS. The operation of the Condominium shall be governed by the By-Laws of the Association. No modification of or amendment to the By-Laws shall be valid unless set forth in or annexed to a duly recorded amendment to this Declaration in accordance with the formalities set forth herein. No amendment to the By-Laws shall be adopted which would affect or impair the validity or priority of any mortgage held by an Institutional Mortgagee covering any condominium parcel without the consent of said Institutional Mortgagee. Defects or omissions in the By-Laws shall not affect the validity of the Condominium or title to the condominium parcels.

15. MAINTENANCE, ALTERATIONS AND IMPROVEMENTS. Responsibility for the maintenance of the condominium property and restrictions upon alterations and improvements thereof shall be as follows:

15.1 Common Elements.

(a) The maintenance and operation of the common elements shall be the responsibility of the Association and shall be a common expense;

(b) There shall be no material alteration or further substantial improvement of common elements without prior approval, in writing, by record owners of seventy-five per cent (75%) of all units. The cost of such alteration or improvement shall be a special assessment and so assessed.

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15.2 Units and Limited Common Elements.

(a) The Association shall maintain, repair and replace as a common expense:

(1) All portions of a unit contributing to the support of the building, which portions shall include but not be limited to the outside walls of the building, all fixtures on the exterior thereof, the perimeter baluster and walls abutting each screened porch, including the exterior surfaces thereon, boundary walls of a unit, floors and ceiling slabs, load-bearing columns and load-bearing walls, but shall not include screening, windows, exterior doors, glass and interior surfaces of walls, ceilings and floors;

(2) All conduits, plumbing (but not fixtures), wiring and other facilities for the furnishing of utility services which are contained in a unit but which service all or parts of the building other than the unit within which contained;

(3) Ventilation and plumbing chases that are common elements;

(4) All parking area pavement;

(5) All incidental damage caused to a unit by such work shall be promptly repaired by the Association.

(b) The responsibility of the unit owner shall include:

(1) To maintain, repair and replace, at his sole and personal expense, all doors, windows, glass, screens, electric panels, electric wiring, electric outlets and fixtures, air-conditioning and heating equipment, including but not limited to condensers, compressors and evaporators whether located within or outside the unit; refrigerators, other appliances, drains, plumbing fixtures and connections, interior surfaces of all walls, including boundary and exterior walls, floors and ceilings, including screened porch floor coverings, if any, and all other portions of his unit and limited common elements appurtenant thereto, except the portions specifically to be maintained, repaired and replaced by the Association.

(2) To refrain from enclosing, painting or otherwise decorating or changing the appearance of any portion of the exterior of the condominium building, or the screened porch appurtenant to the unit, including, but not limited to, screened porch floor coverings, if any, screening, windows, window coverings, and exterior doors, without the written approval of the Association.

(3) To promptly report to the Association any defect or need for repairs, the responsibility for which is that of the Association.

15.3 Enforcement of Maintenance. In the event the owner of a unit fails to maintain the property as required above, or otherwise violates the provisions hereof, the Association or any other unit owner shall have the right to proceed in a court of

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equity to seek compliance with the foregoing provisions; or the Association shall have the right to assess the unit for the necessary sums to put the improvement within the unit in good condition, and to collect assessments and have a lien for same as is otherwise provided herein. After such assessment, the Association shall have the right, for its employees or agents, to enter the unit and do the necessary work to enforce compliance with the above provisions.

15.4 Alteration and Improvement. A unit owner may make such alteration or improvement to his unit at his sole and personal costs as he may be advised, provided all work shall be done without unduly disturbing the rights of other unit owners; provided, however, nothing herein shall be construed to limit, modify or derogate the right of Developer. Except as herein reserved to Developer, neither a unit owner nor the Association shall make any alteration in the portions of a unit or the buildings which are to be maintained by the Association or remove any portion thereof or make any additions thereto or do anything which would jeopardize the safety or soundness of the unit or building without first obtaining approval in writing of owners of all other units in the building. A copy of plans for all such work prepared by an architect licensed to practice in Florida shall be filed with the Association prior to the granting of such approval and the start of the work.

15.5 Association's Right of Access. The Association shall have the irrevocable right of access to all units from time to time during reasonable hours as may be necessary for the maintenance, repair or replacement of any common elements therein or accessible therefrom or for making emergency repairs therein necessary to prevent damage to the common elements or another unit.

16. ASSESSMENTS. The Association, through its Board of Directors, shall have the power to fix and determine from time to time the sums necessary to provide for the common expenses to be paid by the Association. A unit owner, regardless of how title is acquired, shall be liable for all assessments coming due while he is the owner of a unit. In a voluntary conveyance, the grantee shall be jointly and severally liable with the grantor for all unpaid assessments against the grantor for his share of the common expenses up to the time of such voluntary conveyance.

16.1 No Avoidance By Waiver of Use. The liability for assessments may not be avoided by waiver of the use or enjoyment of any common elements or services, or by abandonment of the unit for which the assessment was made.

16.2 Interest in Default. Assessments and installments thereon, not paid when due, shall bear interest from the date when due until paid at the rate of eighteen per cent (18%) per annum. In the event the unit owner shall be more than thirty (30) days delinquent in the payment of any assessment, the Board of Directors, at its discretion, may upon five (5) days' written notice to the unit owners, declare due and payable all assessments applicable to such unit for the fiscal year of the Association in which the delinquency occurs.

16.3 Lien for Unpaid Assessments. The Association shall have a lien on each condominium parcel and all tangible personal property located within said parcel for the amount of any unpaid assessments, and interest thereon, until paid. Such lien shall also include a reasonable attorney's fee incurred by the Association incident to the collection of such assessment or enforcement of such lien, including such fee in connection with

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any appellate proceedings arising out of any suit for collection or enforcement, and further including costs of collection. Such liens shall be executed and recorded in the Public Records of St. Lucie County, Florida, in the manner provided by the Condominium Act, but such liens shall be subordinate to the lien of any mortgage or any other lien recorded prior to the time of the recording of the claim of lien by the Association. The Board of Directors may take such action as it deems necessary to collect assessments by personal action or by enforcing and foreclosing said lien, and may settle and compromise the same if in the best interests of the Association. The lien shall be effective as and in the manner provided by the Condominium Act and shall have the priorities established by said Act.

16.4 Foreclosure of Lien. Liens for assessments may be foreclosed by suit brought in the name of the Association in like manner as a foreclosure of mortgage on real property, as more fully set forth in the Condominium Act. The Association may, at any sale, bid in the sale and apply as a cash credit against its bid all sums due the Association covered by the lien being enforced.

16.5 Liability of Institutional Mortgagees. If an Institutional Mortgagee obtains title to a condominium parcel as a result of foreclosure of the first mortgage, or as a result of a deed or other arrangements in lieu of foreclosure of the first mortgage, the Institutional Mortgagee, its successors or assigns, shall not be liable for the share of common expenses or assessments by the Association pertaining to such condominium parcel applicable to the time prior to acquisition of title as a result of the foreclosure or deed or other arrangements in lieu of foreclosure, unless such share is secured by a claim of lien for assessments that is recorded prior to the recording of the foreclosed mortgage. Such unpaid share of common assessments shall be deemed to be common expenses collectible from all of the unit owners, including such acquirer, and his successors and assigns. No other sale or transfer shall relieve any unit from liability for any assessments due, nor from the lien of any such subsequent assessment. The written statement of the Association that the lien is subordinate to the institutional mortgage or that the unit is not subject to the assessment shall be dispositive of any question pertaining thereto.

16.6 Liability of Others. Any person who acquires an interest in a unit, except through foreclosure of a first mortgage of record (or deed or other arrangements in lieu thereof), as specifically provided in the subparagraph immediately preceding, including, without limitation, persons acquiring title by operation of law, including purchasers at judicial sales, shall not be entitled to occupancy of a unit or enjoyment of the common elements until such time as all unpaid assessments due and owing by the former owner have been paid.

16.7 Assignment of Claim by Association. The Association, acting through its Board of Directors, shall have the right to assign its claim and lien rights for the recovery of any unpaid assessments to Developer or to any unit owner or group of unit owners, or to any third party.

16.8 No Abridgement of Rights of Institutional Mortgagees. Nothing herein shall abridge or limit the rights or responsibilities of an Institutional Mortgagee of a unit, as set out herein or in the statutes made and provided for same.

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16.9 Budget. The Board of Directors of the Association shall approve the annual budget for this Condomminium in advance for each fiscal year, which budget shall be in the form prescribed by the By-Laws of the Association.

17. LIENS. No liens of any nature may be created subsequent to the recording of this Declaration against the condominium property as a whole (as distinguished from individual units) except with the unanimous consent of the unit owners.

17.1 Consent of Unit Owners. Unless a unit owner has expressly requested or consented to work being performed or materials being furnished to his unit, such labor or materials may not be the basis for the filing of a lien against the unit. No labor performed or materials furnished to the common elements shall be the basis for a lien thereon unless such labor performed or materials furnished was authorized by the Association, in which event the same might be the basis for the filing of a lien against all condominium parcels in the proportions for which the owners thereof are liable for common expenses.

17.2 Partial Release of Lien. In the event a lien against two or more condominium parcels becomes effective, each owner thereof may relieve his condominium parcel of the lien by paying the proportionate amount attributable to his condominium parcel. Upon such payment, it shall be the duty of the lienor to release the lien of record for such condominium parcel.

18. PROVISIONS GOVERNING THE ALIENATION AND MORTGAGE OF UNITS. In order to maintain a community of congenial residents who are financially responsible and to protect the value of the units, the transfer of units by an owner other than Developer shall be subject to the following provisions so long as the Condominium exists and the improvements, in useful condition, exist upon the Land, which provisions each unit owner covenants to observe:

18.1 Transfers Subject to Approval

(a) Sale. No unit owner may dispose of a unit or any interest in a unit by sale without approval of the Association, except to another unit owner.

(b) Gift, Devise or Inheritance. If a unit owner shall acquire his title by gift, devise or inheritance, the continuance of his ownership of a unit shall be subject to the approval of the Association, unless he is already a unit owner approved by Association or Developer.

18.2 Approval by Association. The approval of the Association is required for the transfer of ownership of a unit falling within Paragraph 18.1 and shall be obtained in the following manner:

(a) Notice to Association.

(1) Sale. A unit owner intending to make a bona fide sale of his unit or any interest in it shall give to the Association notice of such intention, together with the name and address of the proposed purchaser, the purchase price and terms, and such other information concerning the porposed purchaser as the Association may reasonably require and an executed copy of the proposed

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contract to sell. Such notice, at the unit owner's option, may include a demand by the unit owner that the Association furnish a purchaser of the unit if the proposed purchaser is not approved, provided, the proposed purchaser qualifies as a unit owner in accordance with this Declaration and the Rules and Regulations promulgated by the Association.

(2) Gift, Devise, or Inheritance; Other Transfers. Any unit owner who has obtained his title by gift, devise or inheritance, or by any other manner not previously considered, shall give to the Association notice of the acquiring of his title, together with such information concerning the unit owner as the Association may reasonably require, and a certified copy of the instrument evidencing the owner's title.

(3) Failure to Give Notice. If the above required notice to the Association is not given, then at any time after receiving knowledge of a transfer or event transferring ownership or possession of a unit, the Association at its election and without notice, may approve or disapprove the transaction or ownership. If the Association disapproves the transaction or ownership, the Association shall proceed as if it has received the required notice on the date of such disapproval.

(4) Application Form. The Association is vested with the authority to prescribe an application form such as may require specific personal, social, financial and other data relating to the intended purchaser or as relates to the "new owner" in the case of a transfer by gift, devise or inheritance, as may reasonably be required by the Association in order to enable the Association to responsibly investigate the intended purchaser or "new owner" within the time limits extended to the Association for that purpose as hereinafter set forth and which application shall be completed and submitted to the Association along with and as an integral part of the notice. A reasonable fee not to exceed Fifty Dollars ($50.00) may be charged to the transferor of a unit for the purpose of defraying the cost of investigation and the costs associated with granting approval, changing books and records and other matters associated with a transfer.

(b) Certificate of Approval.

(1) Sale. If the proposed transaction is a sale, then within fifteen (15) days after receipt of such notice and information, the Association must either approve or disapprove the proposed transaction. Such approval or disapproval shall be transmitted to the seller in writing within the aforesaid fifteen (15) day period, and failure to do so shall constitute approval of the sale. If approved, the approval shall be stated in a certificate executed by the President or Vice-President of the Association, which shall be recorded in the public records of St. Lucie County, Florida, at the expense of the seller.

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(2) Gift, Devise or Inheritance; Other Transfers. If the unit owner giving notice has acquired his title by gift, devise or inheritance or in any other manner, then within fifteen (15) days after receipt of such notice and information, the Association must either approve or disapprove the continuance of the unit owner's ownership of his unit. Such approval or disapproval shall be transmitted to the owner in writing within the aforesaid fifteen (15) day period, and failure to do so shall constitute approval of the ownership. If approved, the approval shall be stated in a certificate executed by the President or Vice-President of the Association, which shall be recorded in the public records of St. Lucie County, Florida, at the expense of the unit owner.

18.3 Disapproval by Association. The Association may disapprove the transfer of ownership of a unit if the transferee does not qualify to be a unit owner pursuant to this Declaration by delivering or mailing to the transferor, within ten (10) days after receipt of the notice of intent to transfer, notice of the disapproval and the grounds therefor. If the Association shall otherwise disapprove a transfer of ownership of a unit, the matter shall be disposed of in the following manner:

(a) Sale. In a sale transaction, and if the notice of sale given by the Unit owner shall so demand, then within fifteen (15) days after receipt of such notice and information, the Association shall deliver or mail to the unit owner an agreement to purchase the unit concerned by a purchaser approved by the Association who will purchase and to whom the unit owner must sell the unit upon the following terms:

(1) The price to be paid shall be the bona fide price stated in the disapproved contract to sell, and a judgment of specific performance of the sale may be entered in any court of competent jurisdiction. If a question arises as to whether or not the sale price is a bona fide price, the question shall be resolved by having the price determined by arbitration in accordance with the then existing rules of the American Arbitration Association, except that the arbitrators shall be two appraisers appointed by the American Arbitration Association who shall base their determination upon the average of their appraisals of the unit.

(2) The purchase price shall be paid in cash.

(3) The sale shall be closed within thirty (30) days after the delivery or mailing of the agreement to purchase, or within ten (10) days after determination of the sale price if such is by arbitration, whichever is later.

(4) A certificate of the Association executed by its President or Vice-President approving the purchaser shall be recorded in the public records of St. Lucie County, Florida, at the expense of the purchaser.

(5) If the Association shall fail to provide a purchaser upon demand of the unit owner in the manner

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provided, or if a purchaser furnished by the Association shall default in his agreement to purchase, then notwithstanding the disapproval, the proposed transaction shall be deemed to have been approved, and the Association shall furnish a certificate of approval as elsewhere provided, which shall be recorded in the public records of St. Lucie County, Florida, at the expense of the seller.

(b) Gift, Devise or Inheritance; Other Transfers. If the unit owner giving notice has acquired his title by gift, devise or inheritance, or in any other manner, then within fifteen (15) days after receipt from the unit owner of the notice and information required to be furnished, the Association shall deliver or mail to the unit owner an agreement to purchase the unit concerned by a purchaser approved by the Association who will purchase and to whom the unit owner must sell the unit upon the following terms:

(1) The sale price shall be the fair market value determined by agreement between Seller and Purchaser within thirty (30) days from the delivery or mailing of such agreement. In the absence of agreement as to price, the price shall be determined by arbitration in accordance with the then existing rules of the American Arbitration Association, except that the arbitrators shall be two appraisers appointed by the American Arbitration Association who shall base their determination upon the average of their appraisals of the unit; and a judgment of specific performance of the sale upon the award rendered by the arbitrators may be entered in any court of competent jurisdiction. The expense of the arbitration shall be paid by the purchaser.

(2) The purchase price shall be paid in cash.

(3) The sale shall be closed within ten (10) days following the determination of the sale price.

(4) A certificate of the Association executed by its President or Vice-President and approving the Purchaser shall be recorded in the public records of St. Lucie County, Florida, at the expense of the Purchaser.

(5) If the Association shall fail to provide a purchaser as required by this instrument, or if a purchaser furnished by the Association shall default in his agreement to purchase, then notwithstanding the disapproval, such ownership shall be deemed to have been approved, and the Association shall furnish a certificate of approval as elsewhere provided, which shall be recorded in the public records of St. Lucie County, Florida, at the expense of the unit owner.

18.4 Mortgage. No unit owner may mortgage the unit, or any interest in it, without the approval of the Association, except to an Institutional Mortgagee, as defined herein, or to a vendor to secure a portion or all of the purchase price. The approval of any other mortgagee may be upon conditions determined by the Association or may be withheld by the Association.

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18.5 Exceptions. The foregoing provisions of this Paragraph 18 shall not apply in the following instances:

(a) A transfer to or purchase by an Institutional Mortgagee, that acquires its title as a result of owning a mortgage upon the unit concerned, and this shall be so whether the title is acquired by deed or other conveyance from the mortgagor, his successors or assigns, or through foreclosure proceedings.

(b) A transfer or sale by an Institutional Mortgagee that so acquires its title as set forth in 18.5(a).

(c) When a purchaser acquires title to a unit at a duly advertised public sale with open bidding provided by law, such as, but not limited to, execution sale, foreclosure sale, judicial sale or tax sale.

(d) The sale or transfer of any unit to or by Developer.

18.6 Unauthorized Transactions. Any sale or mortgage not authorized pursuant to the terms of this Declaration shall be void unless subsequently expressly approved by the Association.

19. USE AND OCCUPANCY RESTRICTIONS. The use of the condominium property shall be in accordance with the following provisions as long as the Condominium exists:

19.1 Units. Each unit shall be occupied and used by a family, its servants and guests, as a single-family residence and for no other purpose.

19.2 Common Elements. The common elements shall be used only for the purposes for which they are intended in the furnishing of services and facilities for the enjoyment of the units.

19.3 Pets. In the absence of duly promulgated rules and regulations of the Association to the contrary, no pets may be kept in units of this condominium other than tropical fish, birds of household variety, or dogs or cats under the weight of twenty (20) pounds.

19.4 Nuisances. No use or practice which is either an annoyance to unit owners or an interference with the peaceful possession and proper use of the Condominium Property by the unit owners shall be allowed. All parts of the Condominium shall be kept in a clean and sanitary condition, and no rubbish, refuse or garbage shall be allowed to accumulate or any fire hazard allowed to exist.

19.5 Insurance. No unit owner shall permit any use of his unit or make any use of the common elements that will increase the cost of insurance upon the Condominium Property.

19.6 Lawful Use. No immoral, improper, offensive or unlawful use shall be made of the Condominium Property. All valid laws, zoning ordinances and regulations of all governmental bodies having jurisdiction shall be observed. The responsibility of meeting the requirements of governmental bodies for maintenance, modification or repair of the condominium property shall be the

same as the responsibility for maintenance and repair of the property concerned.

19.7 Exteriors. No change shall be made in the color of any exterior window, door, storm or hurricane shutter, glass or screen of a unit, except with the prior written consent of the Board of Directors of the Association.

19.8 Alteration of Units. No unit owner shall make or cause to be made any structural modifications or alterations in his unit, or in the water, gas, electrical, plumbing, air-conditioning equipment or utilities therein, without the consent of the Association, which consent may be withheld in the event the Board of Directors determines that such structural alteration or modification would in any manner endanger the building. If the modification or alteration desired by a unit owner involves the removal of any permanent interior partition, the Association may permit such removal if the partition is not a load bearing partition and if removal of the partition does not interfere with any common utility source.

19.9 Noise Abatement. No noise shall be permitted to be transmitted from one unit to another. In the event the Board of Directors of the Association determines that any noise is being transmitted from one unit to another unit and that such noise is unreasonable, the owner of such unit shall, at his own expense, take such steps as shall be necessary to abate the noise to the satisfaction of the Board of Directors of the Association. In the event the owner of the unit fails to abate the noise, the Board of Directors shall take such steps as shall be necessary to abate such noise, and any expenses incurred by the Association in abating the noise, including reasonable attorney's fees, shall be the responsibility of the owner of such unit.

19.10 Signs, Antenna and Aerials. No signs, advertisements or notices of any type shall be displayed on the condominium property and no exterior aerial or antenna shall be placed on the condominium property unless the Board of Directors of the Association consent in writing thereto.

19.11 Regulations. Reasonable regulations concerning the use of the condominium property may be made and amended from time to time by the Board of Directors of the Association.

20. INSURANCE. Insurance, other than title insurance, that shall be carried upon the condominium property and the personal property of the unit owners shall be governed by the following provisions.

20.1 Authority to Purchase. All insurance policies upon the condominium property and the property of the Association shall be purchased by the Board of Directors of the Association. The named insured shall be the Insurance Trustee designated by the Association, individually and as agent for the Association, the unit owners, without naming them, and their mortgagee endorsements and memoranda of insurance to the mortgagees of unit owners. The policies shall provide that payments by the insurer for losses shall be made to the Insurance Trustee designated by the Association. All policies and their endorsements shall be deposited with the Insurance Trustee. Unit owners may obtain coverage at their own expense upon their personal property and for their personal liability and living expenses. The Insurance Trustee may be any bank in Florida with trust powers, as may be designated by the Board of Directors of the Association.

20.2 Coverage.

(a) Liability. The Board of Directors of the Association shall obtain public liability and property damage insurance covering all of the common elements of the Condominium and all property of the Association, and insuring the Association and the unit owners as their interests may appear, in such amounts and providing such coverage as the Board of Directors of the Association may determine from time to time, provided, that the minimum amount of coverage shall be Five Hundred Thousand Dollars ($500,000.00). Said insurance shall include, but not be limited to, hired and non-owned automobile coverage and a cross-liability endorsement to cover liabilities of the unit owners as a group to an individual unit owner.

(b) Casualty Insurance. The Board of Directors of the Association shall obtain fire and extended coverage insurance, and vandalism and malicious mischief insurance, insuring all of the insurable improvements within the Condominium, including property owned by the Association, in and for the Association, all unit owners and their mortgagees, as their interests may appear, in a company acceptable to the standards set by the Board of Directors of the Association, in an amount equal to the maximum insurance replacement value of the property, as determined annually by the Board of Directors of the Association.

(c) Workmen's Compensation. The Board of Directors of the Association shall obtain Workmen's Compensation Insurance in order to meet the requirements of law.

(d) Flood. The Board of Directors of the Association shall obtain flood insurance to meet the requirements of federal, state or local law, or any regulation enacted pursuant to federal, state or local law.

(e) Other Insurance. The Board of Directors of the Association shall obtain such other insurance as the Board of Directors of the Association shall determine from time to time as to be desirable.

(f) Subrogation Waiver. If available, the Board of Directors of the Association shall endeavor to obtain policies which provide that the insurer waives its right to subrogation as to any claim against unit owners, the Association, and their respective servants, agents and guests.

(g) Premiums. Premiums upon insurance policies purchased by the Association shall be paid by the Association as a common expense. The cost of insurance premiums and other incidental expenses incurred by the Association in administering and carrying out any of the provisions of this Paragraph 20 shall be assessed against and collected from unit owners as a common expense.

20.3 Shares of Proceeds. All insurance policies purchased by the Board of Directors of the Association shall be for the benefit of the Association, the unit owners and their mortgagees, as their interests may appear, and shall provide that all proceeds covering losses shall be paid to the Insurance Trustee. The Insurance Trustee shall be designated by the Board

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of Directors of the Association either prior to or at the time an insured loss occurs. The Insurance Trustee shall neither be liable for payment of the premiums, the renewal or the sufficiency of policies, nor the failure to collect any insurance proceeds. The duty of the Insurance Trustee shall be to receive such proceeds as are paid and hold the proceeds in trust for the benefit of the Association, the unit owners and their mortgagees, in the following shares, which shares need not to be set forth on the records of the Insurance Trustee:

(a) Common Elements. Proceeds on account of damaged common elements - an undivided share for each unit, such share being the same as the undivided share in the common elements appurtenant to the unit.

(b) Property (Real and Personal) of the Association. Proceeds on account of damaged property of the Association, an undivided share for each unit, such share being the same as the undivided share in the common elements appurtenant to the unit.

(c) Units. Proceeds on account of damage to units shall be held in the following undivided shares:

(1) When the building is to be restored, for the owners of damaged units in proportion to the cost of repairing the damage suffered by each unit, which cost shall be determined by the Board of Directors of the Association.

(2) When the building is not to be restored - an undivided share for each unit in the building, such share being the same as the undivided share in the common elements appurtenant to the unit.

(d) Mortgagees. In the event a mortgagee endorsement has been issued regarding a unit, the share of the unit shall be held in trust for the mortgagee and the unit owner as their interests may appear; provided, however, that no mortgagee shall have any right to determine or participate in the determination as to whether or not any damaged property shall be reconstructed or repaired, and no mortgagee shall have any right to apply or have applied to the reduction of a mortgage debt any insurance proceeds except distribution of such proceeds made to the unit owner and mortgagee pursuant to the provisions of this Declaration.

20.4 Distribution of Proceeds. Proceeds of insurance policies received by the Insurance Trustee shall be distributed to or for the benefit of the beneficial owners in the following manner:

(a) Expense of the Trust. All expenses of the Insurance Trust shall be paid first, or provisions made for such payment.

(b) Reconstruction or Repair. If the damage for which the proceeds are paid is to be repaired or reconstructed, the remaining proceeds shall be paid to defray the cost of such as hereinafter provided. Any proceeds remaining after defraying such costs shall be distributed to the beneficial owners, remittances to unit owners and their mortgagees being payable jointly to them. This is a covenant for the benefit

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of any mortgagee of a unit and may be enforced by such mortgagee.

(c) Failure to Reconstruct or Repair. If it is determined in the manner hereinafter provided that the damage for which proceeds are paid shall not be reconstructed or repaired, the remaining proceeds shall be distributed to the beneficial owners, remittances to unit owners and their mortgagees being payable jointly to them. This is a covenant for the benefit of any mortgagee of a unit and may be enforced by such mortgagee. There shall be no distribution of remaining proceeds until all debris, remains and residue have been cleared and removed, and the condominium property has been properly landscaped. In the event of loss or damage to personal or real property belonging to the Association, and should the Board of Directors of the Association determine not to replace such personal or real property as may be lost or damaged, the proceeds shall be disbursed to the beneficial owners as common surplus.

(d) Certificate. In making distribution to unit owners and their mortgagees, the Insurance Trustee may rely upon a certificate of the Board of Directors of the Association, as to the names of the unit owners and their respective shares of the distribution; provided, however, that such certificates shall not be binding insofar as Institutional Mortgagees of units are concerned. The Insurance Trustee shall obtain appropriate certificates from all such Mortgagees prior to any disbursement to owners or mortgagees.

20.5 Association's Power to Compromise Claims. The Board of Directors of the Association is hereby irrevocably appointed agent for each unit owner and for each owner of any other interest in the condominium property, for the purpose of compromising and settling all claims arising under insurance policies purchased by the Board of Directors or the Association, and to execute and deliver releases therefor upon payment of claims.

20.6 Mortgagee's Right to Advance Premiums. Should the Association fail to pay insurance premiums when due, or should the Association fail to comply with other insurance requirements set forth in this Declaration, the Institutional Mortgagee holding the greatest dollar volume of unit mortgages shall have the right, at its option, to order insurance policies and to advance such sums as are required to maintain or procure such insurance, and to the extent of the money so advanced, said Institutional Mortgagee shall be subrogated to the assessment and lien rights of the Association as against the individual unit owners for the payment of such items of common expense.

21. RECONSTRUCTION OR REPAIR AFTER CASUALTY.

21.1 Determination to Reconstruct or Repair. If any part of the condominium property shall be damaged by casualty, whether or not it shall be reconstructed or repaired shall be determined in the following manner:

(a) Common Elements. If the damaged improvements is a common element, the damaged property shall be reconstructed or repaired, unless it is determined in the manner

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hereinafter provided that the Condominium shall be terminated.

(b) Property (Real and Personal) of the Association. If the damaged improvement is property owned (in whole or part) by the Association, the damaged property shall be reconstructed or repaired unless it is determined in the manner hereinafter provided that the Condominium shall be terminated.

(c) Condominium Buildings Containing Units.

(1) Lesser Damage. If the damaged improvement is a building, and if units to which fifty per cent (50%) of the common elements are appurtenant are found by the Board of Directors of the Association to be tenantable, the damaged property shall be reconstructed or repaired, unless within sixty (60) days after the casualty it is determined by agreement in the manner hereinafter provided that the Condominium shall be terminated.

(2) Substantial Damage. If the damaged improvement is a building, and if units to which more than fifty per cent (50%) of the common elements are appurtenant are found by the Board of Directors to be not tenantable, then the damaged property will not be reconstructed or repaired and the Condominium will be terminated without agreement as hereinafter provided, unless within sixty (60) days after the casualty the owners of units to which more than seventy-five per cent (75%) of the common elements are appurtenant agree in writing to such reconstruction or repair.

(d) Certificate. The Insurance Trustee may rely upon a certificate of the Association made by its President and Secretary to determine whether or not the damaged property is to be reconstructed or repaired.

21.2 Plans and Specifications. Any reconstruction or repair must be substantially in accordance with the plans and specifications for the original building, portions of which are attached hereto as exhibits; or if not, then according to plans and specifications approved by the Board of Directors of the Association and by the owners of units to which more than seventy-five per cent (75%) of the common elements are appurtenant, including the owners and Institutional Mortgagees of all damaged units, which approval shall not be unreasonably withheld.

21.3 Responsibility. If the damage is only to those parts of units for which the responsibility of maintenance and repair is that of the unit owner, then the unit owner shall be responsible for reconstruction and repair after casualty. In all other instances the responsibility for reconstruction and repair after casualty shall be that of the Association.

21.4 Estimates of Costs. Immediately after a determination is made to rebuild or repair damage to property for which the Association has the responsibility of reconstruction and repair, the Association shall obtain reliable and detailed estimates of the cost to rebuild or repair. Such costs may include professional fees and premiums for such bond as the Board of Directors may require.

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21.5 Special Assessments. The amount by which an award of insurance proceeds to the Insurance Trustee is reduced on account of a deductible clause in an insurance policy shall be assessed against all unit owners in proportion to their shares in the common elements. If the proceeds of such assessments and of the insurance are not sufficient to defray the estimated costs of reconstruction and repair by the Association, or if at any time during reconstruction and repair, or upon completion of reconstruction and repair are insufficient, assessments shall be made against the unit owners in sufficient amounts to provide funds for the payment of such costs. Such assessments on account of damage to common elements shall be in proportion to the units' shares in the common elements. Such assessments on account of damage to units shall be in proportion to the shares of insurance proceeds attributable to each damaged unit if a building is to be restored, as set forth in Paragraph 20.3(c) of this Declaration.

21.6 Construction Funds. The funds for payment of costs of reconstruction and repair after casualty, which shall consist of proceeds of insurance held by the Insurance Trustee and funds collected by the Association from assessments against unit owners, shall be disbursed in payment of such costs in the following manner:

(a) Association. If the total assessments made by the Association in order to provide funds for payment of costs of reconstruction and repair which are the responsibility of the Association are more than Five Thousand Dollars ($5,000.00) then the sums paid upon such assessments shall be deposited by the Association with the Insurance Trustee. In all other cases, the Association shall hold the sums paid upon such assessments and disburse the same in payment of the costs of reconstruction and repair.

(b) Insurance Trustee. The proceeds of insurance collected on account of a casualty, and the sums deposited with the Insurance Trustee by the Association from collections of assessments against unit owners on account of such casualty, shall constitute a construction fund which shall be disbursed in payment of the costs of reconstruction and repair in the following manner and order:

(1) Association - Minor Damage. If the amount of the estimated costs of reconstruction and repair which is the responsibility of the Association is less than Five Thousand Dollars ($5,000.00), then the construction fund shall be disbursed in payment of such costs upon the order of the Association; provided, however, that upon request to the Insurance Trustee by a mortgagee which is a beneficiary of an Insurance policy the proceeds of which are included in the construction fund, such fund shall be disbursed in the manner hereafter provided for the reconstruction and repair of major damage.

(2) Association - Major Damage. If the amount of the estimated costs of reconstruction and repair which is the responsibility of the Association is more than Five Thousand Dollars ($5,000.00), then the reconstruction fund shall be disbursed in payment of such costs in the manner required by the Board of

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Directors of the Association and upon approval of an architect qualified to practice in Florida and employed by the Association to supervise the work.

(3) Unit Owners. The portion of insurance proceeds representing damage for which the responsibility of reconstruction and repair lies with a unit owner shall be paid by the Insurance Trustee to the unit owners, or if there is a mortgagee endorsement as to such unit, then to the unit owner and the mortgagee jointly, who may use such proceeds as they may be advised.

(4) Surplus. It shall be presumed that the first monies disbursed in payment of costs of reconstruction and repair shall be from insurance proceeds. If there is a balance in the construction fund after payment of all costs of the reconstruction and repair for which the fund is established, such balance shall be distributed to the beneficial owners of the fund in the manner hereinbefore stated; except, however, that the part of a distribution to a unit which is not in excess of assessments paid by such owner into the construction fund shall not be made payable to any mortgagee.

(5) Certificate. Notwithstanding the provisions herein, the Insurance Trustee shall not be required to determine whether or not sums paid by unit owners upon assessments shall be deposited by the Association with the Insurance Trustee, nor to determine whether the disbursements from the construction fund are to be upon the order of the Association or upon approval of an architect or otherwise, nor whether a disbursement is to be made from the construction fund, nor to determine whether surplus funds to be distributed are less than the assessments paid by owners. Instead, the Insurance Trustee may rely upon a certificate of the Association, made by its President and Secretary, as to any or all of such matters and stating that the sums to be paid are due and properly payable, and stating the name of the payee and the amount to be paid, provided, that when a mortgagee is required to be named as payee, the Insurance Trustee shall also name the mortgagee as payee of any distribution of insurance proceeds to a unit owner; and further provided, that when the Association or a mortgagee which is the beneficiary of any insurance policy, the proceeds of which are included in the construction fund, so requires, the approval of an architect named by the Association shall be first obtained by the Association before disbursements in payment of costs of reconstruction and repair.

21.7 Equitable Relief. In the event of major damage to or destruction of all or a substantial part of the condominium property, and in the event the property is not repaired, reconstructed, or rebuilt within a reasonable period of time, any unit owner shall have the right to petition a court of equity, having jurisdiction in and for St. Lucie County, Florida, for equitable relief which may, but need not necessarily, include a termination of the Condominium and a partition thereof.

22. TERMINATION OF CONDOMINIUM. The condominium may be terminated in the following manner in addition to any manner provided by the Condominium Act.

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22.1 Destruction. If it is determined in the manner elsewhere provided herein that the building shall not be reconstructed because of substantial damage, the condominium plan of ownership shall be terminated without agreement.

22.2 Agreement. The condominium may be terminated at any time by the approval in writing of all record owners of units and all record owners of mortgages on units. If the proposed termination is submitted to a meeting of the members of the Association, the notice of such meeting shall give notice of the proposed termination, and if the approval of the owners of units to which more than seventy-five per cent (75%) of the common elements are appurtenant, and of the record owners of all mortgages upon the units, are obtained in writing not later than thirty (30) days from the date of such meeting, then the approving owners shall have an option to buy all of the units of the other owners for the period ending on the sixtieth (60th) day from the date of such meeting. Such approvals shall be irrevocable until the expiration of the option, and if the option is exercised, the approvals shall be irrevocable. The option shall be upon the following terms:

(a) Exercise of Option. The option shall be exercised by delivery or mailing by certified mail to each of the record owners of the units to be purchased an agreement to purchase signed by the record owners of the units that will participate in the purchase. The agreement shall indicate which units will be purchased by each participating owner and shall require the purchase of all units owned by owners not approving the termination. The agreement shall effect a separate contract between each seller and purchaser.

(b) Price. The sale price of each unit shall be the fair market value determined by agreement between the seller and purchaser within thirty (30) days from the delivery or mailing of such agreement, and in the absence of agreement as to price, it shall be determined by arbitration in accordance with the then existing rules of the American Arbitration Association, except that the arbitrators shall be two appraisers appointed by the American Arbitration Association, who shall base their determination upon the average of their appraisals of the units. A judgment of specific performance of the sale upon the award rendered by the arbitrators may be entered in any court of competent jurisdiction. The expense of arbitration shall be paid by the pruchasers.

(c) Payment. The purchase price shall be paid in cash.

(d) Closing. The sale shall be closed within ten (10) days following the determination of the purchase price.

22.3 Certificate. The termination of the condominium in either of the foregoing manners shall be evidenced by a certificate of the Association executed by its President and Secretary certifying as to facts effecting the termination, which certificate shall become effective upon being recorded in the public records of St. Lucie County, Florida.

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ATTORNEYS AT LAW
POST OFFICE BOX 1000
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-5020

22.4 Shares of Owners After Termination. After termination of the condominium, the unit owners shall own the condominium property and all assets of the Association as tenants in common in undivided shares that shall be the same as the undivided shares in the common elements appurtenant to the owners' respective units prior to the termination.

22.5 Amendment. This Article concerning termination cannot be amended without consent of all unit owners and all record owners of mortgages upon the units.

23. AMENDMENT TO DECLARATION. This Declaration may be amended from time to time by resolution adopted at any regular or special meeting of the unit owners called in accordance with the By-Laws at which a quorum is present, such adoption to be by the affirmative vote of seventy-five per cent (75%) of the total number of votes to which the unit owners present and voting shall be entitled. Such amendment shall be duly recorded in compliance with requirements of the Condominium Act.

23.1 Alteration of Units. No amendment may change the configuration or size of any unit in any material fashion, materially alter or modify the appurtenances to the unit, or change the proportion or percentage by which the owner of the parcel shares the common expenses and owns the common surplus unless the record title owner of the unit and all record title owners of liens on the unit join in the execution of the amendment.

23.2 Required Approval. No provision of this Declaration or of the exhibits hereto which requires in order to be effective, operational or enacted, a vote of the unit owners greater than that required in Paragraph 23 above, shall be changed by any amendment to this Declaration or to the exhibits hereto insofar as they pertain to said provision(s) unless in addition to all other requirements of Paragraph 23 being met, said change shall be approved by a vote of the membership not less than that required by this Declaration or exhibits hereto, whichever shall be applicable, to effect such provision.

23.3 Rights of Institutional Mortgagees. No amendment or change to this Declaration or to the exhibits hereto shall be effective to affect or impair the validity or priority of a first mortgage held by an Institutional Mortgagee encumbering a Condominium parcel, or to affect or impair the rights granted herein to Institutional Mortgagees, without the written consent thereto by the Institutional Mortgagee owning and holding the mortgage encumbering the parcel, which consent shall be executed with the formalities required for deeds and recorded with the amendment.

23.4 Non-Material Errors and Omissions. Notwithstanding anything to the contrary contained in this Declaration, Developer expressly reserves the right to amend this Declaration so as to correct any errors or omissions not materially adversely affecting the rights of the unit owners, lienors or Institutional Mortgagees, and such right shall exist until one year from the date of the recording of this Declaration in the public records of St. Lucie County, Florida. Such amendment need not be approved by the Association unit owners, lienors or Institutional Mortgagees of units of the Condominium whether or not elsewhere required for amendments.

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23.5 Discrimination. No amendment shall discriminate against any unit owner or against any unit or class or group of units, unless the owner so affected shall consent.

23.6 Reserved Right of Developer. Notwithstanding anything to the contrary contained in this Declaration, Developer expressly reserves the right to amend this Declaration at any time during the course of registration of this Condominium in any state in order to accomplish a successful registration of this Condominium in that state, provided, said amendment does not materially adversely affect the rights of the unit owners, lienors of record, or Institutional Mortgagees. Such amendment need not be approved by the Association, unit owners, lienors or Institutional Mortgagees of units of the Condominium whether or not elsewhere required for amendments.

23.7 Developer Consent Required. As long as Declarant has title to any unit, no amendment shall be made to this Declaration or any exhibits hereto, unless Developer shall consent in writing to the amendment, which consent may be withheld by Developer for any reason.

24. REGISTRY OF OWNERS AND MORTGAGEES. The Association shall at all times maintain a registry setting forth the names of the owners of units. In the event of a sale or transfer of a condominium unit, the purchaser or transferee shall notify the Association in writing of his interest in such condominium unit together with the recording information of the instrument by which such purchaser or transferee has acquired his interest in the unit. Each unit owner shall notify the Association of all mortgages encumbering a condominium unit and any transfer thereof, the amount of such mortgages, and the recording information for the mortgages. The holder of a mortgage encumbering a condominium unit may notify the Association of the existence of such mortgage, and upon receipt of that notice, the Association shall register in its records all pertinent information pertaining to the mortgage.

25. NOTICE TO AND RIGHTS OF INSTITUTIONAL MORTGAGEES.

25.1 Casualty. In the event of any substantial damage or destruction to a unit or any part of the common elements, Institutional Mortgagees will be entitled to timely notice of such damage or destruction.

25.2 Default. In the event a unit owner shall be in default in the payment of any assessments as provided for herein, and said default shall not be cured within thirty (30) days, the Association shall cause notice of such default to be given to any Institutional Mortgagee of the unit.

25.3 Condemnation. In the event any portion of the condominium property is made the subject matter of a condemnation proceeding, all Institutional Mortgagees shall be entitled to timely written notice of such proceeding.

25.4 Rights of Institutional Mortgagees. An Institutional Mortgagee shall, upon request, be entitled to:

(a) Inspect the books and records of the Association;

(b) Receive an annual financial statement of the Association within ninety (90) days following the end of the fiscal year;

(c) Receive written notice of all meetings of the Association, and be permitted to designate a representative to attend all such meetings; but said representative shall have no right to participate or vote at said meeting.

26. MISCELLANEOUS.

26.1 Developer's Rights. Notwithstanding any other provision in this Declaration, Developer is irrevocably empowered to sell condominium units on any terms to any purchaser for as long as it owns any unit in the Condominium. Developer shall have the right to transact any business necessary to consummate sales of said units, including, but not limited to, the right to maintain model apartments, have signs, employees, and offices, use the common elements and show units. Sales office signs and all items pertaining to sales shall not be considered common elements and shall remain the property of the Developer.

26.2 Limitation of Liability.

(a) The liability of the owner of a unit for common expenses shall be limited to the amounts for which it is assessed from time to time in accordance with the Declaration and exhibits.

(b) The owner of a unit may be personally liable for acts or omissions of the Association in connection with the use of the common elements but only to the extent of his prorata share of his interest in the common elements and then in no case in an amount greater than the value of his unit. A unit owner shall be liable for injuries or damages resulting from an occurrence in his own unit to the same extent and degree that the owner of a house would be liable for an occurrence within his house.

26.3 Remedies for Violation. Each unit owner shall be governed by and conform with the Declaration and exhibits hereto. Failure to do so shall entitle the Association or any unit owner to recover damages or obtain injunctive relief or both, but such relief shall not be exclusive of other remedies provided by law. Should the Association or any unit owner find it necessary to bring court action to bring about compliance with the law, this Declaration, or the exhibits hereto, upon a finding by the court that the violation complained of is willful and deliberate, the owner so violating shall reimburse the party bringing suit for reasonable attorney's fees (including appellate attorney's fees) incurred by it in bringing such action, as determined by the court.

26.4 Covenants run with the Land. All provisions of the Declaration and exhibits attached hereto, and amendments thereof, shall be construed as covenants running with the land, and of every part thereof and interest therein, including but not limited to every unit and the appurtenances thereto, and every unit owner and occupant of the property or any part thereof, or if any interest therein, and his heirs, personal representatives, successors and assigns, shall be bound by all of the privisions of the Declaration and exhibits hereto and any amendments thereof.

26.5 Severability. If any of the provisions of this Declaration, By-Laws or Articles of Incorporation of the Association, or of the Condominium Act, or any article, section, clause, phrase, word, or the application thereof, in any circumstances

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FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461 5020

is held invalid, the validity of the remainder of this Declaration, By-Laws, Articles of Incorporation, or the Condominium Act, and of the application of any such provision, action, sentence, clause, phrase, or word, in other circumstances, shall not be affected thereby.

26.6 Notices. Except when expressly provided otherwise, whenever notices are required to be sent hereunder, the same may be delivered to unit owners, either personally or by mail, addressed to such unit owners at their place of residence in the Condominium, unless a unit owner has, by written notice duly receipted for, specified a different address. Proof of such mailing or personal delivery by the Association shall be given by the affidavit of the person mailing or personally delivering said notice. Notices to the Association shall be delivered by mail to the Secretary of the Association, at the Secretary's residence in the Condominium, or in case of the Secretary's absence, then the President of the Association at his residence in the Condominium, and in his absence, any member of the Board of Directors of the Association.

(a) Notices to the Developer shall be delivered by mail to: 715 South Ocean Drive, Fort Pierce, FL 33450.

(b) All notices shall be deemed and considered sent when mailed. Any party may change his mailing address by written notice, duly receipted for. Notices required to be given to personal representatives of a deceased owner, or devisee when there is no personal representative, may be delivered either personally or by mail, to such party at his or its address appearing in the records of the court wherein the estate of such deceased owner is being administered.

(c) The change of the mailing address of any party, as specified herein, shall not require an amendment to this Declaration.

26.7 Construction of Declaration. The provisions of this Declaration shall be liberally construed to effectuate its purpose of creating a uniform plan for the operation of a condominium.

26.8 Captions. The captions used in this Declaration and exhibits annexed hereto are inserted solely as a matter of convenience and shall not be relied upon or used in construing the effect or meaning of any of the text of this Declaration or exhibits hereto.

IN WITNESS WHEREOF, K. M. BROOKS and LOUISE M. SPARKS have executed this instrument, on this, the 16 day of December, 1983.

Signed, sealed and delivered in the presence of:

K. M. Brooks (Seal)
K. M. Brooks

Louise M. Sparks (Seal)
Louise M. Sparks

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ATTORNEYS AT LAW
POST OFFICE BOX 1000
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-3030

JOINDER OF MORTGAGEE

ROYAL TRUST BANK OF MIAMI, N.A., an association organized under the laws of the United States, 627 S.W. 27th Avenue, Miami, Florida 33135, hereinafter called the Mortgagee, the owner and holder of a mortgage upon lands in St. Lucie County, Florida, which mortgage is dated August 5, 1977, and is recorded in O. R. Book 272 at page 1615 of the public records of St. Lucie County, Florida, joins in the making of the foregoing Declaration of Condominium for BOARDWALK CONDOMINIUM, and the Mortgagee agrees that the lien of its mortgage, with respect to that portion of the mortgaged property included within the Declaration, shall be upon the following described property in St. Lucie County, Florida:

All of the Units of BOARDWALK CONDOMINIUM, according to the Declaration of Condominium

TOGETHER WITH all of the appurtenances of the units, including but not limited to all of the undivided shares of the common elements.

DATED this _____ day of January, 1983.

ROYAL TRUST BANK OF MIAMI, N.A.

By_____
Vice-President

(Corporate Seal)

Signed, sealed and delivered
in the presence of:

_____

_____

STATE OF FLORIDA
COUNTY OF DADE

The foregoing instrument was acknowledged before me this _____ day of January, 1983, by JACOB L. DORN, Vice-President of ROYAL TRUST BANK OF MIAMI, N.A., an association organized under the laws of the United States, on behalf of the corporation.

_____
Notary Public, State of Fla. at Large
My Commission Expires:_____

FEE, FEE, KORLEGARD, TEEL & KENNEY, P.A.
ATTORNEYS AT LAW
POST OFFICE BOX 1390
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-2450

BOARDWALK CONDOMINIUM

SURVEYOR'S CERTIFICATE

STATE OF FLORIDA

COUNTY OF ST. LUCIE

BEFORE ME, the undersigned authority duly authorized to administer oaths and take acknowledgments, personally appeared CARL DE SHAY, who, after being first duly cautioned and sworn, deposes and says as follows:

1. That I, CARL DE SHAY, am a duly licensed Surveyor under the laws of the STATE OF FLORIDA, R.L.S. No. 3477.

2. This Certificate is made as to BOARDWALK CONDOMINIUM, located at Fort Pierce, Florida.

3. The construction of the improvements comprising the condominium is complete so that the materials that comprise Exhibit "B" to the Declaration of Condominium, together with the provisions of said Declaration describing the Condominium property, are an accurate representation of the location and dimensions of the improvements, and the identification, location and dimensions of the Common Elements within the Condominium can be determined from the materials.

4. Further, Affiant sayeth not.

Carl De Shay - Florida Registered
Land Surveyor No. 3477

Sworn to and subscribed before me
this 21 day of September, 1982.

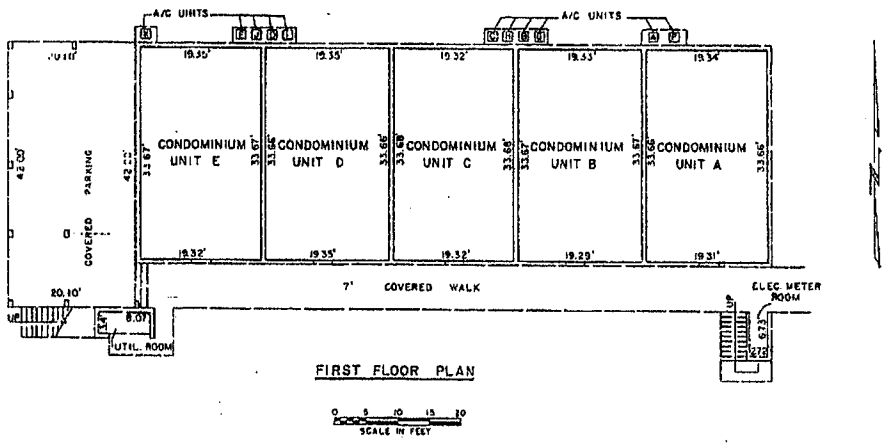
Notary Public, State of Fla. at Large
My Commission Expires: [illegible]

UNIT PLANE ELEVATION SCHEDULE

	FINISHED FLOOR	FINISHED CEILING
UNITS A, B, C, D, E	9.24	17.24

NOTES:

1. ELEVATION REFER TO NATIONAL GEODETIC VERTICAL DATUM.
2. ——— INDICATES LIMITS OF CONDOMINIUM UNIT BOUNDARY
3. — — — INDICATES LIMITS OF COMMON ELEMENTS
4. [A] — A/C UNITS - INDICATES AIR CONDITIONING UNIT LOCATED ON GROUND LEVEL, ANNEXED TO AND MADE PART OF CORRESPONDING CONDOMINIUM UNIT



FIRST FLOOR PLAN

BOARDWALK CONDOMINIUM

ARTHUR V. STROCK & ASSOCIATES, INC

CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

EXHIBIT B(II) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM

DRAWING NUMBER

DATE 5-18-82

DRAWN BY

CHECKED BY

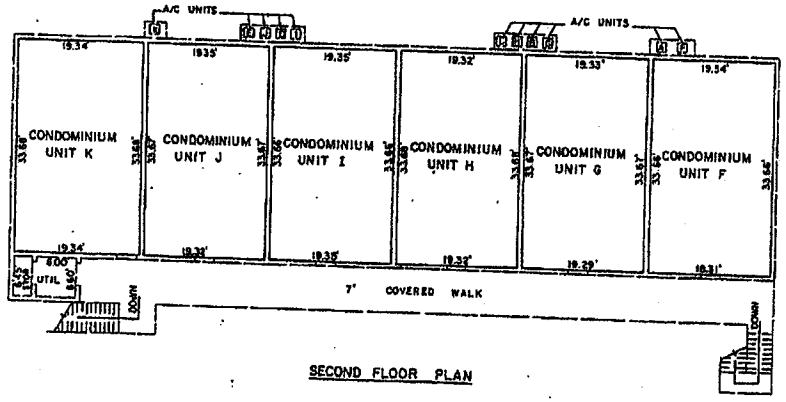
SHEET 2 OF 5

EXHIBIT B(ii)

UNIT PLANE ELEVATION SCHEDULE

	FINISHED FLOOR	FINISHED CEILING
UNITS F, G, H, I, J, K	18.26	26.26

NOTES:
1. ELEVATION REFER TO NATIONAL GEODETIC VERTICAL DATUM.
2. ——— INDICATES LIMITS OF CONDOMINIUM UNIT BOUNDARY
3. – – – – INDICATES LIMITS OF COMMON ELEMENTS
4. (A/C) — A/C UNITS - INDICATES AIR CONDITIONING UNIT LOCATED ON GROUND LEVEL, ANNEXED TO AND MADE PART OF CORRESPONDING CONDOMINIUM UNIT.



SECOND FLOOR PLAN

SCALE IN FEET

BOARDWALK CONDOMINIUM

ARTHUR V. STROCK & ASSOCIATES, INC.

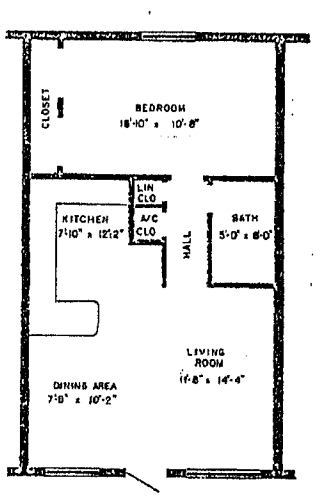
CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

EXHIBIT B(III) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

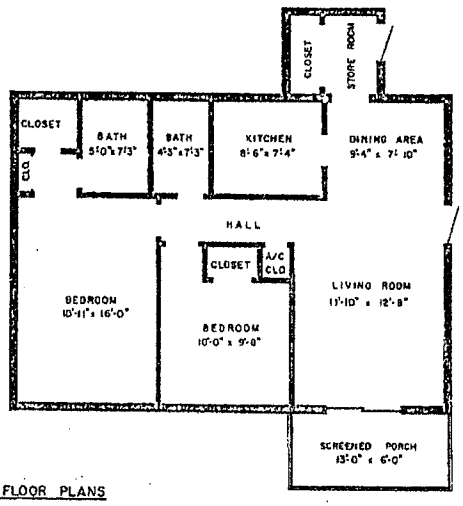
Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM
DRAWING NUMBER: 2 OF 3
DATE: 5-18-82
SCALE: 1"=20'
DRAWN BY: AK
CHECKED BY:
JOB NO. 1825.00

EXHIBIT B(iii)



UNITS: B, D, G, I & K (AS SHOWN)
UNITS: A, C, E, F, H & J (REVERSED)



UNITS: L & M

TYPICAL FLOOR PLANS

0 1 2 3 4 5 10
SCALE IN FEET

BOARDWALK CONDOMINIUM

EXHIBIT B(v) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

ARTHUR V. STROCK & ASSOCIATES, INC.

CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM

DRAWING NUMBER: 345 pr. 1

DATE: 5-18-82

DRAWN BY: AE

CHECKED BY:

SHEET 1 OF 1

SCALE: 1/16" = 1'-0"

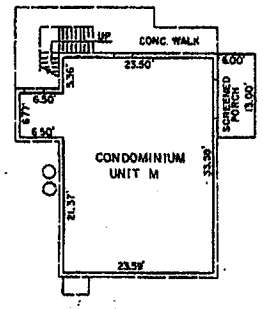
EXHIBIT B (v)

UNIT PLANE ELEVATION SCHEDULE

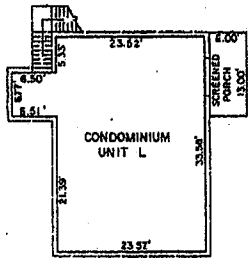
	FINISHED FLOOR	FINISHED CEILING	FINISHED PORCH
UNIT M	7.56	15.56	7.04
UNIT L	16.06	24.66	16.26

NOTES :

1. ELEVATION REFER TO NATIONAL GEODETIC VERTICAL DATUM.
2. ——— INDICATES LIMITS OF CONDOMINIUM UNIT BOUNDARY
3. — — — — INDICATES LIMITS OF COMMON ELEMENTS
4. [E]—A/C UNITS—INDICATES AIR CONDITIONING UNIT LOCATED ON GROUND LEVEL, ANNEXED TO AND MADE PART OF CORRESPONDING CONDOMINIUM UNIT.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



BOARDWALK CONDOMINIUM

EXHIBIT B (iv) TO THE DECLARATION OF CONDOMINIUM OF BOARDWALK CONDOMINIUM

ARTHUR V. STROCK & ASSOCIATES, INC.

CARL DE SHAY
REGISTERED LAND SURVEYOR NO. 3477
STATE OF FLORIDA

Arthur V. Strock & Associates, Inc.
engineers • planners • surveyors deerfield beach • delray beach, fla.

PROJECT: BOARDWALK CONDOMINIUM

DRAWING NUMBER: 4-325.m-1

DATE: 5-18-82

DRAWN BY: [illegible]

CHECKED BY: [illegible]

SHEET: 4 OF [illegible]

JOB NO. 7876.00

EXHIBIT B (iv)

BOARDWALK CONDOMINIUM

DIVISION OF COMMON ELEMENTS

UNIT NUMBER	PERCENTAGE
L	10.07
M	10.07
A	7.26
B	7.26
C	7.26
D	7.26
E	7.26
F	7.26
G	7.26
H	7.26
I	7.26
J	7.26
K	7.26
	100.00%

EXHIBIT C

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ATTORNEYS AT LAW
POST OFFICE BOX 1000
FORT MYERS, FLORIDA 33902
TELEPHONE (813) 461-3020

ARTICLES OF INCORPORATION

OF

BOARDWALK OWNERS ASSOCIATION, INC.

A Non-Profit Florida Corporation

WE, the undersigned, acknowledge and file in the office of the Secretary of State of the State of Florida, for the purpose of forming a non-profit corporation in accordance with the laws of the State of Florida, these Articles of Incorporation. As used herein, terms defined in the Declaration of Condominium for BOARDWALK CONDOMINIUM shall mean the same herein.

ARTICLE I

NAME

The name of the corporation shall be BOARDWALK OWNERS ASSOCIATION, INC., hereinafter referred to as the "Association" or "Corporation".

ARTICLE II

PURPOSE

In accordance with the provisions of Chapter 718, Florida Statutes (1981), the "Condominium Act", a condominium will be created from existing apartment buildings upon certain lands in St. Lucie County, Florida, to be known as: BOARDWALK CONDOMINIUM (the Condominium), according to the Declaration of Condominium (the "Declaration") to be recorded in the public records of St. Lucie County, Florida. This Corporation is organized for the purpose of operating, governing, administering and managing the properties and affairs of the Condominium and to exercise all powers and discharge all the responsibilities granted to it as a corporation under the laws of the State of Florida; the By-Laws of the Corporation, these Articles, the Declaration and the Condominium Act, and to acquire, hold, convey and otherwise deal in and with real and personal property in this Corporation's capacity as a condominium association.

ARTICLE III

POWERS

The powers of the Association shall include and be governed by the following provisions:

Section 1. The Association shall have all of the common law and statutory powers of a corporation not-for-profit which are not in conflict with the terms of these Articles and the Declaration, and all the powers conferred by the Condominium Act upon a condominium association, and all the powers set forth in the Declaration which are lawful.

Section 2. The Association shall have all of the powers reasonably necessary to implement its purpose, including, but not limited to, the following:

EXHIBIT D

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ATTORNEYS AT LAW
POST OFFICE BOX 1609
FORT PIERCE, FLORIDA 33454
Telephone Number 461-2020

(1) To operate and manage the Condominium and condominium properties in accordance with the purpose and intent contained in the Declaration;

(2) To make and collect assessments against members to defray the costs of the Condominium and to refund common surplus to members;

(3) To use the proceeds of assessments in the exercise of its powers and duties;

(4) To maintain, repair, replace and operate the condominium properties;

(5) To reconstruct improvements upon the condominium properties after casualty and to further improve the properties;

(6) To make and amend By-Laws for the Association and regulations respecting the use of the condominium properties;

(7) To approve or disapprove the proposed purchasers and mortgagees of condominium units as required by the Declaration;

(8) To enforce by legal means the provisions of the Declaration, these Articles, the By-Laws and the regulations for the use of the condominium properties;

(9) To collect for the management and maintenance of the condominium and to authorize a management agent to assist the association in carrying out its powers and duties by performing such functions as the collection of assessments, preparation of records, enforcement of rules and maintenance of the common elements. The association shall, however, retain at all times the powers and duties granted them by the Condominium Act, including, but not limited to, the making of assessments, promulgation of rules, and execution of contracts on behalf of the association.

Section 3. All funds and title to all properties acquired by the Association and the proceeds thereof shall be held only for the benefit of the members in accordance with the provisions of the condominium documents. No part of the income, if any, of the Association shall be distributed to the members, directors, and officers of the Association.

Section 4. The powers of the Association shall be subject to and be exercised in accordance with the provisions of the Declaration which govern the use of the condominium properties.

ARTICLE IV

MEMBERS

Section 1. All unit owners of the Condominium shall automatically be members of the Association, and their membership shall automatically terminate when they are no longer owners of a unit. If a member should sell his unit under the

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ATTORNEYS AT LAW
POST OFFICE BOX 1900

provisions of the Declaration, the grantee from such member will automatically acquire membership in the Association. Membership certificates are not required and may not be issued.

Section 2. Each unit owner is entitled to one vote for each unit owned by him. A corporation or several individuals owning a unit shall designate a voting agent for the unit(s) which they own, as set forth in the Declaration and By-Laws.

Section 3. The share of a member in the funds and assets of the Association shall not be assigned, hypothecated, or transferred in any manner except as an appurtenance to his unit.

ARTICLE V

EXISTENCE

This Corporation shall have perpetual existence.

ARTICLE VI

SUBSCRIBERS

The names and addresses of the subscribers hereto are as follows:

Name	Address
K. M. Brooks	715 S. Ocean Drive Fort Pierce, Florida 33450
Louise M. Sparks	715 S. Ocean Drive Fort Pierce, Florida 33450
Frank H. Fee, III	401-A S. Indian River Drive Fort Pierce, Florida 33450

ARTICLE VII

DIRECTORS

Section 1. The affairs and property of the Association shall be managed and governed by a Board of Directors composed of not less than three (3) Directors.

Section 2. Directors shall be elected by the voting members in accordance with the By-Laws at regular annual meetings of the membership of the Association, in the manner set out by the By-Laws. Directors shall be elected to serve for a term of one (1) year. In the event of a vacancy, the remaining director(s) shall appoint a replacement to serve the balance of the term.

Section 8. The following persons shall constitute the first Board of Directors, and shall hold office and serve until removed or until their successors are elected at the first regular meeting of the members:

Name	Address
K. M. Brooks	715 S. Ocean Drive Fort Pierce, FL 33450
Louise M. Sparks	715 S. Ocean Drive Fort Pierce, FL 33450
Frank H. Fee, III	401-A S. Indian River Dr. Fort Pierce, FL 33450

ARTICLE VIII

OFFICERS

Subject to the direction of the Board of Directors, the affairs of the Association shall be administered by the officers designated in the By-Laws, who shall serve at the pleasure of the Board of Directors. The names and titles of the officers who shall serve until removed or until the first election at the first annual meeting of the Board of Directors are as follows:

Name	Title
K. M. Brooks	President
Louise M. Sparks	Vice-President & Secretary-Treasurer

ARTICLE IX

BY-LAWS

The By-Laws of the Association shall be adopted by the first Board of Directors and attached to the Declaration to be filed in the public records of St. Lucie County, Florida. By-Laws may be altered, amended, or rescinded only at duly called meetings of the members, in the manner provided by the By-Laws.

ARTICLE X

AMENDMENTS

Section 1. A majority of the Board of Directors or a majority of the voting members may propose alterations, amendments to, or the rescission of these Articles, so long as the proposals do not conflict with the Condominium Act or the Declaration. Such proposals shall set forth the proposed alteration, amendment, or rescission; shall be in writing; shall be filed by the Board of Directors or a majortiy of the members and shall be delivered to the President of the Association, who shall thereupon call a Special Meeting of the members not less than ten (10) days nor later than thirty (30) days from receipt of the proposed amendment, the notice for which shall be given in the manner provided by the By-Laws. An affirmative vote of two-thirds (2/3) of the Board of Directors, and an affirmative vote of three-fourths (3/4) of the members of the Association shall be required for the adoption of the proposed alteration, amendment or rescission.

Section 2. Any voting member may waive any or all of the requirements of this Article as to notice of proposals to the President of the Association for the alteration, amendment, or rescission of these Articles. Such waiver may occur before, at or after a membership meeting at which a vote is taken to amend, alter or rescind these Articles in whole or in part.

ARTICLE XI

INDEMNIFICATION OF OFFICERS AND DIRECTORS

Every Director and every Officer of the Corporation shall be indemnified by the Corporation against all expenses and liability, including counsel fees, reasonably incurred by or imposed upon him in connection with any proceeding to which he may be a party, or in which he may become involved, by reason of his being or having been a Director or Officer at the time such expenses are incurred, except in such cases wherein the Director or Officer is adjudged guilty of willful misfeasance in the performance of his duties; provided that in the event of any claim for reimbursement or indemnification hereunder based upon a settlement by the Director or Officer seeking such reimbursement or indemnification, the indemnification herein shall apply only if the Board of Directors approves such settlement and reimbursement as being in the interests of the Corporation. Such approval shall be made by a majority vote of a quorum consisting of directors who were not parties to such proceedings. The foregoing right of indemnification shall be in addition to and not exclusive of all other rights to which such Director or Officer may be entitled.

ARTICLE XII

TRANSACTIONS IN WHICH DIRECTORS OR OFFICERS ARE INTERESTED

Section 1. No contract or transaction between the Association and one or more of its Directors or Officers, or between the Association and any other corporation, partnership, association, trust or other organization in which one or more of its Directors or Officers are Directors or Officers, or have a financial interest, shall be invalid, void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or Committee thereof which authorized the contract or transaction, or solely because

said officer's or director's votes are counted for such purpose. No director or officer of the Association shall incur liability by reason of the fact that said director or officer may be interested in any such contract or transaction.

Section 2. Interested officers and directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorized the contract or transaction.

ARTICLE XIII

ADDRESS OF REGISTERED OFFICE

The street address of the registered office of this Corporation in the State of Florida shall be: 715 South Ocean Drive, Fort Pierce, Florida 33450. The name of the initial registered agent at this address shall be Louise M. Sparks. The Board of Directors may from time to time move the registered office to any other address in Florida.

IN WITNESS WHEREOF, we have hereunto set our hands and seals, at St. Lucie County, Florida, this 6th day of January, 1983.

K. M. Brooks (Seal)

Louise M. Sparks (Seal)

Frank H. Fee, III (Seal)

STATE OF FLORIDA

COUNTY OF ST. LUCIE

I HEREBY CERTIFY, that on this day, personally appeared before me K. M. BROOKS, LOUISE M. SPARKS and FRANK H. FEE, III, to me known to be the subscribers described in and who executed the foregoing Articles of Incorporation, and they acknowledged before me that they executed the same freely and voluntarily for the uses and purposes therein expressed.

WITNESS my hand and official seal in the State and County aforesaid, this 6th day of January 1983.

Notary Public, State of Fla. at Large
My Commission Expires: 2-7-85

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ATTORNEYS AT LAW
POST OFFICE BOX 1030
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-2020

BY-LAWS OF

BOARDWALK OWNERS ASSOCIATION, INC.
A Non-Profit Florida Corporation

ARTICLE I

GENERAL

Section 1. Name: The name of the corporation shall be BOARDWALK OWNERS ASSOCIATION, INC., hereinafter referred to as the "Association" or "Corporation".

Section 2. Principal Office: The principal office of the Association shall be at Boardwalk Condominium, 715 South Ocean Drive, Fort Pierce, Florida, or at such other place as may be subsequently designated by the Board of Directors. All books and records of the Association shall be kept at the principal office or at the office of the registered agent of the Association.

Section 3. Definitions: As used herein, terms defined in the Declaration of Condominium for BOARDWALK CONDOMINIUM, hereinafter referred to as the "Condominium", shall mean the same herein.

ARTICLE II

DIRECTORS

Section 1. Powers: The property and business of the Association shall be managed by the Board of Directors ("Board"), which may exercise all corporate powers not specifically prohibited by statute, the Articles of Incorporation or the Declaration of Condominium to which these By-Laws are attached. The powers of the Board of Directors shall include, but not be limited to, all those powers as set forth in Article IV of these By-Laws.

Section 2. Number and Term: Three (3) Directors shall constitute the whole Board of Directors. Except for the initial directors designated in the Articles of Incorporation and any other directors selected by the Developer, a director shall be elected to serve for the term of one (1) year, or until his successor has been elected and qualified. An employee or agent of a business entity owner shall be eligible to serve as a director of the Association. If the number of Directors falls below three (3), a special members' meeting shall be called for the purpose of filling vacancies on the Board of Directors.

Section 3. Vacancy and Replacement: If the office of any director becomes vacant by reason of death, resignation, retirement, disqualification, removal from office or otherwise, a majority of the remaining directors, though less than a quorum, at a special meeting duly called for this purpose, shall choose a successor, who shall hold office for the unexpired term in respect to which such vacancy occurred. The Developer shall be empowered to remove or replace at any time any director originally selected by the Developer.

Section 4. Removal: Directors may be removed for cause by an affirmative vote of a majority of the qualified votes of voting members. No director shall continue to serve on the Board if, during his term of office, his membership in the corporation shall be terminated for any reason whatsoever.

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Section 5. Recall: Directors may be recalled and removed from office with or without cause by the vote or agreement in writing by a majority of all voting members. A special meeting of the voting members to recall a Director or Directors may be called by ten per cent (10%) of the voting members giving notice of the meeting as required in Article VI of these By-Laws, and the notice shall state the purpose of the meeting.

Section 6. First Board of Directors: The first Board of Directors designated in the Articles of Incorporation shall hold office and exercise all the power of the Board of Directors until the first membership meeting, anything herein to the contrary notwithstanding; provided, any or all of said directors shall be subject to replacement by the Developer or, in the event of resignation or death, as above provided.

Section 7. Compensation: Neither directors nor officers shall receive compensation for their services as such.

Section 8. Meetings:

(a) The first meeting of each Board of Directors newly elected by the voting members shall be held immediately upon adjournment of the meeting at which they were elected, provided a quorum shall then be present, or as soon thereafter as may be practicable. The annual meeting of the Board of Directors shall be held at the same place as the voting members' annual meeting, and immediately after the adjournment of same;

(b) Special meetings shall be held whenever called by the President or a majority of the Board of Directors. The Secretary shall give notice of each special meeting either personally, by mail or telegram to each director at least three (3) days before the date of such meeting, but the Directors may waive notice of the calling of the meeting;

(c) Meetings of the Board of Directors shall be open to all unit owners. Adequate notice of all meetings of the Board of Directors shall be posted conspicuously on the condominium properties at least forty-eight (48) hours in advance, except in an emergency;

(d) A majority of the Board of Directors shall be necessary and sufficient at all meetings to constitute a quorum for the transaction of business, and the act of a majority present at any meeting at which there is a quorum shall be the act of the Board of Directors. If a quroum shall not be present at the meeting, the Directors then present may adjourn the meeting without notice, other than announcement at the meeting, until a quorum shall be present.

Section 9. Order of Business: The order of business at all meetings of the Board of Directors shall be as follows:

1. Roll call and quorum determination;

2. Reading of minutes of last meeting;

3. Consideration of communications;

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4. Resignations and elections;

5. Reports of officers and employees;

6. Reports of committees;

7. Unfinished business;

8. Original resolutions and new business;

9. Adjournment.

Section 10. Annual Statement: The Board shall present, no less often than at the annual meeting, a full and clear statement of the business and condition of the Association, including a report of the operating expenses of the Association and the assessments paid by the members.

ARTICLE III

OFFICERS

Section 1. Executive Officers: The executive officers of the Association shall be a President, Vice-President, Treasurer and Secretary, all of whom shall be elected annually by the Board of Directors. Any two of said offices may be united in one person, except that the President shall not also be the Secretary or an Assistant Secretary of the Association. The President shall be a director ex officio, unless elected to the Board. If the Board so determines, there may be more than one Vice-President.

Section 2. Subordinate Officers: The Board of Directors may appoint such other officers and agents as they may deem necessary, who shall hold office during the pleasure of the Board of Directors and have such authority and perform such duties as from time to time may be prescribed by the Board.

Section 3. Tenure of Officers; Removal: All officers and agents shall be subject to removal, with or without cause, at any time by action of the Board of Directors. The Board may delegate powers of removal of subordinate officers and agents to any officer.

Section 4. The President:

(a) The President shall preside at all meetings of the members and Directors; he shall have general and active management of the business of the Association; he shall see that all orders and resolutions of the Board are carried into effect; he shall execute bonds, mortgages and other contracts requiring a seal, under the seal of the Association; the seal when affixed shall be attested by the signature of the Secretary;

(b) He shall have general superintendence and direction of all the other officers of the Association, and shall see that their duties are performed properly;

(c) He shall submit a report of the operation of the Association for the fiscal year to the Directors whenever called for by them, and to the members at the annual meeting, and from time to time shall

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report to the Board all matters within his knowledge which the interest of the Association may require to be brought to their notice;

(d) He shall be an ex officio member of all committees, and shall have the general powers and duties of supervision and management usually vested in the office of President of a corporation.

Section 5. The Vice-President: The Vice-President shall be vested with all powers and required to perform all duties of the President in his absence; and such other duties as may be prescribed by the Board of Directors.

Section 6. The Secretary:

(a) The Secretary shall keep the minutes of the meetings of the voting members and of the Board of Directors in one or more books provided for that purpose; said minute books shall be available for inspection by unit owners, or their authorized representatives, and directors at any reasonable time; said minutes shall be retained for a period of not less than seven (7) years.

(b) He shall see that all notices are duly given in accordance with the provisions of these By-Laws or as required by law;

(c) He shall be custodian of the corporate records and of the seal of the Association and shall see that the seal of the Association is affixed to all documents, the execution of which on behalf of the Association under its seal is duly authorized in accordance with the provisions of these By-Laws;

(d) He shall keep a register of the post office address of each unit owner, which shall be furnished to the Secretary by each unit owner;

(e) In general, he shall perform all duties incident to the office of secretary and such other duties as from time to time may be assigned to him by the President or by the Board of Directors.

Section 7. Treasurer:

(a) The Treasurer shall keep full and accurate accounts of receipts and disbursements in books belonging to the Association, and shall deposit all monies and other valuable effects in the name and to the credit of the Association, in such depositories as may be designated by the Board of Directors;

(b) He shall disburse the funds of the Association as ordered by the Board, taking proper vouchers for such disbursements, and shall render to the President and directors, at regular meetings of the Board, or whenever they may require it, an account of all his transactions as Treasurer and of the financial condition of the Association;

(c) He may be required to give the Association a bond in a sum and with one or more sureties satisfactory to the Board, for the faithful performance of the duties of his office, and the restoration to the

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Association, in case of his death, resignation or removal from office, all books, papers, vouchers, money or other property of whatever kind in his possession belonging to the Association.

Section 8. Vacancies: If the office of the President, Vice-President, Secretary or Treasurer, one or more, becomes vacant by reason of death, resignation, disqualification or otherwise, the directors, by a majority vote, may choose a successor who shall hold office for the unexpired term.

Section 9. Resignations: Any director or other officer may resign his office at any time, such resignation to be made in writing, and to take effect from the time of its receipt by the Association, unless some time be fixed in the resignation, and then from that date.

ARTICLE IV

POWERS AND DUTIES OF THE ASSOCIATION

The Association shall have all powers granted to it by law, the Declaration of Condominium, the Condominium Act, and the Articles of Incorporation, all of which powers shall be exercised by its Board of Directors, unless the exercise thereof is otherwise restricted in the Declaration of Condominium, these By-Laws, or by law. The powers of the Association shall include, but not be limited to, the following:

(a) To levy and collect regular and special assessments and to establish the method and time within which payments are to be made;

(b) To expend monies collected for the purpose of paying the common expenses of the Association;

(c) To purchase equipment, supplies and material required for the maintenance, repair, replacement, operation and management of the condominium properties;

(d) To insure and keep insured the buildings and improvements of the Condominium as provided for and limited by the Declaration of Condominium;

(e) To employ the personnel required for the operation of the condominium properties;

(f) To make reasonable rules and regulations for the use of the condominium properties and to amend them from time to time, and see to it that all members are notified of such changes in the rules and regulations as may be enacted;

(g) To improve the condominium properties subject to the limitations of the Declaration of Condominium;

(h) To enforce by any legal means the provisions of the Articles of Incorporation, the By-Laws, the Declaration of Condominium, and the regulations promulgated by the Association;

(i) To collect delinquent assessments by suit or otherwise, and to abate nuisances and enjoin or seek damages from unit owners for violation of the provisions of the condominium documents;

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(j) To approve or disapprove of all conveyances of condominium parcels as provided for in the Declaration of Condominium;

(k) To select depositories for Association funds, and to determine the manner of receiving, depositing, and disbursing Association funds, and the form of check and the person or persons by whom checks shall be signed, when not signed, as otherwise provided by these By-Laws;

(l) To collect for the management and maintenance of the condominium and to authorize a management agent to assist the Association in carrying out its powers and duties by performing such functions as the collection of assessments, preparation of records, enforcement of rules and maintenance of the common elements. The Association shall, however, retain at all times the power and duties granted them by the Condominium Act, including, but not limited to, the making of assessments, promulgation of rules, and execution of contracts on behalf of the Association.

Nothing in this subparagraph or in the Declaration of Condominium shall be deemed to require the Association to maintain the interior of any condominium unit, or to enter into any contract or undertaking to provide for the maintenance or upkeep of the interior of any condominium unit.

(m) To establish the offices of additional officers of this Association and to appoint all officers;

(n) To propose and adopt the budget for the Condominium;

(o) To possess, enjoy and exercise all powers necessary to implement, enforce, and carry into effect the powers above described, including the power to acquire, hold, convey, and deal in real and personal property.

ARTICLE V

MEMBERSHIP

Section 1. Definition: Voting membership in the Association shall be limited to owners of condominium units in the Condominium.

Section 2. Transfer of Membership and Ownership: Membership in the Association may be transferred only as an incident to the transfer of the transferor's condominium parcel, and such transfer shall be subject to the procedures set forth in the Declaration of Condominium.

Section 3. Plural Ownership: Membership may be held in the names of more than one person, in which event, all of the plural owners of the unit shall be entitled collectively to only one vote in the management of the affairs of the Association, and the vote may not be divided between the plural owners. The plural owners

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must file a certificate authorizing a voting member in accordance with Article VI, Section 7, of these By-Laws.

ARTICLE VI

MEETINGS OF MEMBERSHIP

Section 1. Place: All meetings of the Association membership shall be held at the office of the Association or at such other place as may be stated in the notice of the meeting.

Section 2. Annual Meeting:

(a) The first annual meeting of the members shall be held the first Wednesday in October, 1983, at 8:00 PM , and each subsequent regular annual meeting of the members shall be held on the same day of the same month of each year thereafter, at the hour of 8:00 P.M.

If the day for the annual meeting of the members is a legal holiday, the meeting will be held at the same hour on the first day following that which is not a legal holiday. If the meeting is rescheduled, the directors elected at the first annual meeting and the officers elected as a result of the directors' meeting will hold office until the annual meeting is held.

(b) At the annual meeting, the members, by a plurality vote, shall elect a Board of Directors and transact such other business as may properly come before a meeting.

(c) Written notice of the annual meeting shall be given to each unit owner and shall be posted in a conspicuous place on the condominium properties at least fourteen (14) days prior to the annual meeting. The notice of the annual meeting shall be sent by mail to each unit owner and the post office certificate of mailing shall be retained as proof of such mailing.

Section 3. Membership List: At least ten (10) days before every regular meeting of the membership, a complete list of members entitled to vote at said meeting, arranged numerically by units, with residence of each, shall be prepared by the Secretary. Such list shall be produced and kept for said ten (10) days at the office of the Association, and shall be open to examination by any member throughout such time.

Section 4. Special Meetings:

(a) Special meetings of the members, for any purpose(s), unless otherwise prescribed by law, the Declaration of Condominium, or Articles of Incorporation, may be called by the President, and shall be called by the President or Secretary at the written request of one-third (1/3) of the voting members. Such request shall state the purpose(s) of the proposed meeting;

(b) Written notice of a special meeting of members, stating the time, place and purpose(s) thereof,

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shall be served upon or mailed to each voting member at the address as it appears on the books of the Association, at least five (5) days before such meeting;

(c) Business transacted at all special meetings shall be confined to the purpose(s) stated in the notice of the meeting;

(d) Unit owners may waive notice of special meetings and may take action by written agreement without meetings, if allowed by law, the Declaration of Condominium, and the Articles of Incorporation.

Section 5. Quorum: A majority of the total number of voting members of the Association, present in person or represented by written proxy, shall be required for and shall constitute a quorum at all meetings of the members for the transaction of business, except as otherwise provided by statute, by the Articles of Incorporation or these By-Laws. If, however, such quorum shall not be present or represented at any meeting of the members, the voting members present in person or represented by written proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented. At such adjourned meeting at which a quorum shall be present or represented, any business may be transacted which might have been transacted at the meeting originally called.

Section 6. Vote Required to Transact Business: When a quorum is present at any meeting, a majority of the votes cast, in person or represented by written proxy, shall decide any questions brought before the meeting, unless the question is one upon which, by express provision of law, the Declaration of Condominium, the Articles of Incorporation or these By-Laws a different vote is required, in which case such express provision shall govern and control the decision of such question. Cumulative voting is prohibited.

Section 7. Entitled and Qualified to Vote; Plural Ownership; Proxies: Each unit owner shall be entitled to one (1) vote for each unit owned by him. At any meeting of the members, every member entitled to vote may vote in person or by proxy. Such proxy shall only be valid for such meeting or subsequent adjourned meetings thereof. If more than one (1) person or a corporation owns a unit, they shall file a certificate with the Secretary of the Association naming the person authorized to cast votes for said unit. If the certificate is not on file, the owner(s) shall not be qualified to vote and the vote of such owner(s) shall not be considered nor shall the presence of said unit owner(s) at a meeting be considered in determining whether the quorum requirement has been met. If a unit shall be owned by husband and wife as tenants by the entirety, no certificate need be filed with the Secretary naming the person authorized to cast votes for said unit, and either spouse, but not both, may vote in person or by proxy and be considered in determining whether the quorum requirement has been met at any meeting of the members, unless prior to such meeting, either spouse has notified the Secretary in writing that there is disagreement as to who shall represent the unit at the meeting, in which case the certificate requirements set forth above shall apply.

Section 8. Waiver and Consent: Whenever the vote of members at a meeting is required or permitted by any provision of law, the Declaration of Condominium, the Articles of Incorporation or these By-Laws to be taken in connection with any action of the Association, the meeting and vote of members

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may be dispensed with, if all members who would have been entitled to vote upon the action at such meeting, if such meeting were held, shall have consented in writing to such action being taken.

Section 9. Order of Business: The order of business at annual members' meetings, and as far as practical at other members' meetings, shall be:

1. Election of Chairman
2. Roll call and Quorum Determination
3. Proof of Notice of Meeting or Waiver of Notice
4. Reading of Minutes of Prior Meeting
5. Officers' Reports
6. Committee Reports
7. Elections
8. Unfinished Business
9. New Business
10. Adjournment

Section 10. Procedure: Roberts Rules of Order (latest edition) shall govern the conduct of Association proceedings when not in conflict with the Articles of Incorporation, these By-Laws or any provision of law.

ARTICLE VII

NOTICES

Section 1. Definition: Except where expressly provided to the contrary, whenever under the provision of law, the Declaration of Condominium, the Articles of Incorporation or these By-Laws, notice is required to be given to any director or member, it shall not be construed to mean personal notice; but such notice may be given in writing by regular mail, by depositing the same in a post office or letter box in a postpaid, sealed envelope, addressed as appears on the books of the Association.

Section 2. Service of Notice - Waiver: Whenever any notice is required to be given under the provisions of these By-Laws, a waiver thereof, in writing, signed by the person(s) entitled to such notice, whether before or after the time stated herein, shall be deemed the equivalent of such notice.

Section 3. Address: The address for notice to the Association is 715 South Ocean Drive, Fort Pierce, Florida 33450.

ARTICLE VIII

FINANCES

Section 1. Fiscal Year: The fiscal year of the Association shall be the calendar year, commencing January 1 of each year,

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provided, however, that the Board of Directors is authorized to change to a different fiscal year at such time as the Board deems advisable.

Section 2. Checks: All checks or demands for money and notes of the Association shall be signed by any one of the following officers: President, Secretary or Treasurer, or by such officer(s) or such other person(s) as the Board of Directors may from time to time designate.

Section 3. Depositories: The funds of the Association shall be deposited in a bank(s) in St. Lucie County, Florida, in an account for the Association under resolutions approved by the Board of Directors, and shall be withdrawn only over the signature of the Treasurer, the President or the Vice-President, or such other person(s) as the Board may authorize. The Board may require more than one signature on checks and bank drafts. Said funds shall be used only for Association purposes. If necessary, and if demanded by Institutional Mortgagees, separate accounts shall be established to maintain and disburse escrow funds required by Institutional Mortgagees to meet mortgage requirements as to establishment of escrows for real estate taxes and insurance respecting condominium parcels.

Section 4. Inspections and Records: The Association shall maintain good accounting records. All such records and any legal documents, policies of insurance, and books of the Association shall be open to inspection at reasonable times by members, their authorized representatives, and all Institutional Mortgagees. Upon request, Institutional Mortgagees shall have the right to receive an unaudited financial statement of the Association within ninety (90) days following the end of the fiscal year.

Section 5. Annual Statement: The Board of Directors shall present at each annual meeting a full and clear statement of the business and condition of the Association.

Section 6. Insurance: The Association shall procure, maintain and keep in full force and effect, all insurance required by and in accordance with the Declaration of Condominium.

Section 7. Fidelity Bonds: Fidelity bonds may be required by the Board of Directors from all officers and employees of the Association and from any contractor handling or responsible for Association funds. The premiums for such bonds shall be paid by the Association as a common expense.

Section 8. Assessments:

(a) The Board of Directors has the power to and shall from time to time fix and determine the amount necessary to pay the common expenses of the Condominium. Common expenses include those expenses described in Paragraph 2.6 of the Declaration of Condominium and any other expenses designated as common expenses by the Board of Directors.

(b) Funds for the payment of common expenses shall be assessed and be a lien against the condominium parcels in the proportion of percentage of sharing common expenses as provided in the Declaration of Condominium.

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(c) Regular assessments shall be paid by the members on a monthly basis unless the membership shall approve a different period for payment.

(d) Special assessments, when required by the Board of Directors, shall be levied and paid in the same manner as regular assessments, unless the Declaration of Condominium shall otherwise provide. The Board of Directors may make special assessments in emergencies and upon such conditions as the Board may authorize.

(e) When the Board of Directors has determined the amount of any assessments, the Secretary or Treasurer shall transmit a statement of such assessment to each condominium parcel owner. All assessments shall be made payable to and at the office of the Association and upon request the Secretary or Treasurer shall give a receipt for each payment made.

(f) Assessments are necessarily made upon projections and estimates of the Board of Directors, and may be in excess of or less than the sums required to meet the cash requirements of the Condominium, in which event the Board of Directors may increase or decrease the amount of an assessment, and make such adjustments in cash or otherwise, as they shall deem proper, including the assessment of each member of his proportionate share of any deficiency. Notice of all changes in assessments shall be given to all unit owners.

(g) Assessments shall not include charges for utilities separately charged and metered to each condominium unit, nor charges for such alterations, repairs, maintenance, improvements or decorating within the interior of any unit as are the obligation of the unit owner and not the obligation of the Association. The Board of Directors may provide certain maintenance and repairs as would otherwise be the obligation of the individual unit owners, by the undertaking of contracts with business establishments providing repair and maintenance services, and in such cases the cost or price of such contractual services may be treated as a common expense and assessed against the members as part of their monthly maintenance. The specific contracts or undertakings need not be submitted by the Board of Directors to the membership for approval once the membership has approved the policy of having a specific type of repair or maintenance undertaken by the Association which would otherwise be the individual unit owners' responsibility.

(h) Assessments are due on the dates stated in the notice of assessments, and thereafter shall bear interest at eighteen per cent (18%) per annum until paid.

(i) In the event an assessment is not paid within fifteen (15) days of the date it is due and payable, the Association through the Board of Directors, may proceed to enforce and collect said

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assessment from the delinquent owner in any manner provided by the Condominium Act, the Declaration and these By-Laws. Each condominium parcel owner shall be individually responsible for the payment of reasonable attorney's fees and costs incurred by the Association in the collection of sums due and enforcement of any lien held by the Association.

(j) The Board of Directors may authorized the President to enter into a management contract with third parties to whom the power to levy and collect assessments may be delegated.

(k) All sums collected by the Association from assessments may be commingled in a single fund or divided into more than one fund, as determined by the Board of Directors. All assessment payments by a unit owner shall be applied as provided herein and in the Declaration of Condominium.

(l) Any unit owner shall have the right to require from the Association, a certificate showing the amount of unpaid assessments against him with regard to his condominium parcel. The holder of a mortgage or other lien shall have the same right as to any condominium parcel upon which it has a lien. Any person other than owner who relies upon such certificate shall be protected thereby.

Section 9. Budget:

(a) The Board of Directors is empowered to propose and adopt the budget for the Condominium.

(b) Notice of the meeting and a copy of the proposed annual budget of common expenses shall be mailed to the unit owners not less than thirty (30) days prior to the meeting of the Board of Directors at which the budget will be considered. Such meeting shall be open to the unit owners. If a budget is adopted by the Board of Directors which requires assessments against the unit owners in any fiscal year exceeding 115 per cent of such assessments for the preceding year, a special meeting of the unit owners shall be held, if requested in writing by at least ten per cent (10%) of the unit owners, to consider and enact a revision of the budget, or recall any and all members of the Board of Directors and elect their successors. Such meeting shall be held not less than ten (10) days after written notice is given to each unit owner, but not more than thirty (30) days after such meeting has been requested in writing. The revision of the budget or the recall of any or all members of the Board of Directors shall require a vote of not less than two-thirds (2/3) of the voting members. The Board of Directors may in any event propose a budget to the unit owners at a members' meeting or in writing, and if such proposed budget is approved by the unit owners at a members' meeting or by a majority of voting members in writing, such budget shall not thereafter be re-examined by the unit owners in the manner set forth above, nor shall the Board of Directors be recalled under the terms of this sub-section.

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(c) Each proposed annual budget of common expenses adopted by the Board of Directors shall be detailed and shall show the amounts budgeted by accounts and expenses classifications, including, but not limited to, the following:

1. Administration of the Association.
2. Management fees.
3. Maintenance.
4. Taxes upon Association properties, if any.
5. Insurance.
6. Security provisions.
7. Utilities.
8. Other expenses.
9. Operating capital.
10. Reserves.
11. Fees payable to Division of Florida Land Sales and Condominiums.

(d) Regular assessments shall be made against unit owners not less frequently than monthly, in an amount no less than required to provide funds in advance for payment of all the anticipated current operating expenses and for all of the unpaid operating expenses previously incurred.

(e) The provisions of Florida Statute 718.112, with regard to limitations on budget increases, special membership meetings for budget reconstruction, and the right to consider and adopt a budget at the annual membership meeting as an alternative, are hereby adopted. In determination of the percent of increase of the annual budget over the preceding years, authorized provisions for reasonable reserves for repair or replacement of the condominium properties, anticipated expenses by the Association which are not anticipated to be incurred on a regular or annual basis, and assessments for betterments to the condominium properties shall be excluded from the computation.

(f) As long as Developer is in control of the Association, the Association shall not impose an assessment for any year greater than one hundred fifteen per cent (115%) of the prior fiscal year's assessment without approval by a majority of all voting members.

(g) Notwithstanding anything in these By-Laws or the Declaration which authorize expenditures, no single expenditure for the improvement of the common elements exceeding $2,000.00 shall be made without the approval of seventy-five per cent (75%) of the membership, except for the

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repair of the condominium properties due to casualty loss, emergency repairs immediately necessary for the preservation and safety of the property, for the safety of persons, or as required to avoid suspension of any necessary service to the condominium.

ARTICLE IX

CORPORATE SEAL

The seal of the Association shall have inscribed thereon the name of the Association, the year of its organization, and the words "Non-Profit". The seal may be used by causing it or a facsimilie thereof to be impressed, affixed, reproduced or otherwise.

ARTICLE X

DEFAULT

Section 1. Enforcement of Lien: In the event a unit owner does not pay any sums, charges or assessments required to be paid to the Association within thirty (30) days from the due date, the Association, acting on its own behalf or through its Board of Directors, may enforce its lien for assessments to which it is entitled, in accordance with the Declaration and provisions of law.

Section 2. Proceeds of Sale: If the Association becomes the owner of a unit by reason of foreclosure, it shall offer said unit for sale and at such time as a sale is consummated, it shall deduct from the proceeds of said sale all sums of money due it for assessments and charges, all costs incurred in the bringing of the foreclosure suit, including reasonable attorneys' fees, and any and all expenses incurred in the resale of the unit, which shall include but not be limited to advertising expenses, real estate brokerage fees and expenses necessary for the repairing and refurbishing of the unit. All monies remaining after deducting the foregoing items of expenses shall be returned to the former owner of the unit.

Section 3. Violations: In the event of violation of the provisions of the Declaration, Articles of Incorporation or these By-Laws, for thirty (30) days after notice from the Association to the unit owner to correct said breach or violation, the Association, on its own behalf or through its Board of Directors, may bring appropriate action to enjoin such violation or may enforce the provisions of said documents, or may sue for damages, or take such other courses of action, or other legal remedy, as it or they may deem appropriate. An Institutional Mortgagee, as defined in the Declaration of Condoiminium, of a unit shall be entitled to written notice from the Association of any default by the mortgagor of such unit under the condominium documents which is not cured within thirty (30) days.

Section 4. Attorneys' Fees: In the event such legal action contemplated by this Article is brought against a unit owner and results in a judgment for the Plaintiff, the Defendant shall pay the Plaintiff's reasonable attorney's fees and court costs.

Section 5. Binding Effect: Each unit owner, for himself, his heirs, successors and assigns, agrees to the foregoing provisions relating to default and abatement of nuisance,

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regardless of the harshness of the remedy available to the Association and regardless of the availability of other equally adequate legal procedures. It is the intent of all owners of the units to give to the Association a method and procedure which will enable it at all times to operate on a business-like basis, to collect those monies due and owing it from the owners of units, and to preserve each unit owner's right to enjoy his unit, free from unreasonable restraint and nuisance.

ARTICLE XI

AMENDMENT OF BY-LAWS

These By-Laws may only be amended at a duly called meeting of the voting members; provided (1) that the notice of the meeting shall contain a full statement of the proposed amendment; and (2) that the quorum requirement for such purposes shall be a majority of the voting members, in person or by proxy. It shall be necessary that there be an affirmative vote of three fourths (3/4) of the voting members, in person or by proxy. It shall be necessary that there be an affirmative vote of three fourths (3/4) of the voting members, as well as an affirmative vote of two thirds (2/3) of the Board of Directors, in order to amend these By-Laws. No amendment to these By-Laws shall be passed which would operate to impair or prejudice the right or liabilities of any Institutional Mortgagee without the consent of said Institutional Mortgagee.

No By-Law shall be revised or amended by reference to its title or number only. Proposals to amend existing By-Laws shall contain the full text of the By-Laws to be amended; new words shall be inserted in the text underlined, and words to be deleted shall be lined through with hyphens. If the proposed change is so extensive that the above procedure would hinder, rather than assist, the understanding of the proposed amendment, it is not necessary to use underlining and hyphens as indicators of words added or deleted, but a notation must be inserted immediately preceding the proposed amendment in substantially the following language: "Substantial rewording of By-Laws. See By-Laws _____ for present text".

Non-material errors or omissions in the By-Laws amendment process shall not invalidate an otherwise properly promulgated amendment.

ARTICLE XII

CONSTRUCTION

Wherever the masculine singular form of the pronoun is used in these By-Laws, it shall be construed to mean the masculine, feminine or neuter, singular or plural, wherever the context so requires.

Should any of the covenants herein imposed be void or unenforceable at law or in equity, the remaining provisions of this instrument shall nevertheless be and remain in full force and effect.

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These By-Laws and the Articles of Incorporation shall be construed in the event of any ambiguity consistent with the provisions of the Declaration of Condominium.

The foregoing were adopted as the By-Laws of:

BOARDWALK OWNERS ASSOCIATION, INC.

a Florida non-profit corporation, at the first meeting of the Board of Directors.

BOARDWALK OWNERS ASSOCIATION, INC.

By Louise M. Sparks
Its Secretary

APPROVED:

K. M. Brooks
Its President

FEE, FEE, KOBLEGARD, TEEL & KENNY, P.A.
ATTORNEYS AT LAW
POST OFFICE BOX 1090
FORT MYERS, FLORIDA 33902
TELEPHONE (305) 461-3023

BOARDWALK CONDOMINIUM

ESTIMATED OPERATING BUDGET

	Monthly	Annually
Administration of the Association		
Bookkeeping	10.00	120.00
Legal and Bank Expenses	10.00	120.00
Office Supplies	5.00	60.00
Management Fees	-0-	-0-
Maintenance		
Appliance Repair & Replacement	20.00	240.00
Grounds Supplies	50.00	600.00
Lawn and general maintenance	100.00	1,200.00
Rent- Recreational and Other Commonly Used Facilities	-0-	-0-
Taxes Upon Association Property	-0-	-0-
Taxes Upon Leased Areas	-0-	-0-
Insurance	125.00	1,500.00
Security Provisions	-0-	-0-
Other Expenses		
Utilities	275.00	3,300.00
Operating Capital	-0-	-0-
Reserves		
Painting and Building Maintenance	375.00	4,500.00
Pavement Resurfacing	33.34	400.00
Roof	150.00	1,800.00
Division of Condominium Fees	.55	6.50
TOTALS	$1,153.89	$13,846.50

Schedule of Unit Owner's Expenses

	Monthly	Annually
Units A through K, inclusive (One Bedroom)	83.77	1,005.24
Units L and M (Two Bedroom)	116.20	1,394.40
Units A through K, inclusive (1-BR)-Without reserves	43.31	519.72
Units L & M (2 BR) - Without reserves	59.57	714.84

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Note 1. The foregoing budget is deemed sufficient, and accordingly, no provision for operating capital has been established herein.

Note 2. Since there is no management contract or agreement in effect, and since it is not contemplated employing the services of a management firm for the first year of operation, no provision has been made for management fees or a management agreement in this budget.

Note 3. The figures on this budget are established by operating history and by contracts and other experience pertaining directly to this project, but are estimates only and are subject to revision to reflect changes in costs and services.

Note 4. There is excluded from this estimate items of expense that are personal to unit owners or which are not uniformly incurred by all unit owners or which are not provided for nor contemplated by the condominium documents; including, but not limited to, private telephone costs, cost of maintenance of the interior of the condominium units to the extent that such maintenance is not the obligatio of the condominium or Association, the cost of maid or janitorial services privately contracted for by the unit owners, cost of utility bills billed directly to each unit owner for utility service or supply to his unit, insurance premiums other than those incurred applicable to the condominium or Association property in general, debt servicing upon any mortgage encumbering the individual unit, but not encumbering the condominium or Association property as a whole, real estate taxes assessed directly to a condominium unit, and like personal expenses of the unit owner.

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BUILDING INSPECTION
OF
13 UNIT APARTMENT COMPLEX
LOCATED AT
715 SOUTH OCEAN DRIVE
FORT PIERCE, FLORIDA

SUBMITTED TO:

ARTHUR STROCK & ASSOCIATES
829 S. E. 9th STREET
DEERFIELD, FLORIDA

PREPARED BY:

JAMES BUSHOUSE & ASSOCIATES, INC.
2136 HAMMONDVILLE ROAD
POMPANO BEACH, FLORIDA 33060

James D. Bushouse, P.E.
Registered Engineer No. 20311
State of Florida

STATEMENT PREPARED
June 16, 1982

INTRODUCTION

The following is an analysis of the general condition and state of repair of the 13 UNIT APARTMENT COMPLEX located at 715 South Ocean Drive, Fort Pierce, Florida, as determined by visual inspection of the premises by James Bushouse & Associates, Inc., under the direct supervision of James D. Bushouse, P. E. The report is divided into the component parts of the Buildings and Premises as required by Florida Statute, with the following information listed for each component:

1. Approximate age of the Component.

2. Estimated remaining useful life - Economic Life
   This figure represents the Engineer's estimate of the amount of relatively maintenance free service life which could be expected from a particular component.

3. Current Replacement Cost
   This figure represents the Engineer's estimate of the current replacement cost of a particular building component shown as a total amount and as per unit share of the expense.

4. A discussion of the overall state of repair and the structural soundness of the component.

The apartments consist of 2 buildings, 1 consisting of 2-2 bedroom units and the other 11-1 bedroom units. The buildings are constructed with C. B. S. walls on the 1st floor and wood stud with texture 1-11 on the second floor. The roof is wood trusses with asphalt shingles on the slope part and built-up roof on the flat part.

The 2 unit building was built a few years before the other, but due to the fact that it has been well maintained, this report calls the component of both the same age.

Our visual inspection covered the civil, structural, mechanical and electrical elements of the project, including the roofs. In general, for a 5 year old project, it is in good condition and appears to have been well maintained. For the age, estimated remaining useful life and estimated current replacement cost of the component parts of the buildings, refer to Appendix "A" of this report.

A. STRUCTURAL

The general structural condition of the apartment buildings is average for buildings of this type. The structural elements are safe and sound for use intended. There are some thermal stress cracks in the walkway slab, side of stairways and exterior walls under windows that will require on going maintenance.

B. ROOFS

The flat part of the roofs which are built-up are in generally good condition with no visible signs of leaks. The slope parts which are asphalt shingles, are in very good condition with no visible signs of leaks. The soffits should be monitored and maintained as necessary.

C. ELEVATORS

There are no elevators on the premises. Access to the upstairs units is achieved through exterior concrete stairways.

D. HEATING AND COOLING SYSTEMS

The general condition of the A/C Systems was average for buildings of this age period. Our inspection of the ductwork and air distribution system indicates there are no problems in these areas. Each apartment unit is equipped with its own split system A/C unit. All of the condensing units are located on a concrete pad on the ground.

E. PLUMBING

Our inspection of the plumbing systems indicate that the systems are safe and sound and are in good condition and functioning properly with no obvious defects or code violations. Water pressure at the second floor of the building was adequate. Sanitary drainage on the second floor drains slower than normal.

The electric hot water heater in the apartments appear to be in good condition with the exception that the water line connection in isolated cases is starting to rust. The main water distribution system is PVC and copper piping. The distribution lines within the apartments are copper. The hot water system and laundry room equipment appears to be adequately servicing the buildings and seems to pose no apparent maintenance problems.

F. ELECTRICAL SYSTEMS

The electrical distribution and utilization devise systems within the apartments are safe, sound and are functioning properly for the use intended and present no apparent shock or fire hazard. The elements comprising the electrical distribution system and the appliances, circuit breakers, etc. are of quality material and were installed with good workmanship. With the exception of a few lights, switches and toilet exhaust fans (of the units that were inspected) all of the utilization devices, controls, light fixtures, A/C equipment and appliances were operating. Of the outlets and switches inspected, all were properly installed and grounded. There was no ground fault breaker on the outlet in the bathrooms.

The electrical work in the public spaces was inspected and found to be functioning properly and to be safe and sound for the use intended. Electrical service equipment and distribution apparatus are in safe and sound condition. No violations of codes, standards, or regulations were observed in the power service equipment and main distribution apparatus and they were functioning properly.

G. SWIMMING POOL AND EQUIPMENT

There is no pool on the premise.

H. SEAWALLS

There are no seawalls on the premise.

I. PAVEMENT AND PARKING AREAS

Asphalt paving was in good condition for its age; some minor settlement has occurred, which will cause some minor problems. Also the paving should be sealed to add to the possible life of the surface.

J. SITE DRAINAGE SYSTEM

The drainage of the Parking Areas is to the grass swales where the water them percolates into the water table.

K. SYNOPSIS

Other than the items mentioned above, there is nothing that would constitute a serious problem any time in the near furture. The structural integrity of the buildings appear sound and can be expected to remain so with proper maintenance. The buildings are constructed with C. B. S. walls on the first floor, wood studs with texture I-11 on the second floor and wood studs and drywall for the interior partitions. The 11 unit building was given a Certificate of Occupancy about October 1977. The 2 unit building was constructed in 1970. This is estimated year only, due to the fact that no records of Certification of Occupancy could be located in the city of Fort Pierce. The prior use of these buildings were as a Rental Apartment Complex.

The items in this report indicate the current status at the time of inspections, which was June 7, 1982. These items are not to be considered all inclusive, nor a guarantee, but our professional expression based on our experience, knowledge, examination of available plans and on our visual inspection of the exposed conditions to the extent reasonably possible. It is the opinion of this firm that the above referenced buildings are safe for residential habitation.

THIS STATEMENT WAS PREPARED JUNE 16, 1982.

JAMES BUSHOUSE & ASSOCIATES, INC.
2136 Hammondville Road
Pompano Beach, Florida 33060
P. O. Box 4562, Margate, Florida 33063

PROJECT:

APPENDIX "A"

715 South Ocean Drive
Fort Pierce, Florida

COMPONENT	Age of the Component	Estimated Remaining Useful Life Of The Component	ESTIMATED CURRENT REPLACEMENT COST OF THE COMPONENT EXPRESSED AS:				
			A Total Amount	A PER UNIT AMOUNT, BASED ON EACH UNIT'S PROP. SHARE OF THE COMMON EXPENSE			
				Efficency	Approximately 700 s/f each. One Bedroom	Approximately 970 s/f each. Two Bedroom	Three Bedroom
1. ROOF a. Built-Up	5 years	10	$10, 800. 00	N/A	785. 45	$1, 080. 03	N/A
b. Asphalt Shingles	5 years	9	7, 175. 00	N/A	521. 82	717. 49	N/A
2. ELEVATORS	N/A	N/A	-0-	N/A	-0-	-0-	N/A
a. Ductwork & Air Handler	5 years	19	9, 750. 00	N/A	709. 09	975. 00	N/A
3. HEATING & COOLING SYSTEMS b. Compressor	5 years	3	7, 800. 00	N/A	567. 27	780. 02	N/A
a. Fixtures	5 years	11	9, 750. 00	N/A	709. 09	975. 00	N/A
4. PLUMBING b. Piping	5 years	15	13, 000. 00	N/A	945. 45	1, 300. 03	N/A
5. BUILDING ELECTRICAL SYSTEMS	5 years	25	32, 500. 00	N/A	2, 363. 64	3, 249. 98	N/A
6. SWIMMING POOL	N/A	N/A	-0-	N/A	-0-	-0-	N/A
7. SEAWALLS	N/A	N/A	-0-	N/A	-0-	-0-	N/A
8. PAVEMENT & PARKING AREAS	5 years	17	8, 505. 00	N/A	618. 54	850. 53	N/A
9. SITE DRAINAGE SYSTEM	N/A	N/A	-0-	N/A	-0-	-0-	N/A

CASE NUMBER _____

WOOD-DESTROYING ORGANISM INSPECTION REPORT

HRS Form 1145, Effective 6/28/79

Licensee Name Rowley's Pest Control — Inspection Date 7-20-82

Licensee Address 906 Angle Road Ft. Pierce, Fla. — License No. 1030

Inspector's Name James D. Powell — I.D. Card No. 7852

Property Address 715 S. Ocean Dr. Ft. Pierce, Florida

Specific Structure(s) Inspected Apartments

SCOPE OF INSPECTION

A trained and qualified representative of this company has conducted a careful inspection of the visible and accessible areas of the structure(s) listed above. This report is made on the basis of what was visible and accessible at the time of the inspection and is not an opinion covering areas such as, but not necessarily limited to, those that are enclosed or inaccessible, areas concealed by wall coverings, floor coverings, furniture, equipment, stored articles, or any portion of the structure in which inspection would necessitate removing or defacing finished wood.

THIS IS NOT A STRUCTURAL DAMAGE REPORT: A wood-destroying organism inspector is not ordinarily a construction or building trade expert and therefore is not expected to possess any special qualifications which would enable him to detect the extent of structural damage. If damage or other evidence of wood-destroying organisms is noted in this report, further investigation by qualified experts of the building trade should be made to determine structural soundness of the property. This is not to be construed to constitute a guarantee of the absence of wood-destroying organisms.

REPORT OF FINDINGS

(1) Active infestation was observed: Yes ☐ No ☒ _____ (Common name of organisms observed)

Location(s): _____ (Continue on reverse side if necessary)

(2) Other evidence of infestation was observed: Yes ☐ No ☒

Describe other evidence observed: _____ (Continue on reverse side if necessary)

Location(s): _____ (Continue on reverse side if necessary)

(3) Visible damage was observed: Yes ☐ No ☒

Organism(s) causing damage: _____ (Common name of organism(s))

Location(s): _____ (Continue on reverse side if necessary)

(4) This company has treated this property previously: Yes ☐ No ☒

(5) This property shows evidence of previous treatment: Yes ☐ No ☒

(6) This company has treated the structure(s) for the control of: _____ (Common name(s) of organism(s))

by the application of _____ A one year warranty transferable to any subsequent owner was issued for the control of _____ (Common name(s) of organism(s))

and expires _____ (Date)

Neither I nor the firm for whom I am acting have any financial interest in this property, or is associated in any way in this transaction with any party to this transaction, other than as a wood-destroying organism inspector of the structure(s).

Representative Billie Rowley/blc (Licensee or Certified Operator) Date July 21, 1982

HRS Form 1145, Effective 6/28/79

MAIL REPORT TO:

Boardwalk Apts. ATT: Mrs. Sparks

715 S. Ocean Dr.

Fort Pierce, Florida 33450

Basic Charge $ $25.00

Additional Charges $ _____

Total Amount Dues $25.00

INSPECTION ORDERED BY _____ BUYER _____ SELLER _____

ORAL REPRESENTATIONS CANNOT BE RELIED UPON AS CORRECTLY STATING THE REPRESENTATIONS OF THE DEVELOPER (SELLER). FOR CORRECT REPRESENTATIONS, REFERENCE SHOULD BE MADE TO THIS CONTRACT AND THE DOCUMENTS REQUIRED BY SECTION 718.503, FLORIDA STATUTES, TO BE FURNISHED BY A DEVELOPER (SELLER) TO A BUYER.

PURCHASE AGREEMENT

THIS AGREEMENT, made and entered into by and between K. M. BROOKS and LOUISE M. SPARKS, hereinafter called the "Seller", and

hereinafter called the "Purchaser"; which terms Seller and Purchaser shall include and bind the heirs, executors, legal representatives, successors and assigns of the respective parties hereto whenever the context hereof so requires or admits;

W I T N E S S E T H :

WHEREAS, the Seller is converting to condominium ownership apartments situate in the City of Fort Pierce, State of Florida, known as BOARDWALK CONDOMINIUM, (hereinafter called the "Condominium"), and has submitted or will submit the land upon which such building is located to the condominium form of ownership and use by recordation of a Declaration of Condominium for the Condominium in the public records of St. Lucie County, Florida; and

WHEREAS, the Purchaser will read when available, or has read, the Condominium documents to be submitted, or submitted, by the Seller as required by Florida Statutes 718.503, including a copy of said Declaration of Condominium and all of its exhibits (hereinafter called the "Declaration"); and

WHEREAS, the Purchaser desires to purchase Apartment Unit _____ of the Condominium, all appliances located or to be located therein, and the air conditioning unit serving or to serve said apartment; and

WHEREAS, the Seller does hereby approve of the purchase of said apartment by the Purchaser, and the parties desire to set forth herein all of the terms and conditions of such sale and purchase;

NOW, THEREFORE, in consideration of the mutual promises and undertakings hereinafter set forth, the parties mutually agree as follows:

1. The Seller will sell and convey and the Purchaser will purchase all of that certain property in St. Lucie County, Florida, described as follows:

Apartment Unit _____ of BOARDWALK CONDOMINIUM, hereinafter called the Apartment, according to the Declaration, together with all of the appurtenances to such apartment, including but not limited to automobile parking space _____, all furniture, furnishings, appliances and fixtures located or to be located therein, and the air conditioning unit serving or to serve said apartment.

2. The total purchase price to be paid for the apartment is $_____, payable as follows:

a. The amount of $_____ shall be deposited by the Purchaser with FLOWERS-CULPEPPER REALTY, INC., Registered Real Estate Broker, whose business address is 2011 South 25th Street, Fort Pierce, Florida

Escrow Agent, pursuant to agreement dated _____, and pursuant to the Florida Condominium Act (Chapter 718, Florida Statutes, 1981)

b. The balance is to be paid in cash by the Purchaser to the Seller at the time of closing.

3. Anything herein to the contrary notwithstanding, it is mutually agreed that the purchase and sale contemplated hereby is contingent upon the Purchaser's obtaining a commitment for a mortgage loan to encumber the apartment, in the amount of $_____, which said loan shall be at an annual rate of interest and upon such terms as may be reasonable in St. Lucie County, Florida at the time the application for loan is made. Said commitment for loan is to be obtained within twenty (20) days of the date of this agreement from a lending institution in St. Lucie County, Florida; its purpose is to obtain funds with which to pay such purchase price; and the Purchaser agrees to diligently attempt to obtain said loan. If not obtained within said twenty-day period and such diligent attempt has been made, the Purchaser's deposit will be returned and this agreement shall be null and void and of no further force or effect between the parties hereto. The Seller agrees that it will assist the Purchaser in obtaining mortgage financing on the apartment which is the subject of this contract.

(NOTE: This Paragraph No. 3 shall not be a part of this Agreement unless the amount of loan is specified in full by the Purchaser upon his execution of this Agreement.)

4. All mortgages or liens now or hereafter encumbering the apartment will be discharged or released at or prior to the closing unless assumed by the Purchaser. The Seller will convey by warranty deed a marketable fee simple title to the apartment together with all appliances and fixtures located in the apartment and the air conditioning unit serving the apartment. The title to the apartment will be subject to the following exceptions:

a. The provisions of the Declaration, including all exhibits and changes thereto made prior to the time of delivery of the warranty deed; and all rules and regulations and contracts affecting the property

made by BOARDWALK OWNERS ASSOCIATION, INC., the nonprofit corporation responsible for the operation of the condominium (hereinafter called the "Association"), existing at the time of delivery of the warranty deed.

b. The easements provided for in the Florida Condominium Act (Chapter 718, Florida Statutes, 1981).

c. Restrictions, reservations and easements of record.

d. Such zoning or other restrictions upon the use of the apartment and upon all of the condominium property as may be imposed by governmental authorities having jurisdiction.

e. Taxes for the year in which the sale is closed, if not paid; and for subsequent years.

f. Any mortgage executed by the Purchaser encumbering the apartment.

Any or all of the foregoing exceptions may be omitted from the warranty deed to be delivered hereunder, but all such provisions so omitted shall nevertheless survive delivery of the warranty deed.

5. Real and personal property taxes, less the November discount, will be prorated as of the date of closing; and, if the taxes for the year in which this sale is closed are assessed against the condominium property as a whole, the total amount thereof may be estimated by the Seller and the portion apportioned to the apartment, the appliances and the air conditioning unit shall be the same share as the share of common expenses attributed to the apartment. In such event, the Seller and the Purchaser agree that they will each pay their proportionate share of such taxes. If the amounts of the taxes have not been established as of the date of closing, such prorations and apportionments will be based upon the amounts of the taxes for the previous year.

6. Assessments, if any, for the apartment established by the Association will be prorated between the Seller and the Purchaser as of the date of closing.

7. Subject to those items specified in Item 4 hereof, the title which the Seller obligate themselves to convey to the Purchaser will be marketable and insurable. As evidence of their title and in order to provide title security to the Purchaser, the Sellers agree to provide to the Purchaser at, or immediately following, the closing an Owner Title Insurance Guarantee covering the apartment which is the subject matter of this contract.

8. At or before the closing contemplated hereby, the Purchaser agrees to pay, in addition to the purchase price for the apartment unit, the following:

a. The sum required to record the warranty deed to Purchaser; and

b. All mortgage closing costs, if applicable, pursuant to Paragraph 3 hereof, including the charge of $50 for mortgagee title insurance coverage if the same is required by Purchaser's mortgage lender. Said mortgagee coverage will be issued concurrently with the owner coverage provided for in Paragraph 7 above.

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ATTORNEYS AT LAW
POST OFFICE BOX 1900
FORT MYERS, FLORIDA 33902
Telephone (813) 334-2020

Seller shall pay for all documentary stamps to be affixed to the warranty deed at the time of its recording.

9. Unless mutually agreed otherwise, the closing of this sale shall be held no later than thirty (30) days from the effective date of this contract. The effective date of this contract shall be the date upon which Seller furnishes to Purchaser copies of all documents, including the Declaration of Condominium, listed in Florida Statutes §718.503(2), with copies of same having been previously filed by Seller with the Division of Florida Land Sales and Condominiums. Prior to said effective date, this contract shall be voidable by Purchaser. The closing shall be held at the office of the Seller, at the office of the Seller's attorneys, or at the office of the Seller's title insurance agent, or at the office of the mortgagee of any mortgage executed by the Purchaser encumbering said apartment. At such closing, the Purchaser will pay the balance of the purchase price and the Seller will deliver the warranty deed to the Purchaser.

10. In the event the Purchaser fails to take title pursuant to the provisions of this Agreement, the Sellers at their election may terminate same by giving written notice of such termination to the Purchaser. Ten (10) days after the mailing of such notice, this Agreement will become null and void and of no further force or effect between the parties hereto; and the Seller may retain the deposit, together with interest accrued thereon, as liquidated damages. If the Seller defaults in the performance of this Agreement by failing to convey title pursuant to its provisions, the Purchaser may terminate same by giving written notice of such termination to the Seller. Ten (10) days after the mailing of such notice, the Seller will return the deposit, together with interest accrued thereon, to the Purchaser and this Agreement shall become null and void and of no further force or effect between the parties hereto.

11. THIS AGREEMENT IS VOIDABLE BY PURCHASER BY DELIVERING WRITTEN NOTICE OF THE PURCHASER'S INTENTION TO CANCEL WITHIN FIFTEEN (15) DAYS AFTER THE DATE OF EXECUTION OF THIS AGREEMENT BY THE PURCHASER, AND RECEIPT BY PURCHASER OF THE ITEMS REQUIRED TO BE DELIVERED TO HIM BY THE DEVELOPER (SELLER) UNDER SECTION 718.503, FLORIDA STATUTES. PURCHASER MAY EXTEND THE TIME FOR CLOSING FOR A PERIOD OF NOT MORE THAN FIFTEEN (15) DAYS AFTER THE PURCHASER HAS RECEIVED ALL OF THE ITEMS REQUIRED. PURCHASER'S RIGHT TO VOID THIS AGREEMENT SHALL TERMINATE AT CLOSING.

12. Purchaser acknowledges that Seller has advised that the condominium unit which is the subject matter of this contract is approximately five (5) years of age and has been previously occupied, prior to conversion to condominium ownership, by transient tenants as vacation or seasonal residences.

13. The Purchaser has examined the apartment to be sold, the apartment building within which it is located and all other portions of the condominium property and is familiar or will be familiar in advance of the closing with the physical condition thereof. The Seller does not make any representations as to the physical condition, expense of operation, or any other matter affecting or relating to said property, except as herein, or in the Declaration and in the other documents described in Section 718.503 of the Florida Condominium Act.

14. The Purchaser, by the execution of this Purchase Agreement, acknowledges that he is entitled to a receipt of copies of all documents described in Section 718.503 of the Florida Condominium Act. Such documents include the declaration

FEE, FEE, KOBLEGARD, TEEL & KENNY, P.A.
ATTORNEYS AT LAW
POST OFFICE BOX 1069
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-5020

of condominium, the documents creating Boardwalk Owners Association, Inc., and the By-Laws for Boardwalk Owners Association, Inc. At the time of delivery of said documents, Purchaser agrees to give a receipt therefor. At closing, the Purchaser will in writing agree to be bound by the provisions of said documents, including the declaration of condominium, and the warranty deed conveying the apartment to the Purchaser will contain an acknowledgment that the conveyance is subject to the provisions of said documents. Further, the Purchaser will, in writing at the closing, ratify, confirm and approve all of the provisions of said documents and will agree to be bound thereby; Purchaser will impress a lien upon the apartment, as security for his obligations as described in the declaration and its exhibits and will acknowledge and agree that said documents and this Purchase Agreement contain all of the warranties, representations and inducements concerning the purchase by Purchaser of the apartment.

15. Wherever the context hereof so permits, the use of plural will include the singular, the singular the plural, and the use of any gender will be deemed to include all genders.

16. The delivery of any item and the giving of any notice in compliance with this Agreement shall be accomplished by personal delivery of the item or notice to the party intended to receive it, or by mailing it to the address of the party as stated in this Agreement, by registered or certified mail, return receipt requested. It shall be the obligation of Purchaser to insert his correct mailing address in the place specified below. Notice or delivery by mail shall be effective when mailed.

17. The effective date of this Agreement shall be regarded as the date when the last one of the Seller and Purchaser has signed this agreement.

18. Special Clauses: _____

_____

_____

_____

_____

IN WITNESS WHEREOF, the parties hereto have cause this Agreement to be executed on the dates as set forth below.

WITNESSES:

_____

_____
As to Sellers

Executed by the Seller on _____, 19___.

_____(Seal)
K. M. BROOKS

_____(Seal)
LOUISE M. SPARKS
"SELLER"

WITNESSES:

_____

_____
As to Purchasers

Executed by Purchaser on _____, 19___.

_____(Seal)

_____(Seal)
"PURCHASER"

Purchaser's Mailing Address: _____

_____

FEE, FEE, KOBLEGARD, TEEL & KENNY, P.A.
ATTORNEYS AT LAW
POST OFFICE BOX 1000
FORT PIERCE, FLORIDA 33454
Telephone (305) 461-5020

WARRANTY DEED

THIS WARRANTY DEED made and executed this _____ day of _____, 19_____, by K. M. BROOKS and LOUISE M. SPARKS, hereinafter called the Grantor, to

_____

_____

whose post office address is _____

_____

hereinafter called the Grantee, which terms "Grantor" and "Grantee" shall include all the parties to this instrument, and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations.

WITNESSETH:

That the Grantor, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the Grantee all that certain real property situate in St. Lucie County, Florida, viz:

Apartment Unit _____ of BOARDWALK CONDOMINIUM, according to the Declaration of Condominium and all exhibits thereto dated _____, recorded _____, in Officiel Record Book _____, pages _____ through _____ of the public records of St. Lucie County, Florida;

TOGETHER WITH:

1. All of its appurtenances, according to said Declaration of Condominium and all of its exhibits, including automobile parking space _____, and all of the tenements, hereditaments and other appurtenances thereunto belonging or in anywise appertaining.

2. All furniture, furnishings, appliances and fixtures now situate in said apartment.

SUBJECT, HOWEVER, to the following:

1. The provisions of the Declaration, including all exhibits, and all rules and regulations affecting the property made by Boardwalk Owners Association, Inc., the nonprofit corporation responsible for the operation of the condominium.

2. The easements provided for in the Declaration or its exhibits or in the Condominium Act of the State of Florida, Chapter 718, Florida Statutes, 1981.

3. Restrictions, reservations and easements of public record.

4. Such zoning and other restrictions upon the use of the apartment and upon all of the condominium property as may be imposed by Governmental authorities having jurisdiction.

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POST OFFICE BOX 1108
FORT PIERCE, FLORIDA 33454
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5. Taxes for the current year.

6. That certain mortgage from the grantee hereof to

_____

in the original principal sum of $_____, dated _____, recorded in O. R. Book _____ at page _____ of the public records of St. Lucie County, Florida. (This Item 6 shall not be a part of this warranty deed unless all required information is inserted in the blanks provided.)

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

AND the Grantor hereby covenants with said Grantee that it is lawfully seized of said real property in fee simple; that the Grantor has good right and lawful authority to sell and convey said real property; that the Grantor hereby fully warrants the title to said real property and will defend the same against the lawful claims of all persons whomsoever; that said real property is free and clear of all encumbrances except taxes accruing subsequent to December 31, 19___.

AND, the Grantor further grants to Grantee an implied warranty of fitness and merchantability for the purposes and uses intended, as to the roof and structural components of the improvements and as to mechanical, electrical and plumbing elements serving the improvements, excepting mechanical elements serving only a unit other than the one hereby conveyed, for a term of three (3) years from the recording of the Declaration of Condominium for Boardwalk Condominium.

IN WITNESS WHEREOF, the said Grantor has executed this deed the day and year first above written.

WITNESSES:

_____ _____(Seal)
K. M. BROOKS

_____ _____(Seal)
LOUISE M. SPARKS

STATE OF FLORIDA
COUNTY OF ST. LUCIE

The foregoing instrument was acknowledged before me this _____ day of _____, 198___, by K. M. BROOKS and LOUISE M. SPARKS.

_____
Notary Public, State of Fla. at Large
My Commission Expires:_____

THIS INSTRUMENT WAS PREPARED BY:

FRANK H. FEE, III, Esquire, of
FEE, FEE, KOBLEGARD, TEEL & KENNEY, P.A.
P. O. Box 1000
Fort Pierce, FL 33454
(305)461-5020

RATIFICATION BY GRANTEE

THE UNDERSIGNED, as Grantee in the foregoing Condominium Warranty Deed, hereby acknowledges receipt of all documents described in Section 718.503 of the Florida Condominium Act. The undersigned hereby ratify, confirm and approve all of the provisions of said documents and agree to be bound thereby. The undersigned hereby impress a lien upon the apartment described in the foregoing warranty deed, as security for the obligations as described in the Declaration and its exhibits, and they acknowledge and agree that said documents together with any prior purchase contract contain all of the warranties, representations and inducements concerning the purchase by grantee of the described apartment.

Witnesses:

_____ _____

_____ _____

_____

STATE OF FLORIDA

COUNTY OF ST. LUCIE

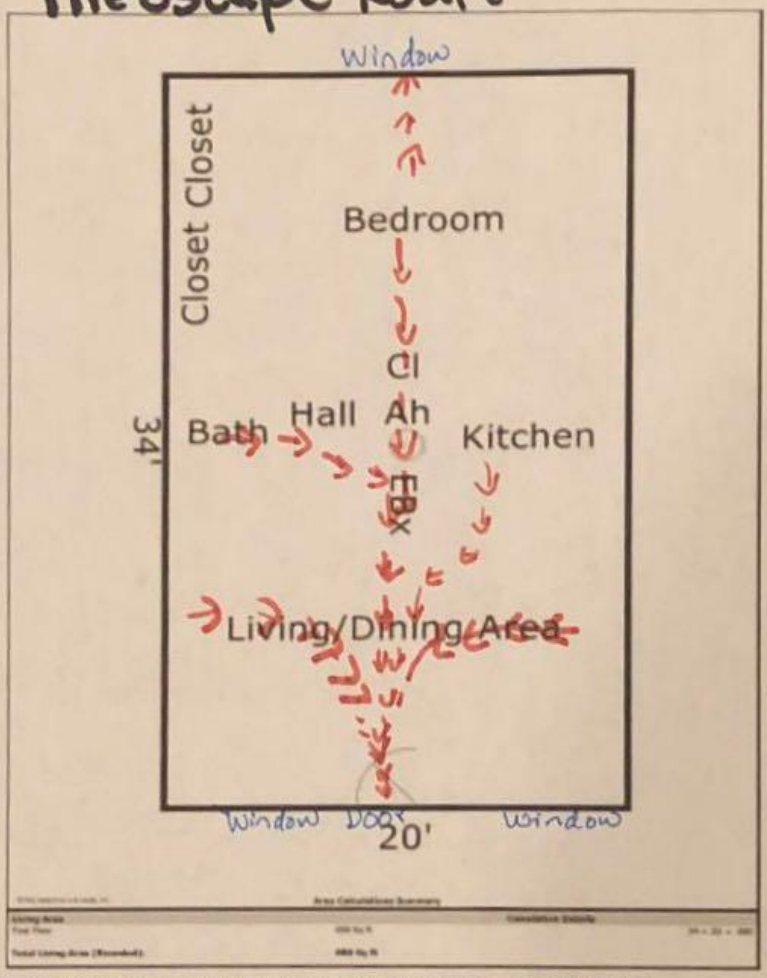
The foregoing instrument was acknowledged before me this _____ day of _____, 19_____, by

_____.

_____
Notary Public, State of Fla. at Large
My Comm. Expires:_____

FEE, FEE, KOBLEGARD, TEEL & KENNY, P.A.
ATTORNEYS AT LAW
POST OFFICE BOX 1000
FORT PIERCE, FLORIDA 33454
TELEPHONE (305) 461-5020

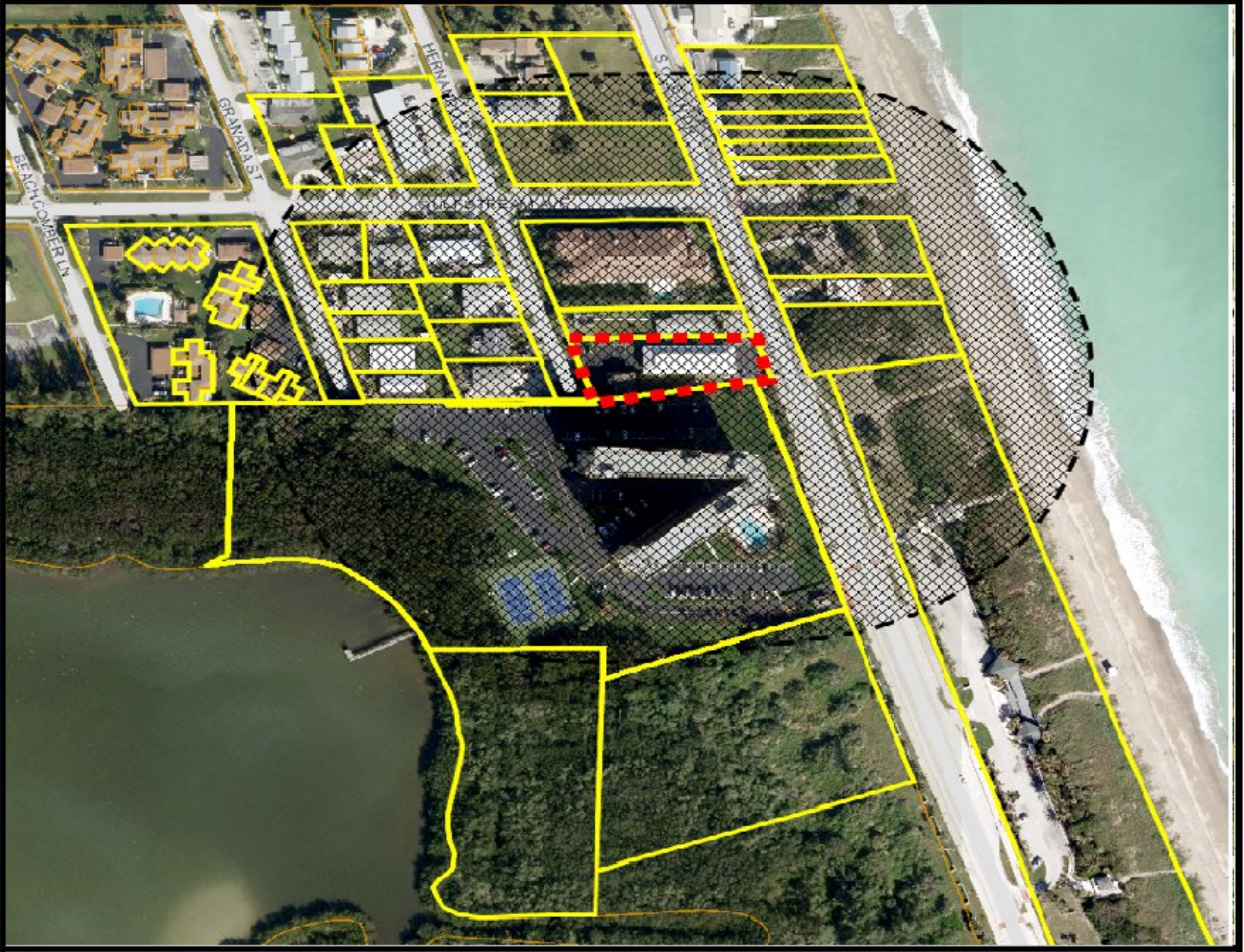
Fire Escape Route



Floor Plan for 715 South Ocean Drive, Unit F, Fort Pierce, Florida 34949

Uses

Bedroom – rest/lounge
Bath - bodily care
Closet - storage
Living Room - lounge/entertainment
Kitchen - cooking/food prep
Dining Area - eating/entertainment

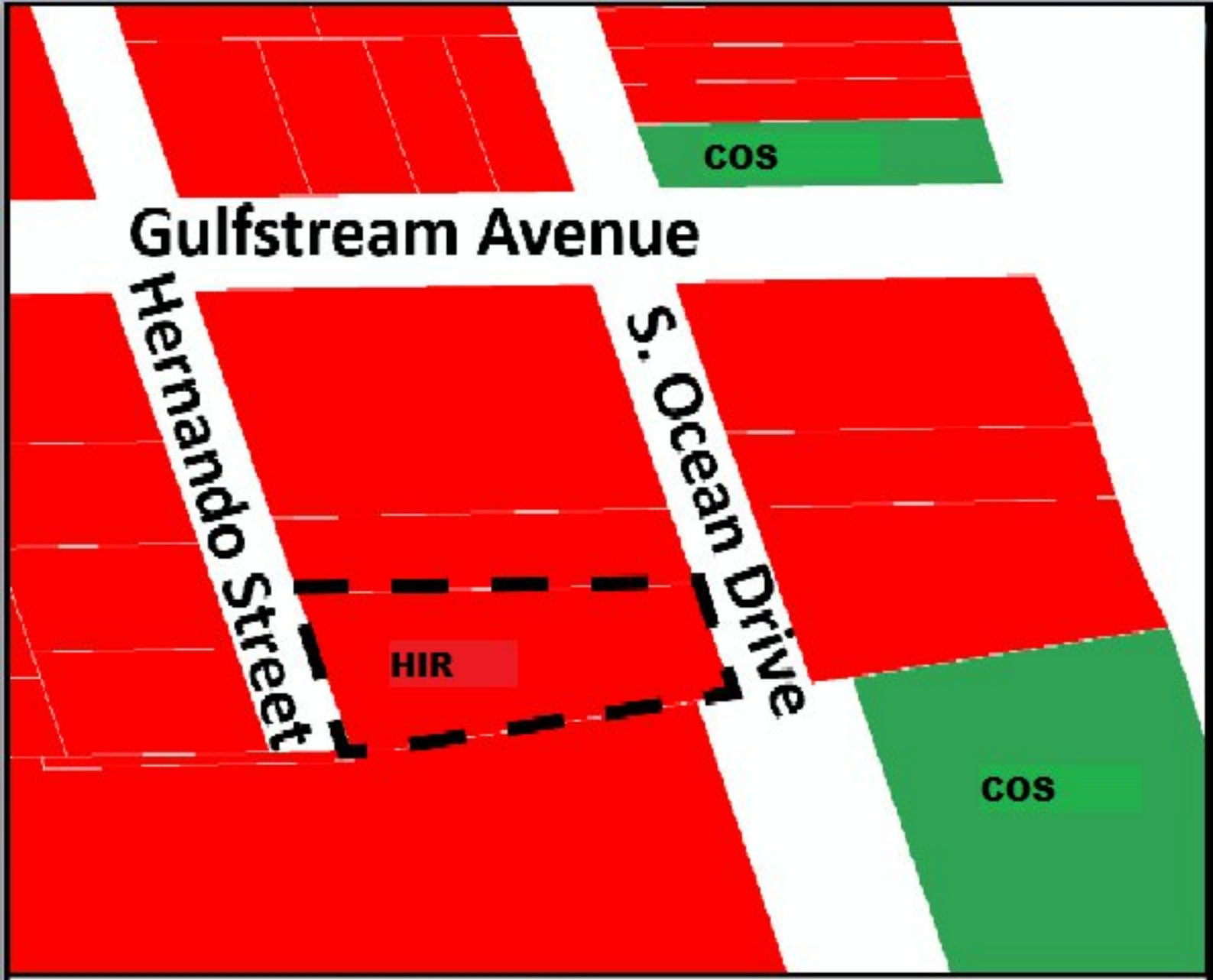


Location Map

715 S. Ocean Drive, Unit F

Fort Vacation Rental

THE SUNRISE CITY
FORT PIERCE
Florida



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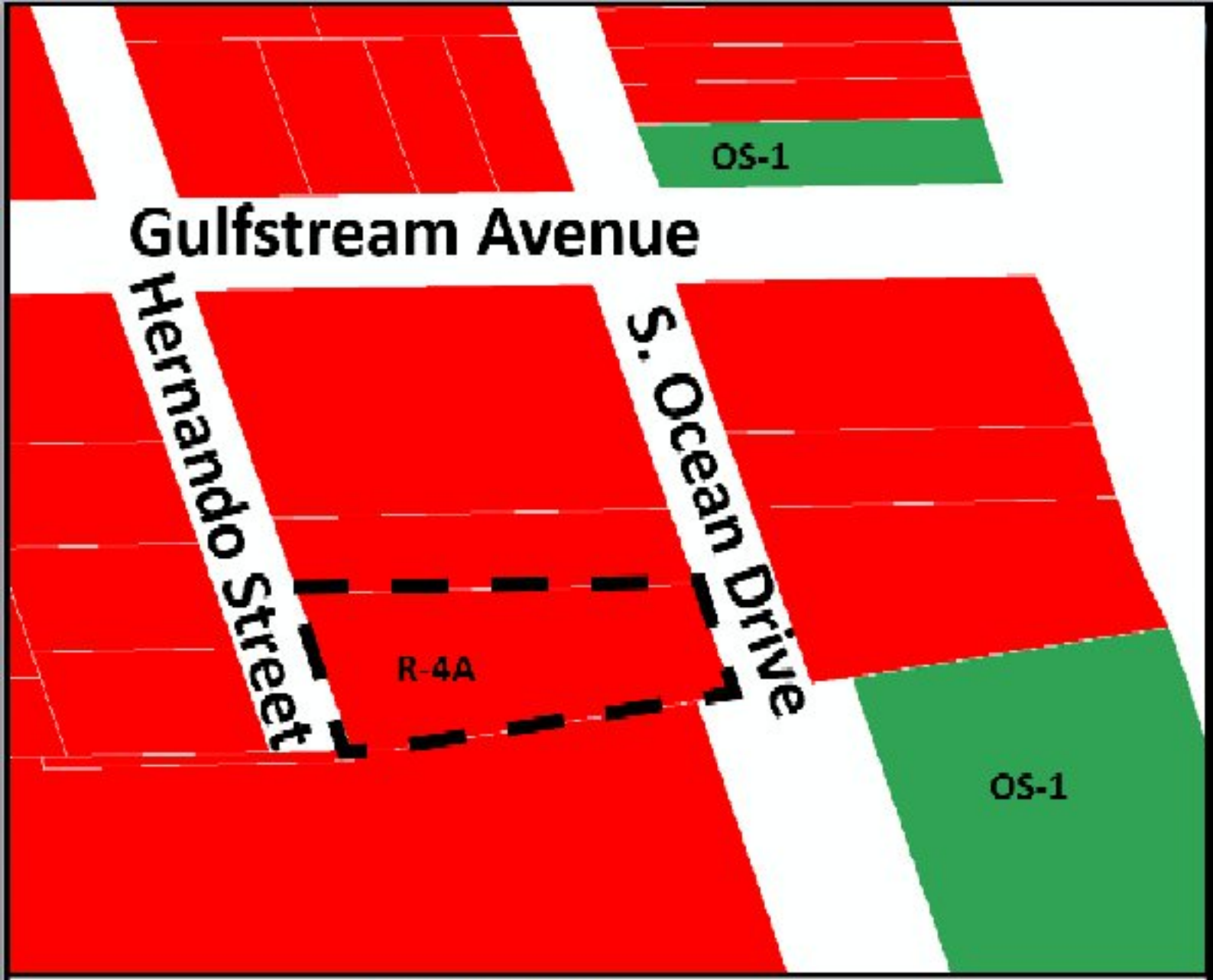
Conditional Use
Fort Vacation Rental
715 S. Ocean Drive, Unit F

THE SUNRISE CITY FORT PIERCE Florida

HIR = **COS** =

FLU Map



N
W E
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Conditional Use
Fort Vacation Rental
715 S. Ocean Drive, Unit F

THE SUNRISE CITY FORT PIERCE Florida

R-4A = **OS-1 =**

Zoning Map

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

July 16, 2020

Augustus B. Fort Jr.
49 Woodland Drive, #201
Vero Beach, FL 32962

Subject: 715 S. Ocean Drive, Unit F – TRC Comments for July 16th, 2020 conference call

City of Fort Pierce Planning Department

1. The property manager for the dwelling rental shall be available at all times to resolve complaints or violations of city code. Said manager shall reside in St. Lucie County and shall be registered with the City of Fort Pierce.

2. Guide booklets (available from Code Enforcement) shall be provided to renters regarding local rules and public service resources, to minimize conflicts.

3. The applicant shall file for and obtain St. Lucie County and City of Fort Pierce Business Tax Licenses within thirty (30) days of issuance of a license from the Florida Department of Business & Professional Regulation.

4. There shall be a limitation of no more than no two (2) vehicles at the site.

5. The City of Fort Pierce Business Tax License number shall be included on all advertising.

Fort Pierce Engineering Department

Engineering has no objections to the short-term rental request.

Fort Pierce Utility Authority

W/WW Engineering: No Comment

Electric & Gas Engineering: No comment

Fort Pierce Building Department

The Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

Fort Pierce Police Department

No Comments

St. Lucie County Planning Department

No Comments

St. Lucie County PW/Engineering

No Comments

City Clerk Office

No Comments

Code Enforcement

Code does not have any comments outside of the standard list of requirements that are covered by the Planning Department. There is no code activity at this location.

Florida Department of Transportation

FDOT has no comments regarding the referenced application.

Planning Board - 2 PM **7. d.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Site Plan and Conditional Use - Aria Apartments - 3000 Okeechobee Road

LOCATION

3000 Okeechobee Road

RESPONSIBLE STAFF

Vennis Gilmore
Technical Review Committee

RECOMMENDATION

The requested applications for Development Review and Design Review meets the criteria specified in Sections 125-313 and 125-314 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare; Therefore staff recommends **APPROVAL** with the following four (4) conditions and one (1) Staff Advisory Suggestion:

1. A Landscape Bond will need to be provided at the time of Certificate of Occupancy for each building pursuant to City Code 123-6. The Landscape Bond for the common areas, clubhouse, lakes, and parking areas shall be submitted before the Certificate of Occupancy is issued for the first building in each phase.

2. At the time of Building Permit submit a signed and sealed boundary and topographic survey to the City Engineering Department in accordance with City Code 119-2 (a)(7).

3. Remove the light grey from the color scheme and use colors from the blue-violet or blue-green color palette.

4. Include a landscaped area around base of the monument sign which extends a minimum distance of three (3) feet in all directions. Such landscaped area shall be completely covered by ground cover and shrubs, hedges or similar vegetative materials. Vegetation in the area surrounding said sign shall be maintained at a height of less than twelve (12) inches.

Advisory Comment:
Please consider a gated entry for the health, safety, and welfare of the future tenants of this proposed development. **(This is not a condition, but rather a suggestion.)**

Attachments

Staff Report
Location Map
FLU Maps
Zoning Maps
Application & Supporting Documents
TRC Comments

Form Review

Form Started By: Vennis Gilmore
Started On: 08/04/2020 11:00 AM
Final Approval Date: 08/05/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director
FROM:	Vennis Gilmore, Planner
RE:	**Application for Development Review, Design Review, & Conditional Use** **Aria Apartments – 3000 Okeechobee Road** **File # 20-07000007**
BOARD DATE:	August 11, 2020

STAFF REPORT

Property Owner	Arrow Investment Group, LLC 4512 N. Flagler Drive, Suite 2056 West Palm Beach, Florida 33407
Representative:	Michael Sanchez/Managed Land Entitlements 3710 Buckeye Street, Suite 100 Palm Beach Gardens, Florida 33410
Requested Action:	Approval of an Innovative Residential Multi-Family 112-unit Development
Site Location:	3000 Okeechobee Road
Parcel IDs:	2417-504-0020-001-6
Existing Use:	Vacant
Parcel Size:	6.796 +/- acres
Current Future Land Use:	General Commercial (GC)
Current Zoning:	General Commercial (C-3)
Proposed Future Land Use:	Medium Density Residential (RM)
Proposed Zoning:	Medium Density Residential (R-4)

	North	East	South	West
Surrounding FLU:	RL	GC	GC	GC/RM
Surrounding Zoning:	R-2	C-3	C-3	C-3/R-4

Staff Analysis

Request

In accordance with Sections 125-313, 125-314, and 125-236 of the City Code, the applicant is requesting approval for Development Review (Major Site Plan), Design Review and Conditional Use (Innovative Residential Development) for a multi-family 112-unit development. The subject site is currently vacant land. The applicant is requesting approval of a Future Land Use Amendment from General Commercial (GC) to Medium Density Residential (RM) and a Zoning Atlas Amendment from General Commercial (C-3) to Medium Density Residential (R-4); concurrent with the above reference applications.

Site Plan

The applicant has stated that as proposed the project will consist of five (5) apartment buildings with 24-units in four (4) of the apartment buildings and 16-units in one (1) of the apartment buildings for a total of 112-units. The maximum building height will be 39 feet from existing grade. The proposed Aria Apartments will offer a 2,168 square foot clubhouse with a swimming pool. Pursuant to City Code 125-315 (d)(1)(b), the parking ratio for a multi-family development is 1.5 spaces per unit. The development is required to have 168 parking spaces and 172 parking spaces are provided with four (4) surplus parking spaces. Seven (7) of those parking spaces are designated as handicap accessible. The development is also providing a total of 14 bicycle parking spaces, which includes two (2) surplus bicycle spaces above the minimum code requirement of City Code 125-315 (f)(1)(a).

Onsite amenities include a clubhouse, pool, tot lot with playground equipment and benches, a lake with a fountain feature, a walking trail around the lake at the center of the development, a passive park with picnic tables and benches, and a fenced dog-park. There is one (1) vehicle access point into the site from Okeechobee Road with two (2) pedestrian-only access points from the south of the property connecting to the Okeechobee Road northern sidewalk. The proposed site also includes an abundance of pedestrian pathways, such as internal sidewalks and striped crosswalks, throughout the development.

The Landscape Plan as presented is consistent with City Code 123-37, General Landscaping requirements. The applicant is providing a landscape plan that goes above and beyond code minimums, as demonstrated below:

- The interior landscaping area requires 56 trees and the applicant is providing 166 total trees.
- The interior landscaping area requires 5,531 square feet and the applicant is providing 8,284 square feet.

- The code minimum for the perimeter landscape buffer is 10 feet and the proposed landscape plan is providing up to 25 feet in locations along its perimeter.

The applicants will be required to mitigate trees because the mitigation plan provided shows that a total of 552 inches would be required for mitigation of trees and 316 inches are being preserved. A total of 155 Palms will be relocated on site. The Tree Mitigation Plan has been reviewed and approved by the City Urban Forester. The lighting plan is consistent with City Code 125-315 (j)(1)(b).

Density Bonuses

The Medium Density Residential (RM) Future Land Use designation allows for a maximum of 12 dwelling units per acre, per the City's Comprehensive Plan. To make the project viable, the applicant is taking advantage of the Density Bonus that is outlined in the City's Comprehensive Plan Policy 1.1.5 that states a "maximum of five (5) dwelling units per acre density bonus is permitted for development located within one-fourth (¼) mile radius of a rail station, multimodal transit center or transit stop." The project is located within the boundary of the Community Redevelopment Agency (CRA). Furthermore, the applicant has provided a map which demonstrates that the project is ¼ mile from a transit stop (corner of S. 33rd Street and Okeechobee Road). Therefore, this application is eligible for the density bonus of up to five (5) units an acre under the above criteria. The above referenced Comprehensive Plan density bonus brings the total allowed density of this application to seventeen (17) units per acre.

The Medium Density Residential (R-4) Zoning District, per City Code Section 125-194, allows for up to 10 dwelling units for conventional developments and 12 dwelling units per acre for innovative residential developments. City Code 125-243 distinguishes what it is required to allow for up the up to two (2) unit density bonus for an Innovative Residential Development. City Code Section 125-243 allows for up to one (1) additional unit per acre for enhanced landscaping, allows for up to one-half (1/2) an additional unit per acre for creative placement of buildings within a residential development, and allows for up to one-half (1/2) an additional unit per acre for building design. City Code 125-326 (b)(2) states that a maximum of five dwelling units per acre density bonus is permitted for development located within one-fourth mile radius of a rail station, multimodal transit center or transit stop (corner of S. 33rd Street and Okeechobee Road). Therefore, this application is eligible for the density bonus of up to seven (7) units an acre under the above criteria. The above referenced City Code density bonuses brings the total allowed density of this application to seventeen (17) units per acre.

Conditional Use

In accordance with City Code Section 125-243, the applicant is requesting approval for a Conditional Use with New Construction for an Innovative Residential Development that consists of 112 multi-family units. The applicant is taking advantage of an additional Density Bonus outlined in Section 125-243.

Innovative residential developments are developments which achieve a more creative and imaginative housing environment than normally occurs by use of the clustering technique, by employing various other methods to achieve distinctiveness and excellence in siting, design

and/or landscaping. Density bonuses and reductions in various building restrictions are used to encourage these developments. Densities will not exceed the level which the city commission determines is appropriate due to natural features of the area, public facility and service needs and capacities, transportation needs and capacities and compatibility with nearby development.

Density bonuses awarded for the following criteria are cumulative:

(1) ***Landscaping****. The gross density may be increased up to one unit per acre for landscaping plans which provide for effective use of existing vegetation and/or for approved landscape plans for streetscapes, pedestrian ways, bicycle paths, areas near buildings, open spaces and/or recreation areas. This increased density may only be awarded if the landscaping of the innovative residential development will exceed the requirements in section 125-314 for landscaped area by ten percent, for amount of trees by ten percent and/or in terms of qualitative characteristics of the landscaping.*

(2) ***Siting****. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-5 zone) for creative placement of buildings and/or other facilities in terms of visual focal points, use of existing physical features such as topography, views, sun and wind orientation, the circulation pattern, variation in building setbacks and/or building and facility groupings.*

(3) ***Design****. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-5 zone) for imaginative design features including architectural styles, harmonious use of building materials, varied use of housing types and/or other design elements of the innovative residential development.*

The application requires approval of the Conditional Use for the additional maximum Density Bonus of two (2) units and qualifies for the following reasons:

1) The landscaping plan provides for effective use of existing vegetation and for streetscapes, pedestrian ways, bicycle paths, areas near buildings, open spaces and recreation areas. Landscaping of this proposed Innovative Residential Development exceeds the requirements in section 125-314 for landscaped area by ten percent, for the amount trees by ten percent and in terms of qualitative characteristics of the landscaping. The code minimum for total of trees is 168, the applicant has provided 303 trees. This exceeds the minimum requirement by 80.4%.
2) The site plan provides for creative placement of buildings and other facilities in terms of visual focal points, use of existing physical features such as topography, views, sun and wind orientation, the circulation pattern, variation in building setbacks and/or building and facility groupings.
3) The design elevations provide for imaginative design features including architectural styles, harmonious use of building materials, varied use of housing types and other

design elements of the innovative residential development. The architecture includes a neo-modern design with balconies, pitched roofs, window canopies, and open-air stairway spaces.

Design Review

The City's Design Review guidelines provide approaches to design situations that will contribute to the existing and developing character of the City. The intent of the City's design review process is not to stifle innovative architecture, but rather to assure respect for and reduce incompatible and adverse impacts on the visual experience throughout the City. This may be accomplished through respectful interpretation of vernacular building typologies and styles in proposed development. Proposed designs should take cues from traditional proportioning systems and be synonymous with a chosen style.

In staff's professional opinion the design will not detract from the build environment and will blend in with its surroundings. The building is articulated with varying roof heights and accents. The apartment buildings will vary between two (2) and three (3) stories and will offer a consistent color. The architectural features are modern in nature and will compliment the other residential communities in the area. Staff recommends that the applicant remove the light grey from the color scheme and use colors from the blue-violet or blue-green color palette.

Technical Review Committee

All affected City and County Departments have reviewed the proposed Development Review and Design Review applications and have provided conditional approval based on compliance with requirements of the City Code and the Comprehensive Plan. The comments generated from the technical review and any responses by the applicant have been provided.

Staff Recommendation

The requested applications for Development Review and Design Review meets the criteria specified in Sections 125-313 and 125-314 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare; Therefore staff recommends **APPROVAL** with the following four (4) conditions and one (1) Staff Advisory Suggestion:

1. A Landscape Bond will need to be provided at the time of Certificate of Occupancy for each building pursuant to City Code 123-6. The Landscape Bond for the common areas, clubhouse, lakes, and parking areas shall be submitted before the Certificate of Occupancy is issued for the first building in each phase.
2. At the time of Building Permit submit a signed and sealed boundary and topographic survey to the City Engineering Department in accordance with City Code 119-2 (a)(7).
3. Remove the light grey from the color scheme and use colors from the blue-violet or blue-green color palette.

4. Include a landscaped area around base of the monument sign which extends a minimum distance of three (3) feet in all directions. Such landscaped area shall be completely covered by ground cover and shrubs, hedges or similar vegetative materials. Vegetation in the area surrounding said sign shall be maintained at a height of less than twelve (12) inches.

Advisory Comment:
Please consider a gated entry for the health, safety, and welfare of the future tenants of this proposed development. **(This is not a condition, but rather a suggestion.)**



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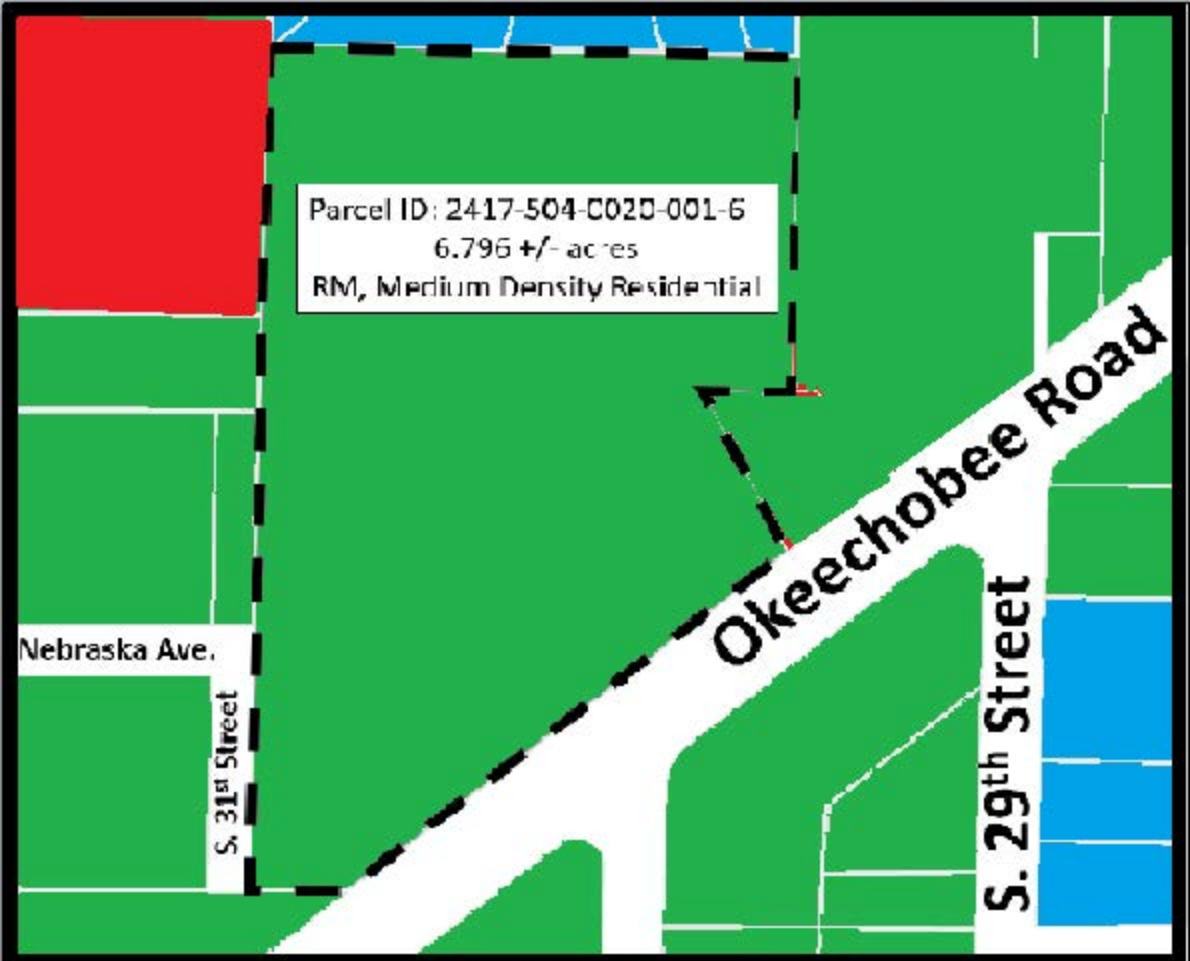
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY
FORT PIERCE
Florida

Aerial Map



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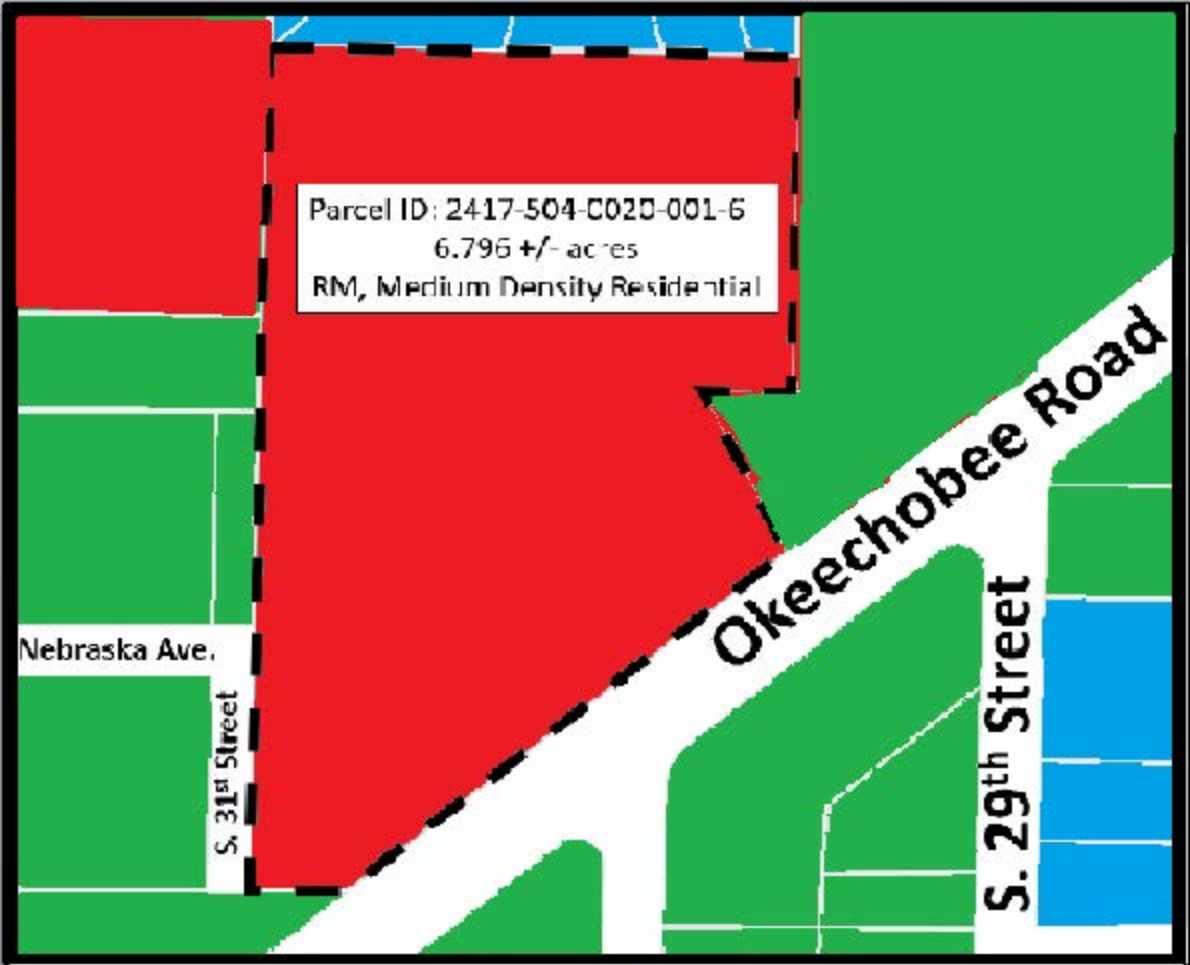
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Existing FLU Map



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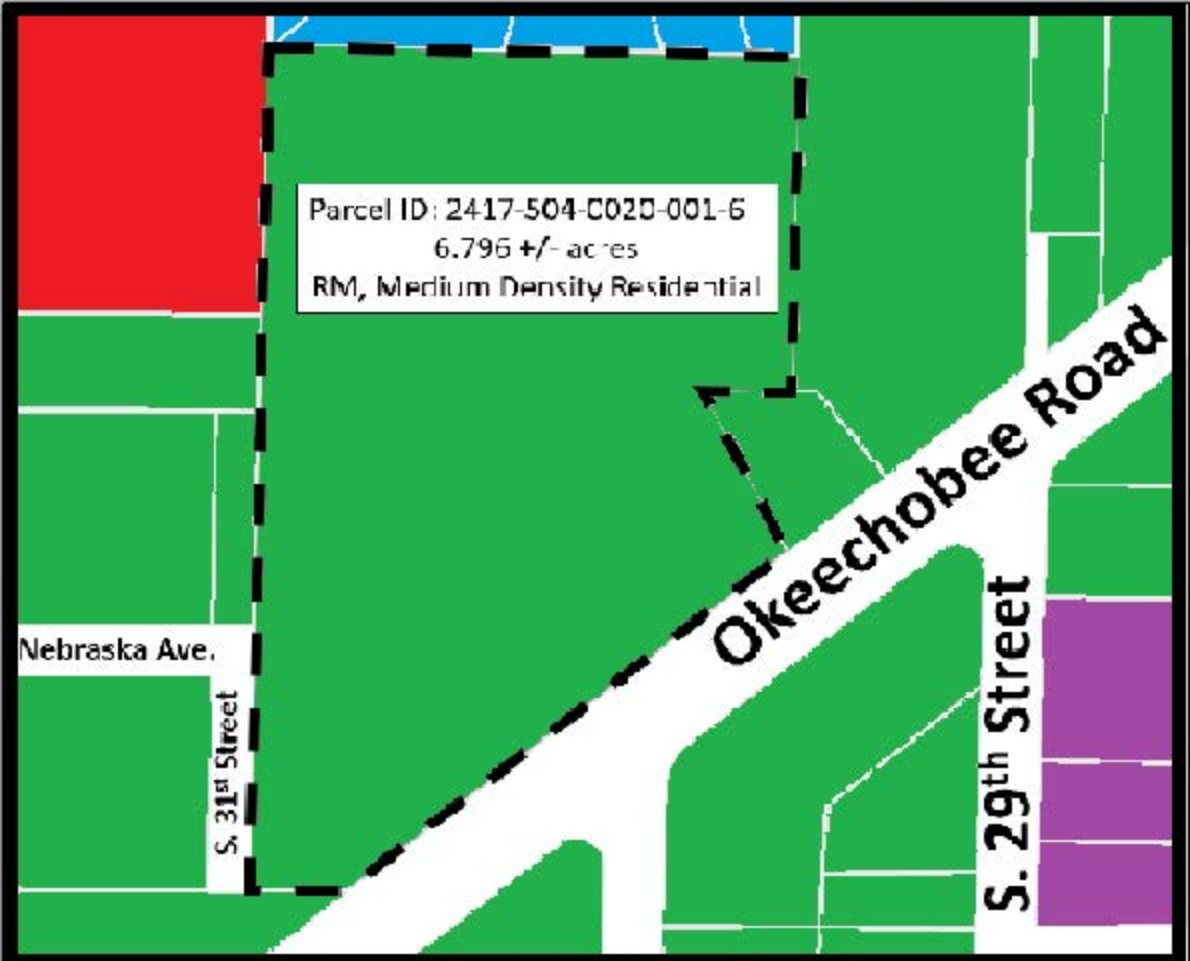
Aria Apartments
3000 Okeechobee Road

RM = GC= RL=

THE SUNRISE CITY FORT PIERCE Florida

Proposed FLU Map



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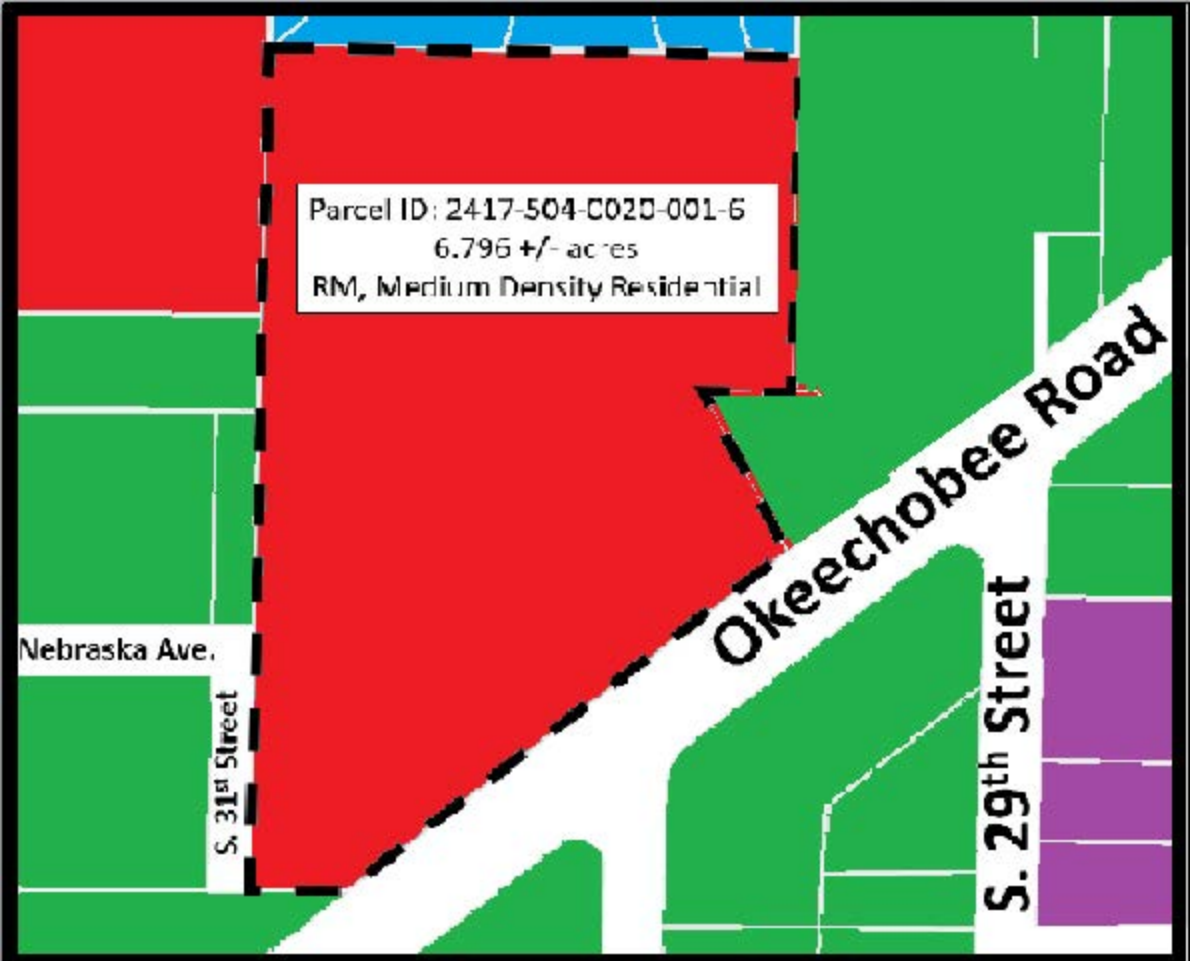
Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: :

Existing Zoning Map



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Aria Apartments
3000 Okeechobee Road

THE SUNRISE CITY FORT PIERCE Florida

R-4= C-3= R-2= R-3: : Proposed Zoning Map

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

DEVELOPMENT REVIEW

Property address or Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street

Parcel ID #(s): 2417-504-0020-001-6

Project description: Aria Apartments

Arrow Investment Group, LLC	Michael Sanchez/Managed Land Entitlements
Property Owner(s)	**Applicant/Representative, Title, Company**
4512 N. Flagler Drive, Suite 2056	3710 Buckeye Street, Suite 100
Street Address	Street Address
West Palm Beach, FL 33407	Palm Beach Gardens, FL 33410
City State Zip	City State Zip
(561) 324-4439	561-568-8045
Phone Number	Phone Number
capitalinvestments@usa.com	michael@mylandentitlements.com
Email Address	Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below sholl also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Alnok who is personally known to me or has produced FLDL as identification.

Signature of Notary (seal)

NOTARY PUBLIC
MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____ Fees_____ Control #_____ B. Permit #_____

Intake Planner_____

Planner Assigned_____

Approved By_____ Date _____

Comments_____

Intake Date Stamp

❑ DEVELOPMENT REVIEW

General Information

- ❑ Incomplete application packets cannot be accepted.
- ❑ Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type		
☒ Site Plan	☒ Conditional Use with New Const.	❑ Major Amendment
❑ Conceptual Development Plan		❑ Minor Amendment

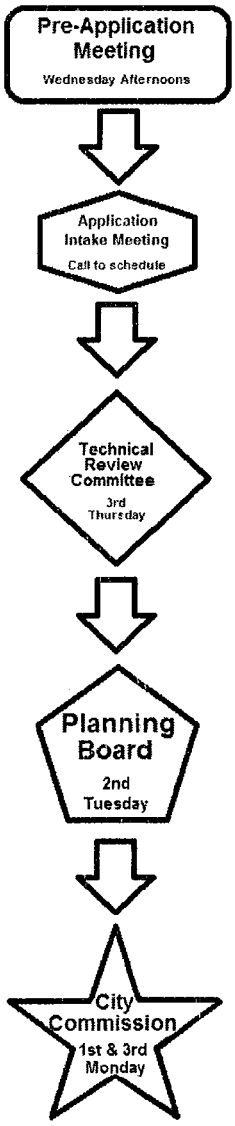
Site Information:

Non-Residential: Proposed Sq. Ft.: _____ Residential: Proposed Units: 112 Units

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West
Single Family	Commercial	Commercial	Multifamily/Commercial

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- ❑ Complete notarized application
- ❑ Warranty Deed
- ❑ SLC Property Record Card
- ❑ Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- ❑ General location map (see Section 22-58.d.2)
- ❑ Survey (see Section 22-58.d.3)
- ❑ Site Plan (see Section 22-58.d.4)
- ❑ Landscaping Plan (see Section 22-187)
- ❑ Storm Drainage Plan (see Section 22-58.d.6)
- ❑ Environmental Impact Report
- ❑ Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- ❑ Lighting Plan (see Section 22-58.d.8)
- ❑ Design Review submittals (see Design Review application)
- ❑ Traffic Impact Report
- ❑ Concurrency Review submittals (see Concurrency Review application)

ARIA APARTMENTS

CITY OF FORT PIERCE

FUTURE LAND USE MAP AMENDMENT, REZONING, CONDITIONAL USE AND SITE PLAN APPROVAL

PROJECT NARRATIVE/JUSTIFICATION STATEMENT

JUNE 26, 2020

REQUEST SUMMARY

Arrow Investments Group, LLC (the "Applicant"), hereby respectfully requests approval from the City of Fort Pierce (the "City") of the following applications related to the Aria Apartments project proposed on a 6.796-acre property located on the north side of Okeechobee Road approximately ¼ mile east of S. 33rd Street (the "Property"):

- Future Land Use Map Amendment to change the land use designation of the Property from General Commercial (GC) to Medium Density Residential (RM);
- Zoning Map Amendment to change the zoning designation of the Property from General Commercial (C3) to Medium Density Residential (R-4);
- Site Plan Approval to allow the construction of a 112-unit luxury rental apartment project on the Property to be referred to as the "Aria" apartment complex (the "Project"); and
- Conditional Use Approval to allow for an "Innovative Residential Development" for the Project.

PROPERTY DETAILS

The Property is currently vacant and, to the best knowledge of the Applicant, has never been developed. Limited clearing had previously occurred on the Property, and the Property is currently dominated by cleared land with some remnant forest communities consisting of Cabbage Palm and Brazilian Pepper (please see "Environmental" section of this narrative for additional information regarding existing vegetation and a small, isolated wetland). A drainage ditch exists along the west perimeter of the Property.

The Property contains a General Commercial (CG) Future Land Use Designation and a General Commercial (C3) zoning designation.

ADJACENT PROPERTIES DETAILS

Details regarding the land use, zoning and existing uses of the properties adjacent to the Property are noted below:

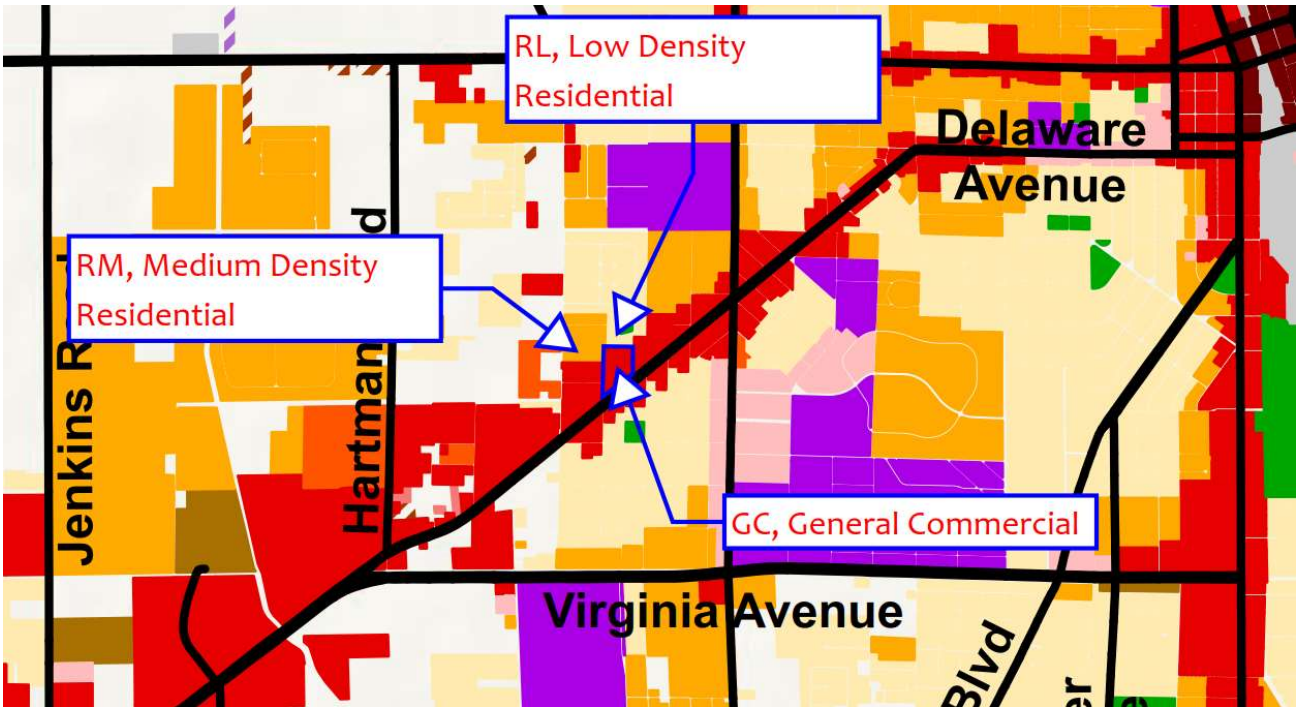
	Current FLU	Current Zoning	Existing Uses
North	RL, Residential Low Density	R2, Single Family Intermediate Residential	Vacant single family
South	GC, General Commercial	C3, General Commercial	Funeral home; grocery store
East	GC, General Commercial	C3, General Commercial	Used car sales; Habitat for Humanity
West	GC, General Commercial; RM, Medium Density Residential	C3, General Commercial; R4, Medium Density Residential	Contractor's Office; Religious Institutions

The graphic below identifies the Property in red and identifies the existing uses of the adjacent properties:

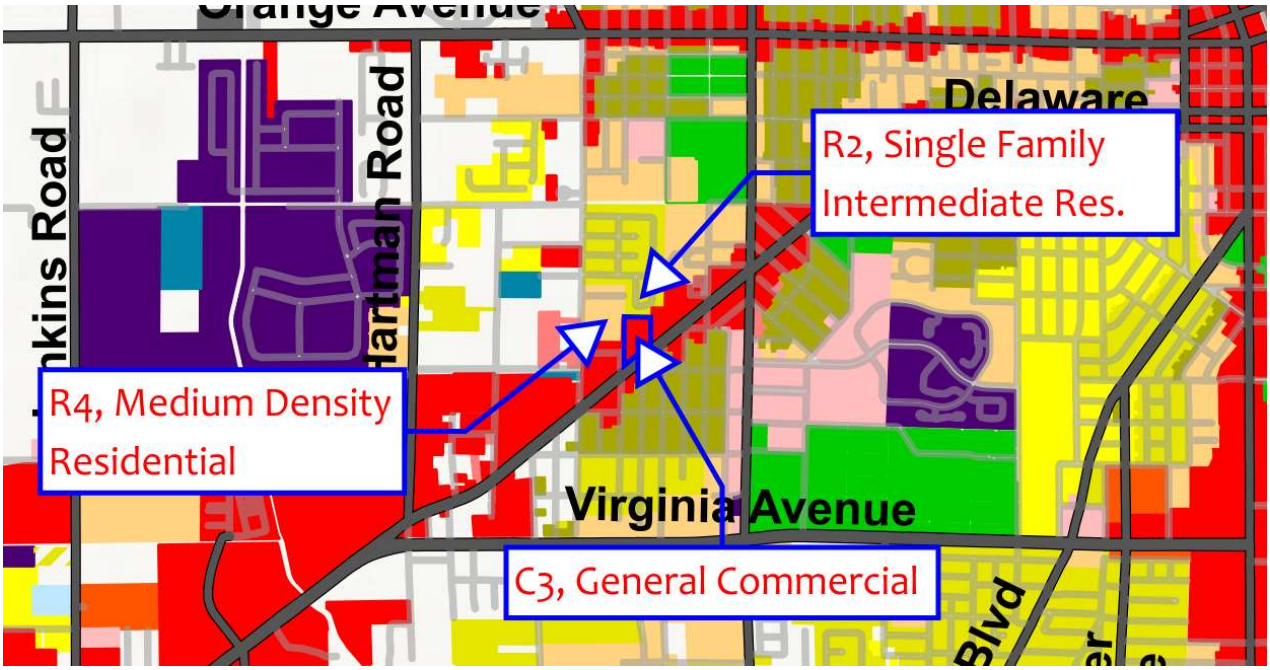


The graphics below identify the Future Land Use and Zoning of the subject property and adjacent properties:

FUTURE LAND USE



ZONING



GENERAL DESCRIPTION OF SUBJECT REQUEST AND NARRATIVE FORMAT

The Applicant is proposing to change the future land use designation of the Property to Medium Density Residential (RM) and rezone the Property to Medium Density Residential (R4) in order to allow for the development of a 112-unit residential apartment project consisting of five (5) residential buildings of between two (2) and three (3) stories in height, a clubhouse, a pool and other amentities.

The balance of this Narrative will provide (1) discussion regarding the proposed change from commercial to residential future land use and zoning designations; (2) discussion regarding the proposed density within the Project; (3) descriptions of the physical improvements proposed for the Project and related issues; and (4) demonstration of compliance with the Innovative Residential Development criteria.

FUTURE LAND USE MAP AMENDMENT AND REZONING FROM COMMERCIAL TO RESIDENTIAL

The Property currently has commercial land use and zoning designations similar to other properties that front along the north and south sides of Okeechobee Road. The portion of Okeechobee Road extending from Virginia Avenue to Delaware Avenue is developed on both sides of the road with an eclectic mix of uses including, but not limited to, smaller retail strip centers, automobile repair, used auto sales, small restaurants, small personal service uses, small office uses, day care, convenience stores, gas stations, bank, religious institutions and other uses. There are no large-scale commercial developments within said stretch of Okeechobee Road since those developments would typically locate on a road with a higher traffic volume such as Virginia Avenue.

It is the Applicant's opinion that (1) an approximately 6.8-acre property such as the Property is not suitable for large scale commercial development given its location along a lesser traveled roadway, and (2) a much more suitable and feasible use for the Property would be medium-scale multifamily development that would be appropriate along a four-lane divided roadway such as the section of Okeechobee Road in front of the Property and which would provide a logical transition from the single family and multi-family residential uses to the north to Okeechobee Road.

The requested Medium Density Residential (RM) future land use designation is consistent with the land use designation of properties to the west and northwest of the Property, provides for a logical transition from the Low Density Residential (RL) land use designation of the properties to the north to Okeechobee Road and is compatible with the General Commercial (GC) land use designations to the west, east and south.

The same logic as above applies to the requested Medium Density Residential (R4) zoning district as it relates to the zoning designations of surrounding properties.

Consistency with Comprehensive Plan

The following are excerpts from the Future Land Use Element of the County's Comprehensive Plan as it relates to the requested Medium Density Residential (RM) designation, each followed by the Applicant's demonstration of the proposed Project's compliance with the referenced provisions of the Comprehensive Plan:

- Section A: *The Medium Density Residential designation is intended for parcels that are best suited for multifamily residential uses ranging in density from 6.5 to 12 du/ac. This category allows small-lot single family units and multifamily dwellings including duplexes, condominiums and townhouses. Limited*

commercial uses intended to serve the residential uses shall be allowed. Compatible public, quasi-public, and special uses including parks, churches, non-profit clubs, schools, and daycare facilities shall be allowed.

Demonstration of compliance: *The proposed land use designation is consistent with the intended use of the property as multi-family apartments, and uses allowed with the RM future land use designation are consistent with other uses existing along Okeechobee Road based on the allowable uses within the RM designation noted above.*

- Objective 1.2: *The City shall use innovative Land Development Regulations to encourage flexibility in development to support compact, mixed-uses compatible with local context and character.*

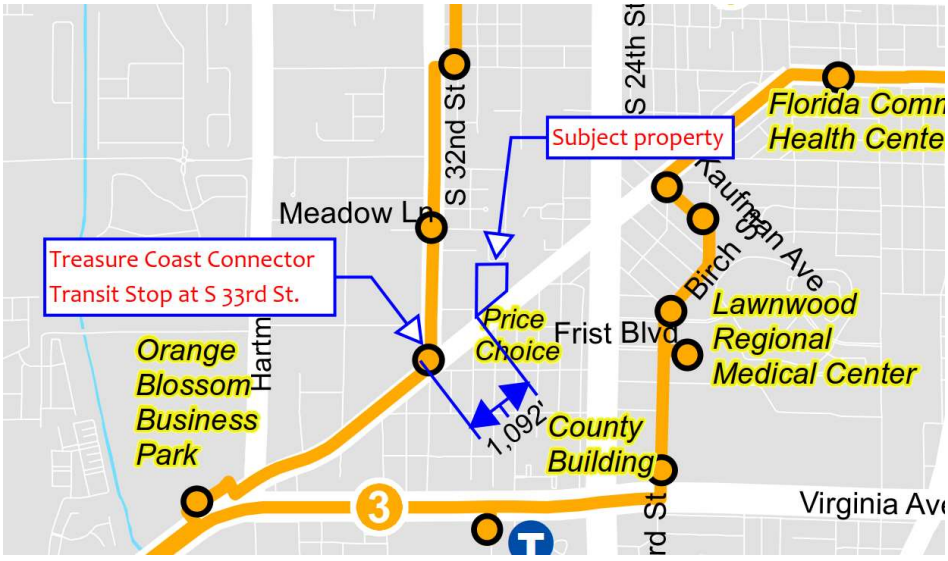
  Demonstration of compliance: *The proposed Project will be a compact development providing new, high-quality apartment housing for residents of the City which is compatible with the local context and character of the area. The increased residential density in the area will help to support the neighboring commercial uses along Okeechobee Road, and the Project's compact, walkable design will help to further the interrelationship between the residential and commercial uses in the area.*

Density

The proposed Project provides for a density of 16.48 du/ac.

The County's Comprehensive Plan provides that the Medium Density Residential (RM) future land use designation allows for between 6.5-12 du/ac. However, Policy 1.1.5 states "The City will allow a density bonus of 5 dwelling units per acre above the maximum density for developments within ¼ mile of a rail station, multimodal transit center or transit stop."

As demonstrated the map below, the Property is located less than ¼ mile from a transit stop for the County's Treasure Coast Connector bus system that is located at the northwest corner of the intersection of Okeechobee Road and S. 33rd Avenue. Accordingly, the Applicant intends to utilize the additional five (5) du/ac authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan bringing the total density permitted under the RM future land use designation to 17 du/ac.



With respect to zoning, the Medium Density Residential Zone (R-4) allow for a maximum density of ten (10) du/ac for conventional developments and twelve (12) du/ac for innovative developments. The Applicant is requesting approval of a Conditional Use to allow an "Innovative Residential Development" as demonstrated in the "Innovative Residential Development/Conditional Use Approval" section of this narrative and, thus, will be utilizing the additional density allowed for such developments (12 du/ac) for the purposes of this application. The maximum density for the Project with respect to zoning has been calculated at 17 du/ac based on the 12 du/ac allowed with an innovative development + the additional five (5) du/ac density bonus authorized by the above-referenced Policy 1.1.5 of the Comprehensive Plan for developments within a ¼ mile of a transit stop.

The proposed density of 16.48 du/ac per acre complies with the 17 du/ac maximum allowed by the future land use and zoning designations noted above.

PROJECT DETAILS

General Project Improvements

A summary of proposed Project improvements depicted in the development plans provided with this submittal is contained below:

- Development program: The Project comprises a multifamily apartment project consisting of 112 dwelling units ranging from one (1) to three (3) bedrooms in five (5) buildings. Four (4) of the buildings will be three (3) stories in height; and the fifth building will be two (2) stories in height. A clubhouse, pool area and other amenities listed below are also proposed.

- General design intent/summary: The design intent of the Project was to create an innovative, walkable and compact apartment project with high quality architecture, landscaping and amenities that raise the bar for new development in the area, increase property values and create an inviting sense of place for its residents. Four (4) of the residential building are placed around a central retention lake which has been provided an amenity for the Project. The lake will have a fountain and littoral plantings to enhance the amenity, and a sidewalk has been provided around the entire lake with benches so that residents can enjoy the lake views and recreate/exercise around the lake. A palm tree-lined roundabout is proposed at the entrance into the Project which will have a specimen tree as a focal point and will provide for an aesthetically pleasing entry into the Project. Parking and dumpsters are evenly and conveniently distributed throughout the Project. Other amenities include a clubhouse with a fitness center, kitchen, multipurpose room, restrooms and a covered area over the pool deck for shade lounging; a passive park with picnic tables, benches and shade trees; a large pool with seating areas and planters; a tot lot with playground equipment and fenced dog park. Additionally, Building 1 and the clubhouse have been placed against the street to add visual interest and to help screen the parking area from the adjacent roadway.

- Parking: Parking is provided within the Project based on a rate of 1.5 spaces/unit. 168 spaces are required, and 172 spaces are provided.

- Open Space/Outdoor Amenities: Section 22-27(b)(3) of the City's Land Development Code requires that buildings within multi-family housing developments in the Medium Density Residential (R-4) zoning district not cover more than 50% of the lot area. The Project proposes a building coverage of only 18.0% and a total open space of 127,934 square feet or 43.2% of the project site. Outdoor amenities include

walking paths throughout the site including around the retention lake, seating areas around the lake; a passive park with benches, tables and shade trees; a large pool; a fenced dog park and a tot lot.

Architecture

Both the two story and three buildings are designed in a contemporary style that mirrors current trends in many residential projects. The building footprints allow the building mass to be broken up reducing overall scale and creating a more visually interesting facade. The fenestration utilizes contemporary features and materials including cantilevered balconies, horizontal railing, variations in roof types and heights, metal eyebrow shades, faux horizontal wood siding, and smooth stucco broken into different wall panels by the building mass and vinyl stucco joints. The color and material palette is contemporary and brings good contrast for visual interest using white for trim, window frames, walls, sun shades and railings; light grey for wall panels, medium grey for the faux wood siding and dark grey for the flat concrete roof tiles.

The maximum height allowed in the Medium Density Residential (R-4) zoning district is 45'-0". The maximum height of the tallest building is 39'-0".

Mechanical equipment will be located on the roof and screened from view.

A monument sign is proposed on the south side of the Project entrance, and details regarding said sign are provided with this submittal on the "Sheet A-1 – Entry Monument" plan. The design of the monument sign incorporates the same colors and materials as the buildings on site and has been sized in accordance with the City's requirements for residential development signage.

Landscaping/Tree Mitigation

The Applicant has gone to every effort to save and/or relocate existing native trees on site which include Pine, Live Oak and Cabbage Palm. The Tree Mitigation Plans provided with this submittal provide that (1) 155 cabbage palms will be relocated on site; (2) 552" of trees will be removed in order to allow for the Project; and (3) 316" of trees will be preserved in place. The total mitigation requirement is 236".

The Applicant is proposing an very dense landscape design in order to satisfy the minimum landscape requirements of the City, provide additional trees to satisfy the mitigation requirement and provide additional landscaping to satisfy the "Innovative Residential Development" requirements as further discussed in the "Innovative Residential Development/Conditional Use Approval" section of this narrative.

The Project requires 56 interior trees, where 166 interior trees are being provided (110 additional trees or 196% additional). The project requires 112 buffer trees, where 137 trees are being provided (25 additional trees or 22.3% additional). A total of 137 additional trees are proposed on the Project. Additionally, the height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.

The Applicant has increased the landscape buffers along the west, north and east sides beyond the minimum 10-foot requirement to 20', 15' and 15', respectively in order to further justify the Project and provide additional buffering for adjacent properties.

The proposed landscape palette provides native vegetation and careful placement of trees to provide shade in open spaces areas, screening where required, planting of the littoral areas of the retention pond for aesthetics and enhanced aesthetics at the Project entrance, residential buildings, clubhouse and other areas.

A cabbage palm hammock is proposed at the southwest corner of the Project, and a "Range Live Oak" is proposed at the roundabout at the Project entrance to serve as a focal point and enhance the Project.

Site Lighting

A photometric plan has been provided with this submittal which depicts the proposed exterior lighting within the Project. Pole mounted lights and building lights are proposed to provide lighting within the parking areas and pedestrian walks, bollard lighting is provided at the passive park and pedestrian scale pole-mounted lights are provided within the pool area. All lighting will be high efficiency LED lighting.

Drainage

The proposed surface water management system will collect stormwater runoff and direct it to the on-site detention area via a network of underground pipes. Stormwater will be stored in the detention area and on surface for large, infrequent storm events. A small exfiltration system is provided to assist with pre-treatment prior to discharge. Finished floors will be protected from the 100-year 3-day storm event. Roadways will be protected from the 10-year 1-day storm event. A perimeter berm will be established and retain the 25-year 3-day storm event on-site.

The drainage ditch along the west side of the property will lie outside the storage basin and act as the receiving body for controlled discharge. Water from the ditch will exit to the west via a culvert under South 31st Street into a City of Fort Pierce drainage ditch that runs west to and under South 33rd Street. At that point, the drainage system becomes part of North St. Lucie River Water Control District Canal 6 and stormwater flows west to Five Mile Creek.

Utilities

Domestic and Fire Water supply will be provided through an 8" water main loop through the project with two connection points to the existing water main located within Okeechobee Road right-of-way. This system will be constructed to Fort Pierce Utility Authority standards and be turned over to the utility for operation and maintenance.

Sanitary sewage will be collected via a service from each building that connects to a sanitary main. The main directs flow to an on-site private lift station located near Building 1 at the southwest corner of the site. The lift station will pump flow to an existing manhole operated and maintained by Fort Pierce Utility Authority. The on-site sanitary system is proposed to be privately operated and maintained.

Traffic Concurrency and Capacity Analysis

Included with this submittal are (1) a future land use amendment traffic analysis (the "FLUA Analysis"), and (2) a traffic impact analysis for the Project (the "TIA").

The FLUA Analysis concludes that the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project and, therefore, the proposed change in future land use for the Project meets applicable criteria for an amendment to the City's Comprehensive Plan.

The TIA concludes that (1) the roadway links are sufficient to accommodate the Project traffic in the AM and PM peak hours; (2) the existing geometry at the intersections of S 25th Street & Okeechobee Road and Okeechobee Road and Virginia Avenue are expected to operate acceptably under existing, background and future total conditions; and (3) an eastbound left turn lane is required. The Project plans provided with this submittal include the required eastbound left turn lane.

INNOVATIVE RESIDENTIAL DEVELOPMENT/CONDITIONAL USE APPROVAL

Section 22-82 of the City's Land Development Code contains the following standards applicable to a multifamily residential developments that shall be satisfied in order to qualify for the two (2) additional dwelling units per acre and the related Conditional Use approval by the City. The Applicant's demonstration of compliance with said criteria is contained below in *italics* typeface:

(a) Purpose. Innovative residential developments are developments which achieve a more creative and imaginative housing environment than normally occurs by use of the clustering technique, by employing various other methods to achieve distinctiveness and excellence in siting, design and/or landscaping. Density bonuses and reductions in various building restrictions are used to encourage these developments.

Demonstration of Compliance: *The Project has been thoughtfully and carefully designed to create a more innovative project than normally occurs. Factors that, in the opinion of the Applicant, qualify the Project as an innovative residential development that are above-and-beyond a "normal" apartment building project and the minimum requirements of the City are listed below:*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*
- *The central lake will have a fountain and a walking trail with sitting areas.*
- *A passive park is proposed as a project amenity with picnic tables, benches and shade trees.*
- *A luxurious clubhouse with a multipurpose room, kitchen, fitness center, etc. is proposed.*
- *A large pool with a large pool deck area decorated with planters is proposed.*
- *A fenced dog park is being provided as an extra amenity.*
- *A fenced tot lot is provided as an extra amenity.*
- *Pedestrian paths are provided throughout the Project.*
- *A central roundabout with a large Oak Tree will serve as a focal point upon entry into the Project.*
- *A high quality of architecture is proposed as discussed in the "Architecture" section of this narrative.*
- *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- *A large number of trees and palms are either being preserved or relocated on site.*
- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*

- *Significant enhancements to landscaping beyond the minimum requirements are provided as further discussed in the "Landscaping" section below.*

(e)(1) Landscaping. Landscaping. The gross density may be increased up to one unit per acre for landscaping plans which provide for effective use of existing vegetation and/or for approved landscape plans for streetscapes, pedestrian ways, bicycle paths, areas near buildings, open spaces and/or recreation areas. This increased density may only be awarded if the landscaping of the innovative residential development will exceed the requirements in section for landscaped area by ten (10) per cent, for amount of trees by ten (10) per cent and/or in terms of qualitative characteristics of the landscaping.

Demonstration of Compliance: *As depicted on the landscape plans provided with this submittal, the Applicant is proposing a carefully designed, very dense landscape design and substantial additional landscaping in order to create an aesthetically pleasing project and to satisfy the innovative residential development criteria. Details regarding the "extra" landscaping proposed are noted below:*

- *The landscape buffer along the west side has been increased to 20 feet and the landscape buffers on the north and east sides have been increased to 15, where ten (10) feet is required on the sides and rear of the Project.*
- *The passive park has been densely landscaped to create an inviting and shaded sitting area for enjoyment of the tenants.*
- *The Project entry and roundabout are lined with palms typical of a luxury development.*
- *The residential buildings, clubhouse and pool are densely landscaped typical of a luxury development.*
- *43.2% open space is provided where only 40% is required.*
- *166 interior trees are provided where only 56 are required (196% additional).*
- *137 buffer trees are provided where only 112 trees are required (25 additional trees = 22.3% additional).*
- *Littoral plantings are proposed around the lake as an added aesthetic enhancement for the Project.*
- *The height of trees and palms proposed (Slash Pine, Bald Cypress, Live Oak, Japanese Blueberry, Crape Mrytle, Yellow Tabebuia, Royal Poinciana, Christmas Palm, Washington Palms, etc.) have been increased by at least 10% beyond the minimum size requirements at planting to provide additional justification for the Innovative Residential Development proposal.*

(e)(2) Siting. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-5 zone) for creative placement of buildings and/or other facilities in terms of visual focal points, use of existing physical features such as topography, views, sun and wind orientation, the circulation pattern, variation in building setbacks and/or building and facility groupings.

Demonstration of Compliance: *As demonstrated below, the site design and placement of buildings have been creatively designed in order to establish an innovative residential development by use of visual focal points and physical features as much as possible on a 6.796-acre property.*

- *Four (4) of the five (5) residential building have been clustered around a central retention lake which is proposed as an amenity (as opposed to a depressed grassed stormwater detention area).*

The placement of the buildings around the lake will enhance views from both the residential units and from tenants recreating/exercising/sitting around the lake.

- ❖ *A central roundabout lined with palm trees and with a large Oak Tree in the center will serve as a focal point upon entry into the Project.*
- ❖ *The fifth residential building and the clubhouse have been located against Okeechobee Road to provide visual interest and screen the parking area from view.*
- ❖ *Pedestrian pathways are provided throughout the development to create a walkable community.*

(e)(3) Design. The gross density may be increased (up to one-half unit per acre in R-3 and R-4 zones and one unit per acre in an R-S zone) for imaginative design features including architectural styles, harmonious use of building materials, varied use of housing types and/or other design elements of the innovative residential development.

Demonstration of Compliance: *The Applicant is proposing enhanced architectural features beyond a standard multi-family housing project as demonstrated in the "Architecture" section of this narrative.*

(g) Open Spaces. Innovative residential developments which receive density bonuses in accordance with subsection (e) of this section shall comply with the following provisions: (1) In all such innovative residential developments, at least forty (40) percent of the site, exclusive of aquatic areas, shall be devoted to open space. Of this required open space area, no more than twenty-five (25) percent may be utilized privately by individuals or users of the innovated residential development. At least seventy-five (75) per cent of the required open space area must be common open space.

Demonstration of Compliance: *Open space is provided at 43.2% of the site where only 40 is required. Additionally, all open space on site will be for the enjoyment of all residents of the community.*

CLOSING

The Applicant respectfully requests the City's consideration and approval of the subject application based on the justification provided herein. The Applicant believes that the Project will provide a substantial enhancement to the area and help to spur other redevelopment in the area. The Applicant looks forward to working with the City to bring a high-quality project to the City.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Future Land Use Map Amendment

☐ Future Land Use Map Amendment – Large Scale (>10 acres)

☒ Future Land Use Map Amendment – Small Scale (<10 acres)

In accordance with Chapter 163.3187, Florida Statutes, The City of Fort Pierce will consider applications for land use changes on parcels in excess of 10 aces ("Large Scale Amendments") only twice each calendar year. The City Commission will consider applications for land use changes on parcels less than or equal to 10 acres with a maximum density of 10 units per acres or less at any time during the calendar year. You are encouraged to schedule a pre-application meeting with the planning staff and to submit your application up to three months in advance of the application deadline.

Application submission shall include the following:

•**TRC** (*Initial Submission): One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**Planning Board**: One (1) original and (13) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

•**City Commission**: One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

In addition to a complete application, packets shall include:

- ☐ Warranty Deed & Legal Description
- ☐ St. Lucie County Property Record Card
- ☐ Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (FLU) RM - Medium Density Residential (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: Zoning Map Amendment, Design Review
8. Describe the existing uses, improvements and structures on the amendment lands: Vacant
9. Are there any identified or possible historical structures on the amendment lands? No
10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. **Capacity Analysis:**

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
South	Commercial	GC - General Commercial	C3 - General Commercial
East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 37,004
Change in Demand	**Total gallons per day** -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 29,900
Proposed Zoning	Total gallons per day 29,603
Change in Demand	**Total gallons per day** +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning Enrollment Demand	N/A	N/A
Proposed Zoning Enrollment Demand	34.01	79.35
Change in Demand	+34.01	+79.35

E. Solid Waste:
2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units

Demand Analysis	Maximum
Current Zoning	Demand for commercial not listed above.
Proposed Zoning	16 yards
Change in Demand	Need demand for commercial

F. Stormwater: Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)	
Impact	See drainage report provided with submittal.

G. Transportation Analysis: Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. Applicant Acknowledgements (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

_____

Same as Owner

Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature(s) below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC

by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by MUSTAFA ACUNOK who is personally known to me or has produced FL DL as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:		
DATE RECEIVED:	Signed:	
File Number:	Check No:	Receipt No:
TRC Review:	Planning Board Review:	City Commission:
Ordinance No:	Date Approved:	

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Single Family	RL - Low Density Residential	R2 - Single Family Intermediate Density
South	Commercial	GC - General Commercial	C3 - General Commercial
East	Commercial	GC - General Commercial	C3 - General Commercial
West	Commercial/Religious Institution	RM - Medium Density Residential GC - General Commercial	R4 - Medium Density Residential C3 - General Commercial

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC - General Commercial	C3 - General Commercial	1.0 FAR = 296,033 SF	6.796 acres	
Proposed	RM - Medium Density Residential	R4 - Medium Density Residential	12 du/ac + 5 du/ac bonus per FLUE Policy 1.1.5 = 17 du/ac = 115 units	6.796 acres	N/A

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 29,900
**Proposed Zoning/FLU	Total gallons per day 37,004
**Change in Demand	Total gallons per day -7,104

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 29,900
**Proposed Zoning/FLU	Total gallons per day 29,603
**Change in Demand	Total gallons per day +297

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
Urban District	5 acres per 1,000 people	221.14	222.63	+1.49
Community	2.5 acres per 1,000 people	110.57	113.32	+0.75
Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
City	Fort Pierce	Fort Pierce
Distance	0.5-0.8 mile	0.5 mile
Current Zoning/FLU Enrollment Demand	N/A	N/A
****Proposed Zoning/FLU Enrollment Demand**	34.01	79.35
****Change in Demand**	+34.01	+79.35

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
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****Proposed Zoning/FLU**	16 yards
***Change in Demand**	Need demand for commercial

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See drainage report provided with submittal.

III. Transportation Analysis: *Complete ITE Trip Generation Form (Attached)*

G. Transportation Analysis: Complete ITE Trip Generation Data Form Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning/FLU	8,300	65/83
****Proposed Zoning/FLU**	609	38/49
***Change in Demand**	Trips	Trips
Impact to Capacity	-7,691	-27/-34

IV. Project Description

PHASING
Is this project (phase) part of a larger project? [ ] Yes [X] No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: 112 Single Family: Multifamily: 112
Non-residential (square footage):
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total)

RESIDENTIAL DATA					
Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached					
Single-family, attached					
Multi-family		112	6.796	03/21	03/22
Other (specify)					

NON-RESIDENTIAL DATA					
Type(s) specify	**Phase**	**Square footage**	**Acres**	**Expecting beginning date**	**Expected completion date**

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. [ ] Yes [X] No

B. 1. Does this application involve demolition or re-use of any structure(s)? [ ] Yes [X] No
If yes, what is the size of the structure(s) to be demolished or re-used? _____
2. What is the current use of the structure to be demolished or re-used? _____
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? [ ] Yes [ ] No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Application for Zoning Atlas Map Amendment

Application submission shall include the following:

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- ☐ Current Survey
- ☐ Environmental Study
- ☐ Traffic Impact Report
- ☐ *** Capacity Analysis-Separate Form
- ☐ Drainage Analysis
- ☐ Historical Report
- ☐ 1 CD of all documents submitted in PDF
- ☐ Other_____

1. Property Address/Location: North side of Okeechobee Road - Approximately 1/4 mile NE of S 33rd Street
2. Property Tax ID(s): 2417-504-0020-001-6
3. Total Acreage: 6.796 acres
4. Existing Future Land Use Designation: GC - General Commercial
5. Existing Zoning Classification: C3 - General Commercial
6. Proposed Zoning Classification: (ZONING) R4 - Medium Density Residential
7. Other applications being submitted concurrent with this application, if any: FLU Amendment, Design Review

8. Describe the existing uses, improvements and structures on the amendment lands: Vacant

9. Are there any identified or possible historical structures on the amendment lands? No

10. The reason for making this request: Proposed luxury apartment project. See Project Narrative.

11. CAPACITY ANALYSIS

I. Site Data:

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A. Potable Water:	
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Demand Analysis	Maximum
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Proposed Zoning	Total gallons per day 37,004
Change in Demand	**Total gallons per day** -7,104

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Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
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C. Parks and Recreation (Residential Classifications Only):
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Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	884.54	890.52	+5.98
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Neighborhood	1.36 acres per 1,000 people	60.15	60.56	+0.41

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
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School Name	Chester A Moore Elementary/Dan McCarty Middle	Fort Pierce Central High
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Impact	See drainage report provided with submittal.

III. Transportation Analysis

G. Traffic Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning	8,300	65/83
Proposed Zoning	609	38/49
Change in Demand	Trips	Trips
Impact to Capacity	-7,691	-27/-34

12. Name of Owner(s): Arrow Investment Group, LLC
Mailing Address: 4512 N. Flagler Drive, Suite 2056
City West Palm Beach State FL Zip 33407
Phone # (561) 324-4439
E-mail: capitalinvestments@usa.com

13. Name of Applicant: Same as Owner
Mailing Address: _____
City _____ State _____ Zip _____
Phone # _____ Fax # _____
E-mail: _____

14. Name of Representative: Michael Sanchez/Managed Land Entitlements
Mailing Address: 3710 Buckeye Street, Suite 100
City Palm Beach Gardens State FL Zip 33410
Phone # 561-568-8045 Fax # _____
E-mail: michael@mylandentitlements.com

15. **Applicant Acknowledgements** (Owner's signature must be notarized)

I certify that: (Check One)

X I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

_____ I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

Same as Owner
Applicant's Signature Date

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

(561) 324-4439 capitalinvestments@usa.com

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Arrow Investment Group, LLC
by: (561) 324-4439

Property Owner's Name (Please Print) Phone

4512 N. Flagler Drive, Suite 2056, West Palm Beach, Florida 33407

Address State Zip

6/24/20

Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 24 day of June, 2020, by Mustafa Altinok who is personally known to me or has produced _____ as identification.

Signature of Notary (seal)

MARIA TELLEZ-HURST
Notary Public. State of Florida
Commission# GG 104011
My comm. expires June 13, 2021

OFFICE USE:

DATE RECEIVED:_____ Signed:_____

File Number:_____ Check No: _____ Receipt No: _____

TRC Review:_____ Planning Board Review: _____ City Commission: _____

Ordinance No:_____ Date Approved: _____

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

GENERAL ADDRESS REQUEST

[X] Assigned [ ] Corrected [ ] Changed

Property Owner(s): Arrow Investment Group, LLC

Parcel Identification(s): 2417-504-0020-001-6

Legal Description: See attached survey

Current Address: No address assigned

Use of Property: Proposed 112 unit multifamily apartment project

Reason for Request: New development.

Applicants Signature: _____ **Date:** 6/24/20

Arrow Investment Group, LLC

Printed Name: by: MUSTAFA ALTINOK

_____I am not the owner of the described property; however, the owner(s) authorizes me to act as agent for the owner(s) of record. (Provide copy of authorization).

Contact Information: Phone: (561) 324-4439 Email: capitalinvestments@usa.com

Office Use Only

PROPOSED NEW ADDRESS: _____

Signature of City Representative: _____

LOCATION MAP



Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	OKEECHOBEE RD
Parcel ID:	2417-504-0020-001-6
Account #:	26668
Map ID:	24/17N
Use Type:	1000
Zoning:	General Co
City/County:	Fort Pierce

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)



Current Values

Just/Market Value:	$732,700
Assessed Value:	$732,700
Exemptions:	$0
Taxable Value:	$732,700

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this parcel: Download PDF

Sale History

Date:	Sep 26, 2019
Book/Page:	4327 / 0333
Sale Code:	0002
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$450,000
Date:	May 27, 2010
Book/Page:	3204 / 0743
Sale Code:	0112
Deed:	SP
Grantor:	Cypress Trust Company (TR)
Price:	$100
Date:	Dec 17, 2008
Book/Page:	3049 / 2156

Sale Code:	XX01
Deed:	CT
Grantor:	Mid South Acquisitions LLC
Price:	$299,000
Date:	Mar 9, 2006
Book/Page:	2511 / 0830
Sale Code:	XX00
Deed:	WD
Grantor:	Zog Limited Partnership
Price:	$1,728,800
Date:	Mar 25, 2004
Book/Page:	1936 / 0579
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$448,500
Date:	Sep 16, 1999
Book/Page:	1251 / 1882
Sale Code:	XX00
Deed:	WD
Grantor:	B + M Construction Co Inc
Price:	$260,000
Date:	Sep 14, 1998
Book/Page:	1171 / 1672
Sale Code:	XX01
Deed:	WD
Grantor:	SCOTTY`S INC
Price:	$95,700
Date:	Jan 1, 1986
Book/Page:	0489 / 2883
Sale Code:	XX00
Deed:	CV
Grantor:	
Price:	$725,000

Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	Sprinkled %: 0%



Image or Sketch unavailable for display

Special Features and Yard Items

Current Year Values

Current Values Breakdown

Building:	$0
Land:	$732,700
Just/Market:	$732,700
Ag Credit:	$0
Save Our Homes or 10% Cap:	$0
Assessed:	$732,700
Exemption(s):	$0
Taxable:	$732,700

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2006	0041	18.1	Fort Pierce Stormwater Charge	$1,248.90

This does not necessarily represent the total Special Assessements that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

Historical Values

Permits

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in Fort Pierce

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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/

LEGAL DESCRIPTION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS-OF-WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT-OF-WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4623280 OR BOOK 4327 PAGE 333, Recorded 10/01/2019 12:37:51 PM Doc Tax: $3150.00

Prepared by and return to:
James H. Ryan
Attorney at Law
Gary, Dytrych & Ryan, P.A.
701 U. S. Highway One Suite 402
North Palm Beach, FL 33408
561-844-3700
File Number: **84101**

[Space Above This Line For Recording Data]

Special Warranty Deed

This Special Warranty Deed made this **30th** day of **September, 2019** between **Cypress Trust Company, a Florida corporation**, as Trustee under Special Purpose Revocable Trust Agreement dated November 22, 2013, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated May 18, 2004, as modified; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 8, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated June 2, 2004; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated October 17, 2003; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated March 23, 2005; Cypress Trust Company, as Trustee under Special Purpose Revocable Trust Agreement dated February 21, 2006; and Cypress Trust Company, as Trustee under IRA Self-directed Trust Agreement dated February 13, 2005, whose post office address is **251 Royal Palm Way, Suite 500, Palm Beach, FL 33480**, grantor, and **Arrow Investment Group LLC, a Florida limited liability company**, whose post office address is **4512 North Flagler Dr., #2056, West Palm Beach, FL 33407**, grantee:

(Whenever used herein the terms grantor and grantee include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Saint Lucie County, Florida**, to-wit:

Block "D", Less rights-of-way, COLLIER'S SUBDIVISION, according to the Plat thereof, recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida, being more particularly described as follows:
Commence at a railroad spike at the Southwest corner of the Northeast 1/4 of Section 17, Township 35 South, Range 40 East, St, Lucie County, Florida; thence run N 88°42'30"E, along the South line of the said Northeast 1/4, a distance of 661.40 feet to the West line of Block "D" of Collier's Subdivision, as recorded in Plat Book 4, Page 63, Public Records of St. Lucie County, Florida; thence run N 00°00'18" W, along the West line of said Block D, a distance of 27.01 feet, to the POINT OF BEGINNING; thence continue N 00°00'18" W, a distance of 796.62 feet, to the Northwest corner of said Block D; thence run N 88°43'25" E, along the North line of said Block D, a distance of 460.00 feet; thence run S 00°04'02" W, a distance of 470.52 Feet, to the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence run S 49°35'30" W, along the said Northerly right-of-way line, a distance of 516.56 feet; thence run S 88°42'30" W, a distance of 65.96 feet, to the POINT OF BEGINNING, all lying and being in Section 17, Township 35 South, Range 40 East, St. Lucie County, Florida.
Less and excepting the following:
A portion of Block "D", COLLIER'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 4, Page 63, of the Public Records of St. Lucie County, Florida.
Being more particularly described as follows:

Begin at the Southeast corner of said Block "D", said corner being situated on the Northerly right-of-way line of Okeechobee Road [State Road 70]; thence, North 28°00'23" W, a distance of 167.87 feet; thence, North 89°51'15" E, a distance of 79.00 feet to the East line of said Block D; thence,
South 00°04'02" W, along said East line, a distance of 148.41 feet to the Point of Beginning of the herein described parcel of land.
Said lands situate, lying and being in Section 17, Township 35 South, Range 40 East, City of Fort Pierce, St. Lucie County, Florida.

Parcel Identification Number: 2417-504-0020-001-6

Subject to taxes for 2019 and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

Grantor is an institutional lender and is acting solely in a fiduciary capacity.

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

To Have and to Hold, the same in fee simple forever.

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

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Witness Name: Donna Pfister

Witness Name: Jamie Reid

Cypress Trust Company, a Florida corporation, as Trustee

By: _____
Roxanne Ertle, Vice President

(Corporate Seal)

State of Florida
County of Palm Beach

The foregoing instrument was acknowledged before me this 26 day of September, 2019 by Roxanne Ertle, Vice President of Cypress Trust Company, a Florida corporation, as Trustee, on behalf of the corporation. He/she [ ] is personally known to me or [ ] has produced a driver's license as identification.

[Notary Seal]

JAMIE REID
Notary Public - State of Florida
Commission # FF 936732
My Comm. Expires Jan 21, 2020
Bonded through National Notary Assn.

Notary Public

Printed Name: Jamie Reid

My Commission Expires: 01 | 21 | 2020

DoubleTime®

CONCEPTUAL SURFACE WATER MANAGEMENT REPORT AND CALCULATIONS

For

ARIA APARTMENTS

June 2020

SINCE 1979

Prepared by:

Michael B. Schorah and Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
(561) 968-0080
EB#2438

MICHAEL J. LACOURSIERE LICENSE No. 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Michael J. LaCoursiere, P.E.
Florida Registration No. 41071
for Michael B. Schorah and Associates, Inc.

Date

MICHAEL J. LaCOURSIERE LICENSE 41071 STATE OF FLORIDA PROFESSIONAL ENGINEER 6/16/2020

INTRODUCTION

This drainage report is prepared and presented as a support document for an application being submitted to City of Fort Pierce Technical Review Committee. The application proposes development of 112 multi-family residential units located in five (5) two- and three-story buildings on approximately 6.8 acres. The site is located on Okeechobee Road at the intersection with South 30th Street. A clubhouse and pool amenity are also proposed. The site is currently undeveloped. An existing ditch runs along the west side of the property. This on-stie ditch appears to provide conveyance of off-site water south to an existing culvert located off-site near the southwest corner of property. Water from the ditch passes through the culvert, under South 31st Street, and into a City of Fort Pierce (CFP) drainage ditch. Flow from the CFP ditch continues westward under South 33rd Avenue and into the North St. Lucie River Water Control District (NSLRWCD) Canal 6 and ultimately to Five Mile Creek (NSLRWCD Canal 29). Therefore, the subject parcel has legal positive outfall.

PROPOSED SURFACE WATER MANAGEMENT SYSTEM

The proposed surface water management design considers the existing on-site ditch as the receiving body (receiving ditch) for stormwater discharge. Discharge from the receiving ditch into the CFP ditch is controlled by an existing 36" RCP pipe with a west invert elevation of 13.4. Therefore, we can assume that water elevations in the receiving ditch can rise to this elevation and artificially control the new system at the same elevation. Conservatively, the following surface water management calculations assume an on-site control elevation of 13.4. The calculations demonstrate the proposed development can meet regulatory criteria for finished floors (100-year 3-day stage), perimeter grades (25-year 3-day stage), and minimum pavement (10-year 1-day stage). We expect, however, that the on-site detention area water level will

fluctuate between elevation 13.4 and 10.5 (expected groundwater elevation). Elevation 10.5 is also the control elevation of NSLRWCD Canal 6. Accordingly, on-site storm stages will only rise as high as presented in the summary shown below during instances where the receiving ditch is full.

The site plan shows modifications to the receiving ditch. More specifically, as shown on the Conceptual Engineering Plan, a portion of the receiving ditch will be piped within the property limits. Sizing of the pipe will be determined based upon expected off-site flows. The site plan also considers re-grading the east bank of the receiving ditch.

We also note that the water surface of the proposed on-site detention area is less than 0.5 acres. This falls short of the minimum dimensional criteria established by South Florida Water Management District for water quality credit. Therefore, an exfiltration trench system is being established to provide necessary water quality treatment prior to off-site discharge.

WATER MANAGEMENT CALCULATIONS

Land Use Assumptions:

Total Site Area	=	6.50 ac.	(area within perimeter berm)	
Lake Area (Water)	=	0.36 ac.	el. 13.4	(100% imp.)
Lake Bank Area	=	0.23 ac.	el. 13.4→17.5	(0% imp.)
Building Area	=	1.39 ac.	el. 19.5 min.	(100% imp.)
Pavement Area	=	1.97 ac.	el. 17.25→18.5	(100% imp.)
Walk Area	=	0.29 ac.	el. 17.5→19.0	(100% imp.)
Remainder	=	2.26 ac.	el. 17.5→19.0	(0% imp.)

Soil Storage:

Wet Season Groundwater elevation is 13.4 NAVD.
Using Flatwoods Soil Storage:
Lake Bank (avg. 2.05' above GWT) = 0.23 ac. x 2.64 in. x 0.75= 0.46 ac.-in.

Remainder (avg. 4'+ above GWT) = 2.26 ac. x 9 in. x 0.75 = 15.26 ac.-in.

Total Soil Storage = 15.26 + 0.46 = 15.72 ac.-in. or 2.42 inches

Water Quality Retention Required:

Drainage Area= 6.5 ac.
1" over site:
V = 1" x 6.5 ac. x 1'/12" = 0.54 ac.-ft.`

2.5" x % impervious:
Site area for water quality = 6.5 – 1.39 – 0.36 = 4.75 ac.
Imp. area for water quality = 4.75 – 2.26– 0.23 = 2.26 ac.
% Impervious = 2.26 / 4.75 = 47.58%
2.5" x % impervious = 2.5" x 0.4758 = 1.19"
V = 1.19" x (6.5 – 0.36) ac. x 1'/12" = 0.61 ac.-ft.

Maximum controls, therefore, V = 0.61 ac.-ft.

Note: Detention area does not meet SFWMD dimensional criteria. Therefore, water quality will be provided by other means, see following exfiltration design.

Bleeder Criteria:

Type: Circular
Invert Elevation: 13.40'
Diameter: 3.75 in.
Weir Flow: 0.6
Orifice Flow: 0.6

Allowable Discharge:

Allowable Discharge = 0.216/24 x 6.5 x (43560 S.F. /3600 sec.) = 0.71 cfs*
Weir Top Elevation has been set above the 25-year 3-day flood stage.

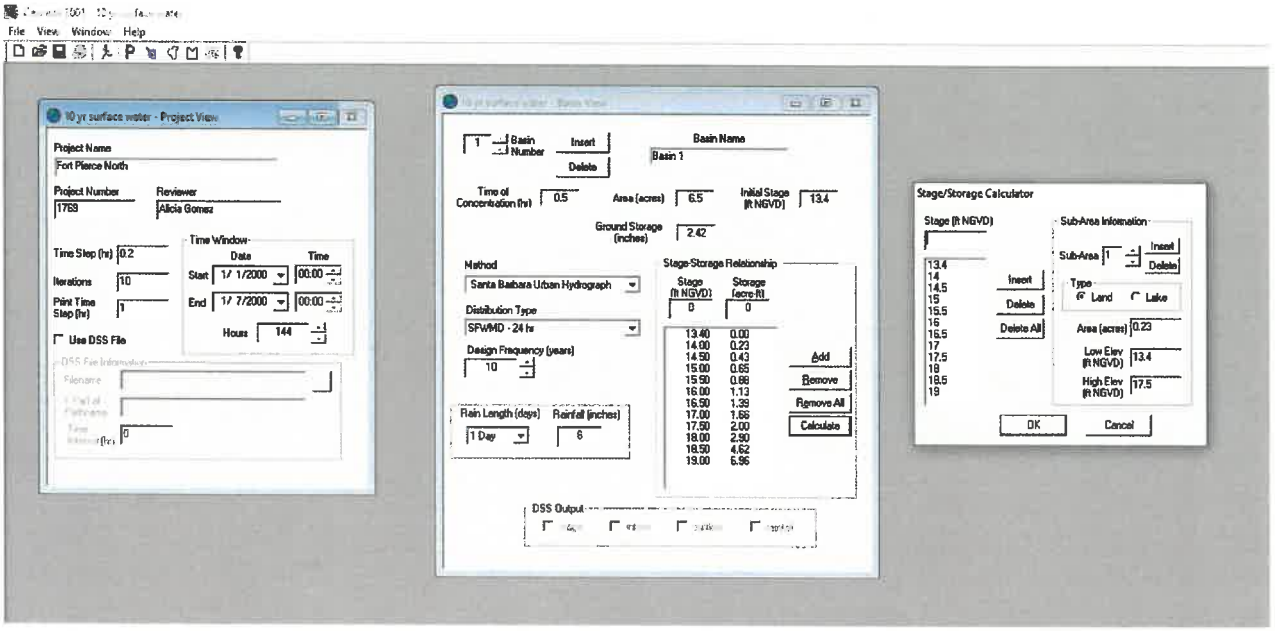
*Based on NSLRWCD criteria which is more restrictive than City of Fort Pierce pre vs. post analysis. NSLRWCD criteria = 2.6" in 24 hours.

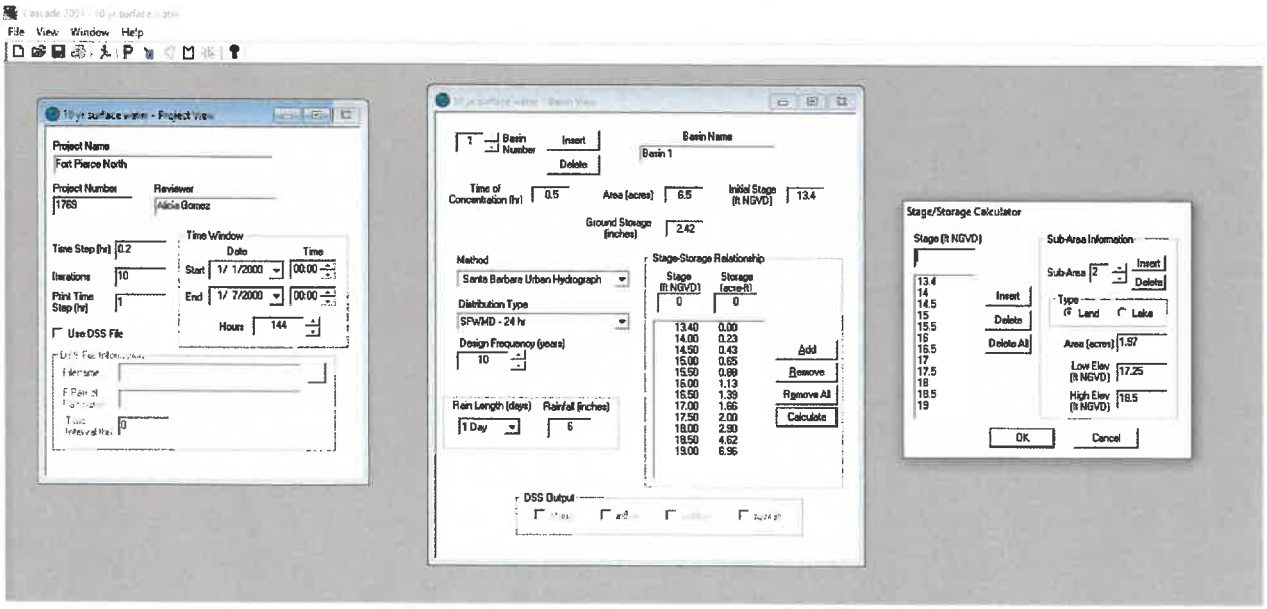
SUMMARY OF CONCEPTUAL DESIGN CRITERIA:

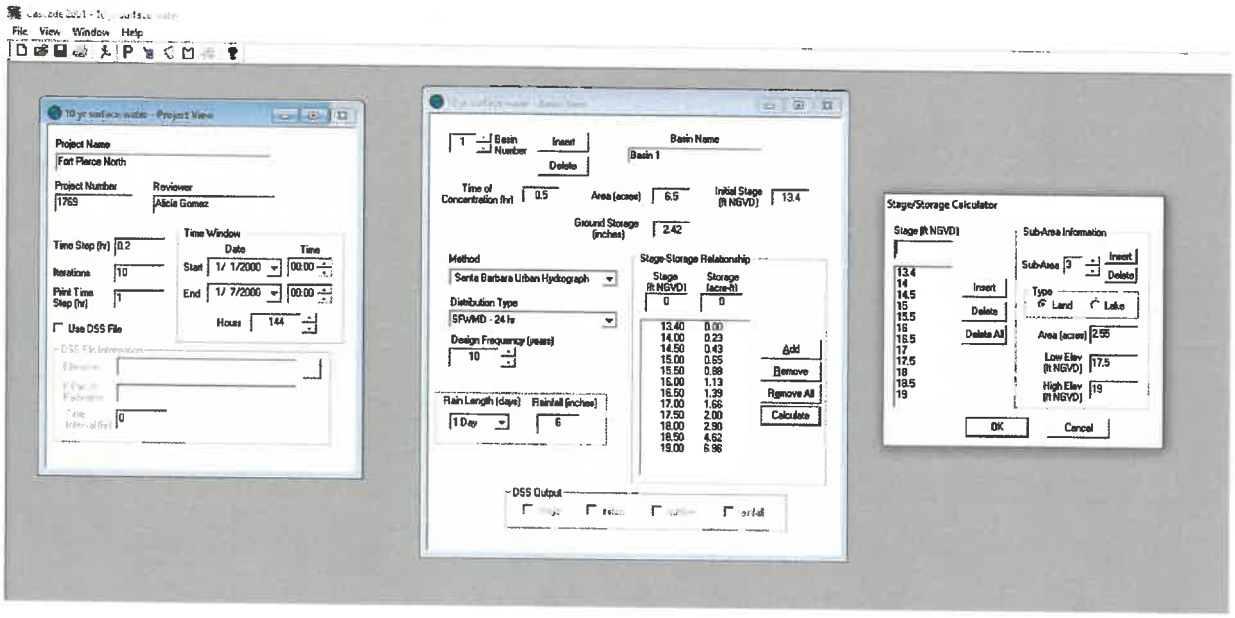
100 year –3 day Rainfall	12.23 inches
100 year - 3 day Flood Elevation	18.58' NAVD (zero discharge)
Minimum Finished Floor Elevation	19.50' NAVD
25 year – 3 day Rainfall	9.5 inches
25 year - 3 day Flood Elevation	17.76' NAVD
Minimum Perimeter Elevation	17.90' NAVD
Weir Elevation	17.90' NAVD
10 year - 1 day Rainfall	6 inches
10 year - 1 day Flood Elevation	16.16' NAVD
Minimum Pavement Elevation	17.25' NAVD

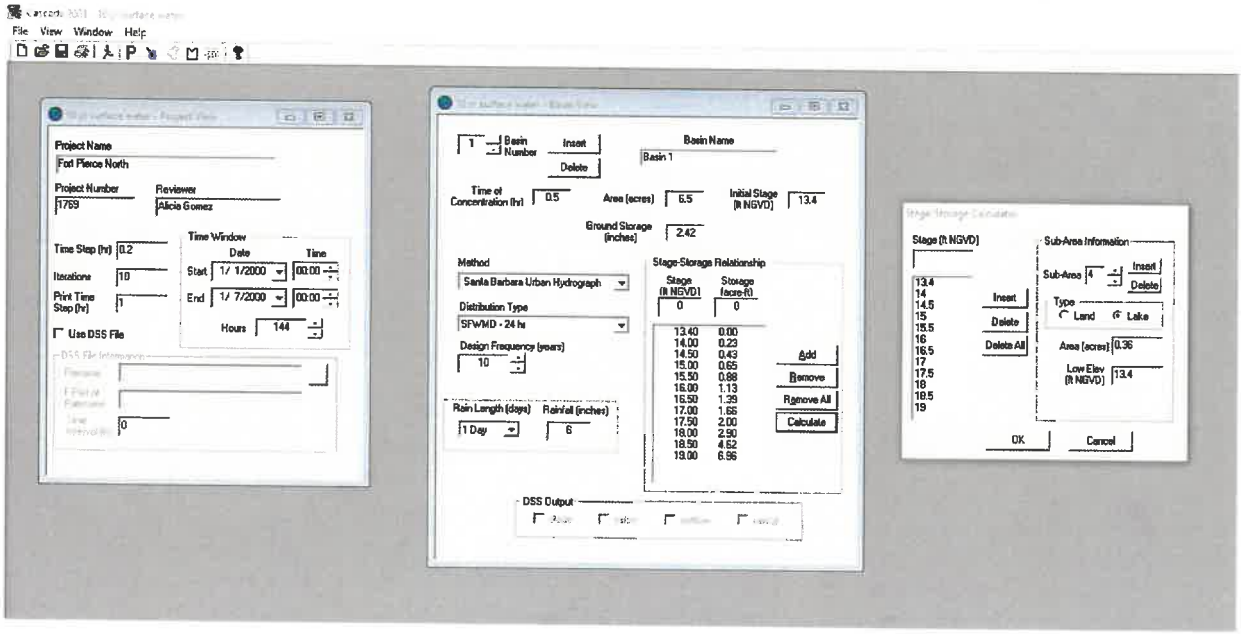
Stage/Storage Calculations on Cascade (Screenshots)

The following screenshots are presented to show the stage-storage table generated by the Cascade/SBWW program prior to hand entering storage associated with the proposed exfiltration trench.






File View Window Help
Project Name
Fort Pierce North
Project Number
1769
Reviewer
Alicia Gomez
Time Window
Time Step (hr) 0.2
Iterations 10
Print Time Step (hr) 1
Use DSS File
Start 1/ 1/2000
End 1/ 7/2000
Hours 144
Basin Number
Insert
Delete
Basin Name
Basin 1
Time of Concentration (hr) 0.5
Area (acres) 6.5
Initial Stage (ft NGVD) 13.4
Ground Storage (inches) 2.42
Method
Santa Barbara Urban Hydrograph
Distribution Type
SFWMD - 24 hr
Design Frequency (years) 10
Rain Length (days) 1 Day
Rainfall (inches) 6
Stage-Storage Relationship
Stage (ft NGVD) Storage (acre-ft)
13.40 0.00
14.00 0.23
14.50 0.43
15.00 0.65
15.50 0.88
16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage/Storage Calculator
Stage (ft NGVD)
Sub-Area Information
Sub-Area 3
Type Land Lake
Area (acres) 2.55
Low Elev (ft NGVD) 17.5
High Elev (ft NGVD) 19
Delete All
OK
Cancel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16.00 1.13
16.50 1.39
17.00 1.66
17.50 2.00
18.00 2.90
18.50 4.62
19.00 6.96
Add
Remove
Remove All
Calculate
DSS Output
Stage (ft NGVD)
Sub-Area Information
Sub-Area 4
Type Land Lake
Area (acres) 0.36
Low Elev (ft NGVD) 13.4
Delete All
OK
Cancel

EXFILTRATION TRENCH DATA:

18" PERFORATED H.D.P.E PIPE
TRENCH DEPTH 3.5', TRENCH WIDTH 6'
OVERFLOW ELEVATION = 13.40 NAVD
PIPE INVERT ELEVATION = 12.75 NAVD
12" MINIMUM COVER OF COARSE ROCK OVER PIPE
TOP OF TRENCH ELEVATION = 15.25 NAVD
BOTTOM OF TRENCH ELEVATION = 11.75 NAVD
WATER TABLE ELEVATION = 13.40 NAVD

k = HYDRAULIC CONDUCTIVITY *	6.32E-05 cfs/sq.ft-ft-head	
V = VOLUME TO BE TREATED	0.61 Ac-in	Max. Allowed Volume
W = TRENCH WIDTH	6.00 feet	
Ds = SATURATED TRENCH DEPTH	1.65 feet	
Du = NON-SATURATED TRENCH DEPTH	1.85 feet	
H2 = DEPTH OF WT FROM CONTROL ELEV.	3.85 feet	(17.25-13.40)

EXFILTRATION TRENCH LENGTH

L = V / K(H2xW+2xH2xDu-Du^2+2xH2xDs) +(1.39x10-4)WxDu

L = 135.86 feet

*HYDRAULIC CONDUCTIVITY FROM SOIL REPORT. SEE ATTACHED EXHIBIT.

STAGE-STORAGE TABLE:

Stage (Ft NAVD)	Storage (acre-ft)	+	Exfiltration Trench (acre-ft)	=	Total Storage (acre-ft)
13.40	0	+	0.31	=	0.31
14.00	0.23	+	0.41	=	0.64
14.50	0.43	+	0.49	=	0.92
15.00	0.65	+	0.57	=	1.22
15.50	0.88	+	0.61	=	1.49
16.00	1.13	+	0.61	=	1.74
16.50	1.39	+	0.61	=	2.00
17.00	1.66	+	0.61	=	2.27
17.50	2.00	+	0.61	=	2.61
18.00	2.90	+	0.61	=	3.51
18.50	4.62	+	0.61	=	5.23
19.00	6.96	+	0.61	=	7.57
	Generated from Cascade				

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 100 year
  3 Day Rainfall: 12.23 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: None
    Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.05	0.00	0.00	0.00	13.40	13.40
2.00	0.11	0.00	0.00	0.00	13.40	13.40
3.00	0.16	0.00	0.00	0.00	13.40	13.40
4.00	0.22	0.00	0.00	0.00	13.40	13.40
5.00	0.27	0.00	0.00	0.00	13.40	13.40
6.00	0.33	0.00	0.00	0.00	13.40	13.40
7.00	0.38	0.00	0.00	0.00	13.40	13.40
8.00	0.44	0.00	0.00	0.00	13.40	13.40
9.00	0.49	0.00	0.00	0.00	13.40	13.40
10.00	0.55	0.01	0.00	0.00	13.40	13.40
11.00	0.60	0.02	0.00	0.00	13.40	13.40
12.00	0.66	0.03	0.00	0.00	13.41	13.40
13.00	0.71	0.05	0.00	0.00	13.41	13.40
14.00	0.77	0.06	0.00	0.00	13.42	13.40
15.00	0.82	0.07	0.00	0.00	13.43	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
16.00	0.88	0.08	0.00	0.00	13.44	13.40
17.00	0.93	0.09	0.00	0.00	13.45	13.40
18.00	0.99	0.10	0.00	0.00	13.47	13.40
19.00	1.04	0.11	0.00	0.00	13.49	13.40
20.00	1.09	0.12	0.00	0.00	13.50	13.40
21.00	1.15	0.13	0.00	0.00	13.52	13.40
22.00	1.20	0.14	0.00	0.00	13.54	13.40
23.00	1.26	0.15	0.00	0.00	13.56	13.40
24.00	1.31	0.15	0.00	0.00	13.59	13.40
25.00	1.39	0.21	0.00	0.00	13.61	13.40
26.00	1.47	0.24	0.00	0.00	13.65	13.40
27.00	1.55	0.26	0.00	0.00	13.68	13.40
28.00	1.63	0.27	0.00	0.00	13.72	13.40
29.00	1.71	0.28	0.00	0.00	13.77	13.40
30.00	1.79	0.29	0.00	0.00	13.81	13.40
31.00	1.87	0.30	0.00	0.00	13.85	13.40
32.00	1.95	0.31	0.00	0.00	13.90	13.40
33.00	2.03	0.32	0.00	0.00	13.95	13.40
34.00	2.11	0.33	0.00	0.00	14.00	13.40
35.00	2.19	0.34	0.00	0.00	14.04	13.40
36.00	2.27	0.34	0.00	0.00	14.09	13.40
37.00	2.35	0.35	0.00	0.00	14.15	13.40
38.00	2.43	0.36	0.00	0.00	14.20	13.40
39.00	2.51	0.36	0.00	0.00	14.25	13.40
40.00	2.59	0.37	0.00	0.00	14.30	13.40
41.00	2.67	0.37	0.00	0.00	14.36	13.40
42.00	2.75	0.38	0.00	0.00	14.42	13.40
43.00	2.83	0.38	0.00	0.00	14.47	13.40
44.00	2.91	0.39	0.00	0.00	14.53	13.40
45.00	2.99	0.39	0.00	0.00	14.58	13.40
46.00	3.07	0.40	0.00	0.00	14.63	13.40
47.00	3.15	0.40	0.00	0.00	14.69	13.40
48.00	3.23	0.40	0.00	0.00	14.75	13.40
49.00	3.32	0.44	0.00	0.00	14.80	13.40
50.00	3.41	0.46	0.00	0.00	14.87	13.40
51.00	3.52	0.53	0.00	0.00	14.93	13.40
52.00	3.64	0.59	0.00	0.00	15.01	13.40
53.00	3.79	0.74	0.00	0.00	15.11	13.40
54.00	3.98	0.93	0.00	0.00	15.24	13.40
55.00	4.20	1.13	0.00	0.00	15.40	13.40
56.00	4.46	1.34	0.00	0.00	15.60	13.40
57.00	4.77	1.61	0.00	0.00	15.84	13.40
58.00	5.15	1.98	0.00	0.00	16.13	13.40
59.00	5.65	2.65	0.00	0.00	16.49	13.40
60.00	9.13	16.79	0.00	0.00	17.45	13.40
61.00	10.13	9.84	0.00	0.00	18.05	13.40
62.00	10.59	5.41	0.00	0.00	18.22	13.40
63.00	10.88	3.12	0.00	0.00	18.32	13.40
64.00	11.15	2.23	0.00	0.00	18.38	13.40
65.00	11.31	1.47	0.00	0.00	18.43	13.40
66.00	11.47	1.19	0.00	0.00	18.46	13.40
67.00	11.64	1.09	0.00	0.00	18.49	13.40
68.00	11.80	1.05	0.00	0.00	18.51	13.40
69.00	11.91	0.82	0.00	0.00	18.52	13.40
70.00	12.01	0.74	0.00	0.00	18.54	13.40
71.00	12.12	0.70	0.00	0.00	18.55	13.40
72.00	12.23	0.69	0.00	0.00	18.56	13.40
73.00	12.23	0.26	0.00	0.00	18.57	13.40
74.00	12.23	0.09	0.00	0.00	18.57	13.40
75.00	12.23	0.03	0.00	0.00	18.57	13.40
76.00	12.23	0.01	0.00	0.00	18.58	13.40
77.00	12.23	0.00	0.00	0.00	18.58	13.40
78.00	12.23	0.00	0.00	0.00	18.58	13.40
79.00	12.23	0.00	0.00	0.00	18.58	13.40
80.00	12.23	0.00	0.00	0.00	18.58	13.40
81.00	12.23	0.00	0.00	0.00	18.58	13.40
82.00	12.23	0.00	0.00	0.00	18.58	13.40
83.00	12.23	0.00	0.00	0.00	18.58	13.40
84.00	12.23	0.00	0.00	0.00	18.58	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
85.00	12.23	0.00	0.00	0.00	18.58	13.40
86.00	12.23	0.00	0.00	0.00	18.58	13.40
87.00	12.23	0.00	0.00	0.00	18.58	13.40
88.00	12.23	0.00	0.00	0.00	18.58	13.40
89.00	12.23	0.00	0.00	0.00	18.58	13.40
90.00	12.23	0.00	0.00	0.00	18.58	13.40
91.00	12.23	0.00	0.00	0.00	18.58	13.40
92.00	12.23	0.00	0.00	0.00	18.58	13.40
93.00	12.23	0.00	0.00	0.00	18.58	13.40
94.00	12.23	0.00	0.00	0.00	18.58	13.40
95.00	12.23	0.00	0.00	0.00	18.58	13.40
96.00	12.23	0.00	0.00	0.00	18.58	13.40
97.00	12.23	0.00	0.00	0.00	18.58	13.40
98.00	12.23	0.00	0.00	0.00	18.58	13.40
99.00	12.23	0.00	0.00	0.00	18.58	13.40
100.00	12.23	0.00	0.00	0.00	18.58	13.40
101.00	12.23	0.00	0.00	0.00	18.58	13.40
102.00	12.23	0.00	0.00	0.00	18.58	13.40
103.00	12.23	0.00	0.00	0.00	18.58	13.40
104.00	12.23	0.00	0.00	0.00	18.58	13.40
105.00	12.23	0.00	0.00	0.00	18.58	13.40
106.00	12.23	0.00	0.00	0.00	18.58	13.40
107.00	12.23	0.00	0.00	0.00	18.58	13.40
108.00	12.23	0.00	0.00	0.00	18.58	13.40
109.00	12.23	0.00	0.00	0.00	18.58	13.40
110.00	12.23	0.00	0.00	0.00	18.58	13.40
111.00	12.23	0.00	0.00	0.00	18.58	13.40
112.00	12.23	0.00	0.00	0.00	18.58	13.40
113.00	12.23	0.00	0.00	0.00	18.58	13.40
114.00	12.23	0.00	0.00	0.00	18.58	13.40
115.00	12.23	0.00	0.00	0.00	18.58	13.40
116.00	12.23	0.00	0.00	0.00	18.58	13.40
117.00	12.23	0.00	0.00	0.00	18.58	13.40
118.00	12.23	0.00	0.00	0.00	18.58	13.40
119.00	12.23	0.00	0.00	0.00	18.58	13.40
120.00	12.23	0.00	0.00	0.00	18.58	13.40
121.00	12.23	0.00	0.00	0.00	18.58	13.40
122.00	12.23	0.00	0.00	0.00	18.58	13.40
123.00	12.23	0.00	0.00	0.00	18.58	13.40
124.00	12.23	0.00	0.00	0.00	18.58	13.40
125.00	12.23	0.00	0.00	0.00	18.58	13.40
126.00	12.23	0.00	0.00	0.00	18.58	13.40
127.00	12.23	0.00	0.00	0.00	18.58	13.40
128.00	12.23	0.00	0.00	0.00	18.58	13.40
129.00	12.23	0.00	0.00	0.00	18.58	13.40
130.00	12.23	0.00	0.00	0.00	18.58	13.40
131.00	12.23	0.00	0.00	0.00	18.58	13.40
132.00	12.23	0.00	0.00	0.00	18.58	13.40
133.00	12.23	0.00	0.00	0.00	18.58	13.40
134.00	12.23	0.00	0.00	0.00	18.58	13.40
135.00	12.23	0.00	0.00	0.00	18.58	13.40
136.00	12.23	0.00	0.00	0.00	18.58	13.40
137.00	12.23	0.00	0.00	0.00	18.58	13.40
138.00	12.23	0.00	0.00	0.00	18.58	13.40
139.00	12.23	0.00	0.00	0.00	18.58	13.40
140.00	12.23	0.00	0.00	0.00	18.58	13.40
141.00	12.23	0.00	0.00	0.00	18.58	13.40
142.00	12.23	0.00	0.00	0.00	18.58	13.40
143.00	12.23	0.00	0.00	0.00	18.58	13.40
144.00	12.23	0.00	0.00	0.00	18.58	13.40

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.00	0.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	18.58	81.60	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	5.27	0.00	0.00	0.31	5.58	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 3day
  Design Frequency: 25 year
  3 Day Rainfall: 9.5 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.04	0.00	0.00	0.00	13.40	13.40
2.00	0.09	0.00	0.00	0.00	13.40	13.40
3.00	0.13	0.00	0.00	0.00	13.40	13.40
4.00	0.17	0.00	0.00	0.00	13.40	13.40
5.00	0.21	0.00	0.00	0.00	13.40	13.40
6.00	0.26	0.00	0.00	0.00	13.40	13.40
7.00	0.30	0.00	0.00	0.00	13.40	13.40
8.00	0.34	0.00	0.00	0.00	13.40	13.40
9.00	0.38	0.00	0.00	0.00	13.40	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	0.43	0.00	0.00	0.00	13.40	13.40
11.00	0.47	0.00	0.00	0.00	13.40	13.40
12.00	0.51	0.00	0.00	0.00	13.40	13.40
13.00	0.55	0.01	0.00	0.00	13.40	13.40
14.00	0.60	0.02	0.00	0.00	13.40	13.40
15.00	0.64	0.02	0.00	0.00	13.41	13.40
16.00	0.68	0.03	0.00	0.00	13.41	13.40
17.00	0.72	0.04	0.00	0.00	13.42	13.40
18.00	0.77	0.05	0.00	0.00	13.42	13.40
19.00	0.81	0.05	0.00	0.00	13.43	13.40
20.00	0.85	0.06	0.00	0.00	13.44	13.40
21.00	0.89	0.07	0.00	0.00	13.45	13.40
22.00	0.94	0.07	0.01	0.00	13.46	13.40
23.00	0.98	0.08	0.01	0.00	13.47	13.40
24.00	1.02	0.09	0.01	0.00	13.48	13.40
25.00	1.08	0.12	0.02	0.00	13.49	13.41
26.00	1.14	0.14	0.02	0.01	13.51	13.42
27.00	1.21	0.15	0.03	0.01	13.53	13.42
28.00	1.27	0.16	0.04	0.01	13.55	13.43
29.00	1.33	0.17	0.05	0.01	13.56	13.44
30.00	1.39	0.18	0.06	0.02	13.58	13.45
31.00	1.45	0.19	0.07	0.02	13.60	13.46
32.00	1.52	0.20	0.08	0.03	13.62	13.47
33.00	1.58	0.21	0.09	0.04	13.64	13.48
34.00	1.64	0.21	0.10	0.05	13.65	13.48
35.00	1.70	0.22	0.11	0.06	13.67	13.49
36.00	1.77	0.23	0.12	0.06	13.69	13.50
37.00	1.83	0.23	0.13	0.08	13.70	13.51
38.00	1.89	0.24	0.15	0.09	13.72	13.52
39.00	1.95	0.24	0.15	0.10	13.73	13.52
40.00	2.01	0.25	0.16	0.11	13.74	13.53
41.00	2.08	0.25	0.16	0.13	13.76	13.54
42.00	2.14	0.26	0.17	0.14	13.77	13.55
43.00	2.20	0.26	0.17	0.15	13.78	13.56
44.00	2.26	0.27	0.17	0.17	13.80	13.57
45.00	2.32	0.27	0.18	0.18	13.81	13.58
46.00	2.39	0.28	0.18	0.20	13.83	13.58
47.00	2.45	0.28	0.18	0.21	13.84	13.59
48.00	2.51	0.28	0.18	0.23	13.86	13.60
49.00	2.58	0.31	0.17	0.24	13.87	13.65
50.00	2.65	0.32	0.16	0.26	13.90	13.69
51.00	2.73	0.37	0.16	0.27	13.92	13.74
52.00	2.82	0.42	0.15	0.28	13.96	13.78
53.00	2.94	0.53	0.16	0.29	14.01	13.83
54.00	3.09	0.66	0.16	0.31	14.07	13.87
55.00	3.26	0.81	0.18	0.32	14.16	13.91
56.00	3.47	0.97	0.20	0.34	14.26	13.96
57.00	3.70	1.16	0.22	0.36	14.39	14.01
58.00	4.00	1.44	0.25	0.38	14.54	14.05
59.00	4.39	1.95	0.29	0.40	14.73	14.10
60.00	7.10	12.58	0.42	0.43	15.45	14.14
61.00	7.87	7.41	0.60	0.47	16.95	14.19
62.00	8.23	4.08	0.66	0.52	17.52	14.23
63.00	8.45	2.36	0.67	0.58	17.63	14.27
64.00	8.66	1.69	0.67	0.63	17.69	14.32
65.00	8.79	1.12	0.67	0.69	17.72	14.36
66.00	8.91	0.91	0.66	0.74	17.74	14.41
67.00	9.04	0.83	0.66	0.80	17.75	14.45
68.00	9.16	0.80	0.66	0.85	17.76	14.50
69.00	9.25	0.63	0.66	0.91	17.76	14.50
70.00	9.33	0.56	0.66	0.96	17.76	14.49
71.00	9.42	0.54	0.66	1.02	17.75	14.49
72.00	9.50	0.53	0.66	1.07	17.74	14.48
73.00	9.50	0.19	0.66	1.12	17.73	14.48
74.00	9.50	0.07	0.65	1.18	17.71	14.48
75.00	9.50	0.03	0.65	1.23	17.68	14.47
76.00	9.50	0.01	0.65	1.29	17.65	14.47
77.00	9.50	0.00	0.65	1.34	17.62	14.47
78.00	9.50	0.00	0.64	1.39	17.59	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	9.50	0.00	0.64	1.45	17.56	14.46
80.00	9.50	0.00	0.64	1.50	17.53	14.45
81.00	9.50	0.00	0.63	1.55	17.50	14.45
82.00	9.50	0.00	0.63	1.60	17.43	14.45
83.00	9.50	0.00	0.62	1.66	17.35	14.44
84.00	9.50	0.00	0.61	1.71	17.28	14.44
85.00	9.50	0.00	0.60	1.76	17.20	14.44
86.00	9.50	0.00	0.60	1.81	17.13	14.43
87.00	9.50	0.00	0.59	1.85	17.06	14.43
88.00	9.50	0.00	0.58	1.90	16.98	14.42
89.00	9.50	0.00	0.57	1.95	16.90	14.42
90.00	9.50	0.00	0.56	2.00	16.81	14.42
91.00	9.50	0.00	0.55	2.04	16.72	14.41
92.00	9.50	0.00	0.54	2.09	16.64	14.41
93.00	9.50	0.00	0.53	2.13	16.56	14.41
94.00	9.50	0.00	0.52	2.18	16.48	14.40
95.00	9.50	0.00	0.51	2.22	16.39	14.40
96.00	9.50	0.00	0.50	2.26	16.31	14.39
97.00	9.50	0.00	0.49	2.30	16.23	14.39
98.00	9.50	0.00	0.48	2.34	16.16	14.39
99.00	9.50	0.00	0.47	2.38	16.08	14.38
100.00	9.50	0.00	0.46	2.42	16.00	14.38
101.00	9.50	0.00	0.45	2.46	15.93	14.38
102.00	9.50	0.00	0.44	2.50	15.86	14.37
103.00	9.50	0.00	0.43	2.53	15.78	14.37
104.00	9.50	0.00	0.42	2.57	15.71	14.36
105.00	9.50	0.00	0.41	2.60	15.64	14.36
106.00	9.50	0.00	0.40	2.63	15.58	14.36
107.00	9.50	0.00	0.39	2.67	15.51	14.35
108.00	9.50	0.00	0.38	2.70	15.45	14.35
109.00	9.50	0.00	0.37	2.73	15.39	14.35
110.00	9.50	0.00	0.36	2.76	15.34	14.34
111.00	9.50	0.00	0.35	2.79	15.28	14.34
112.00	9.50	0.00	0.34	2.82	15.23	14.33
113.00	9.50	0.00	0.33	2.85	15.18	14.33
114.00	9.50	0.00	0.33	2.87	15.13	14.33
115.00	9.50	0.00	0.32	2.90	15.08	14.32
116.00	9.50	0.00	0.31	2.93	15.03	14.32
117.00	9.50	0.00	0.30	2.95	14.99	14.32
118.00	9.50	0.00	0.29	2.97	14.95	14.31
119.00	9.50	0.00	0.28	3.00	14.91	14.31
120.00	9.50	0.00	0.27	3.02	14.87	14.30
121.00	9.50	0.00	0.26	3.04	14.83	14.30
122.00	9.50	0.00	0.26	3.06	14.79	14.30
123.00	9.50	0.00	0.25	3.09	14.76	14.29
124.00	9.50	0.00	0.24	3.11	14.73	14.29
125.00	9.50	0.00	0.23	3.13	14.69	14.29
126.00	9.50	0.00	0.22	3.14	14.66	14.28
127.00	9.50	0.00	0.22	3.16	14.63	14.28
128.00	9.50	0.00	0.21	3.18	14.60	14.27
129.00	9.50	0.00	0.20	3.20	14.57	14.27
130.00	9.50	0.00	0.19	3.21	14.55	14.27
131.00	9.50	0.00	0.18	3.23	14.52	14.26
132.00	9.50	0.00	0.18	3.24	14.50	14.26
133.00	9.50	0.00	0.17	3.26	14.47	14.26
134.00	9.50	0.00	0.16	3.27	14.45	14.25
135.00	9.50	0.00	0.15	3.28	14.42	14.25
136.00	9.50	0.00	0.14	3.30	14.40	14.24
137.00	9.50	0.00	0.14	3.31	14.38	14.24
138.00	9.50	0.00	0.13	3.32	14.36	14.24
139.00	9.50	0.00	0.12	3.33	14.34	14.23
140.00	9.50	0.00	0.11	3.34	14.33	14.23
141.00	9.50	0.00	0.11	3.35	14.31	14.23
142.00	9.50	0.00	0.10	3.36	14.29	14.22
143.00	9.50	0.00	0.09	3.36	14.28	14.22
144.00	9.50	0.00	0.08	3.37	14.27	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.67	64.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	17.76	68.80	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	3.85	0.00	3.37	0.31	0.79	0.00

Project Name: Fort Pierce North
Reviewer: Alicia Gomez
Project Number: 1769
  Period Begin: Jan 01, 2000;0000 hr End: Jan 07, 2000;0000 hr Duration: 144 hr
  Time Step: 0.2 hr, Iterations: 10

Basin 1: Basin 1

  Method: Santa Barbara Unit Hydrograph
  Rainfall Distribution: SFWMD - 24 hr
  Design Frequency: 10 year
  1 Day Rainfall: 6 inches
  Area: 6.5 acres
  Ground Storage: 2.42 inches
  Time of Concentration: 1 hours
  Initial Stage: 13.4 ft NAVD

Stage (ft NAVD)	Storage (acre-ft)
13.40	0.31
14.00	0.64
14.50	0.92
15.00	1.22
15.50	1.49
16.00	1.74
16.50	2.00
17.00	2.27
17.50	2.61
18.00	3.51
18.50	5.23
19.00	7.57

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NAVD)
0.00	13.40
24.00	13.40
48.00	13.60
68.00	14.50
360.00	13.40
1000.00	13.40

Structure: 1

  From Basin: Basin 1
  To Basin: Offsite1
  Structure Type: Gravity
    Weir: None
    Bleeder: Circular, Invert Elev = 13.4 ft NAVD, Diameter = 0.31 ft
      Default Coefs: Weir Coef = 0.6, Orifice Coef = 0.6
    Pipe: Diameter = 2 ft, Manning's n = 0.012, Length = 20 ft
      US Invert Elev = 11.8 ft NAVD, DS Invert Elev = 11.8 ft NAVD, flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
0.00	0.00	0.00	0.00	0.00	13.40	13.40
1.00	0.06	0.00	0.00	0.00	13.40	13.40
2.00	0.12	0.00	0.00	0.00	13.40	13.40
3.00	0.19	0.00	0.00	0.00	13.40	13.40
4.00	0.27	0.00	0.00	0.00	13.40	13.40
5.00	0.37	0.00	0.00	0.00	13.40	13.40
6.00	0.50	0.00	0.00	0.00	13.40	13.40
7.00	0.65	0.05	0.00	0.00	13.40	13.40
8.00	0.82	0.15	0.00	0.00	13.42	13.40
9.00	1.03	0.31	0.01	0.00	13.45	13.40

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
10.00	1.28	0.53	0.02	0.00	13.51	13.40
11.00	1.61	0.91	0.07	0.01	13.61	13.40
12.00	3.94	8.63	0.26	0.02	14.06	13.40
13.00	4.60	5.35	0.44	0.05	15.01	13.40
14.00	4.91	3.04	0.51	0.09	15.56	13.40
15.00	5.10	1.81	0.55	0.14	15.86	13.40
16.00	5.28	1.33	0.57	0.18	16.02	13.40
17.00	5.39	0.89	0.58	0.23	16.10	13.40
18.00	5.50	0.72	0.58	0.28	16.13	13.40
19.00	5.60	0.67	0.58	0.33	16.15	13.40
20.00	5.71	0.65	0.59	0.37	16.16	13.40
21.00	5.78	0.51	0.59	0.42	16.15	13.40
22.00	5.86	0.46	0.58	0.47	16.14	13.40
23.00	5.93	0.44	0.58	0.52	16.11	13.40
24.00	6.00	0.43	0.58	0.57	16.09	13.40
25.00	6.00	0.16	0.57	0.62	16.04	13.41
26.00	6.00	0.06	0.56	0.66	15.97	13.42
27.00	6.00	0.02	0.55	0.71	15.88	13.42
28.00	6.00	0.01	0.54	0.75	15.79	13.43
29.00	6.00	0.00	0.53	0.80	15.70	13.44
30.00	6.00	0.00	0.52	0.84	15.62	13.45
31.00	6.00	0.00	0.51	0.88	15.53	13.46
32.00	6.00	0.00	0.50	0.93	15.45	13.47
33.00	6.00	0.00	0.49	0.97	15.38	13.48
34.00	6.00	0.00	0.48	1.01	15.30	13.48
35.00	6.00	0.00	0.47	1.05	15.23	13.49
36.00	6.00	0.00	0.46	1.08	15.16	13.50
37.00	6.00	0.00	0.45	1.12	15.09	13.51
38.00	6.00	0.00	0.44	1.16	15.02	13.52
39.00	6.00	0.00	0.43	1.19	14.96	13.52
40.00	6.00	0.00	0.42	1.23	14.90	13.53
41.00	6.00	0.00	0.41	1.26	14.84	13.54
42.00	6.00	0.00	0.40	1.30	14.79	13.55
43.00	6.00	0.00	0.39	1.33	14.73	13.56
44.00	6.00	0.00	0.38	1.36	14.68	13.57
45.00	6.00	0.00	0.37	1.39	14.63	13.58
46.00	6.00	0.00	0.36	1.42	14.58	13.58
47.00	6.00	0.00	0.35	1.45	14.53	13.59
48.00	6.00	0.00	0.34	1.48	14.48	13.60
49.00	6.00	0.00	0.32	1.51	14.43	13.65
50.00	6.00	0.00	0.30	1.53	14.38	13.69
51.00	6.00	0.00	0.28	1.56	14.34	13.74
52.00	6.00	0.00	0.26	1.58	14.30	13.78
53.00	6.00	0.00	0.24	1.60	14.26	13.83
54.00	6.00	0.00	0.22	1.62	14.23	13.87
55.00	6.00	0.00	0.19	1.64	14.20	13.91
56.00	6.00	0.00	0.17	1.65	14.17	13.96
57.00	6.00	0.00	0.14	1.66	14.15	14.01
58.00	6.00	0.00	0.10	1.67	14.13	14.05
59.00	6.00	0.00	0.06	1.68	14.12	14.10
60.00	6.00	0.00	0.00	1.68	14.12	14.14
61.00	6.00	0.00	0.00	1.68	14.12	14.19
62.00	6.00	0.00	0.00	1.68	14.12	14.23
63.00	6.00	0.00	0.00	1.68	14.12	14.27
64.00	6.00	0.00	0.00	1.68	14.12	14.32
65.00	6.00	0.00	0.00	1.68	14.12	14.36
66.00	6.00	0.00	0.00	1.68	14.12	14.41
67.00	6.00	0.00	0.00	1.68	14.12	14.45
68.00	6.00	0.00	0.00	1.68	14.12	14.50
69.00	6.00	0.00	0.00	1.68	14.12	14.50
70.00	6.00	0.00	0.00	1.68	14.12	14.49
71.00	6.00	0.00	0.00	1.68	14.12	14.49
72.00	6.00	0.00	0.00	1.68	14.12	14.48
73.00	6.00	0.00	0.00	1.68	14.12	14.48
74.00	6.00	0.00	0.00	1.68	14.12	14.48
75.00	6.00	0.00	0.00	1.68	14.12	14.47
76.00	6.00	0.00	0.00	1.68	14.12	14.47
77.00	6.00	0.00	0.00	1.68	14.12	14.47
78.00	6.00	0.00	0.00	1.68	14.12	14.46

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NAVD)	Tail Water Stage (ft NAVD)
79.00	6.00	0.00	0.00	1.68	14.12	14.46
80.00	6.00	0.00	0.00	1.68	14.12	14.45
81.00	6.00	0.00	0.00	1.68	14.12	14.45
82.00	6.00	0.00	0.00	1.68	14.12	14.45
83.00	6.00	0.00	0.00	1.68	14.12	14.44
84.00	6.00	0.00	0.00	1.68	14.12	14.44
85.00	6.00	0.00	0.00	1.68	14.12	14.44
86.00	6.00	0.00	0.00	1.68	14.12	14.43
87.00	6.00	0.00	0.00	1.68	14.12	14.43
88.00	6.00	0.00	0.00	1.68	14.12	14.42
89.00	6.00	0.00	0.00	1.68	14.12	14.42
90.00	6.00	0.00	0.00	1.68	14.12	14.42
91.00	6.00	0.00	0.00	1.68	14.12	14.41
92.00	6.00	0.00	0.00	1.68	14.12	14.41
93.00	6.00	0.00	0.00	1.68	14.12	14.41
94.00	6.00	0.00	0.00	1.68	14.12	14.40
95.00	6.00	0.00	0.00	1.68	14.12	14.40
96.00	6.00	0.00	0.00	1.68	14.12	14.39
97.00	6.00	0.00	0.00	1.68	14.12	14.39
98.00	6.00	0.00	0.00	1.68	14.12	14.39
99.00	6.00	0.00	0.00	1.68	14.12	14.38
100.00	6.00	0.00	0.00	1.68	14.12	14.38
101.00	6.00	0.00	0.00	1.68	14.12	14.38
102.00	6.00	0.00	0.00	1.68	14.12	14.37
103.00	6.00	0.00	0.00	1.68	14.12	14.37
104.00	6.00	0.00	0.00	1.68	14.12	14.36
105.00	6.00	0.00	0.00	1.68	14.12	14.36
106.00	6.00	0.00	0.00	1.68	14.12	14.36
107.00	6.00	0.00	0.00	1.68	14.12	14.35
108.00	6.00	0.00	0.00	1.68	14.12	14.35
109.00	6.00	0.00	0.00	1.68	14.12	14.35
110.00	6.00	0.00	0.00	1.68	14.12	14.34
111.00	6.00	0.00	0.00	1.68	14.12	14.34
112.00	6.00	0.00	0.00	1.68	14.12	14.33
113.00	6.00	0.00	0.00	1.68	14.12	14.33
114.00	6.00	0.00	0.00	1.68	14.12	14.33
115.00	6.00	0.00	0.00	1.68	14.12	14.32
116.00	6.00	0.00	0.00	1.68	14.12	14.32
117.00	6.00	0.00	0.00	1.68	14.12	14.32
118.00	6.00	0.00	0.00	1.68	14.12	14.31
119.00	6.00	0.00	0.00	1.68	14.12	14.31
120.00	6.00	0.00	0.00	1.68	14.12	14.30
121.00	6.00	0.00	0.00	1.68	14.12	14.30
122.00	6.00	0.00	0.00	1.68	14.12	14.30
123.00	6.00	0.00	0.00	1.68	14.12	14.29
124.00	6.00	0.00	0.00	1.68	14.12	14.29
125.00	6.00	0.00	0.00	1.68	14.12	14.29
126.00	6.00	0.00	0.00	1.68	14.12	14.28
127.00	6.00	0.00	0.00	1.68	14.12	14.28
128.00	6.00	0.00	0.00	1.68	14.12	14.27
129.00	6.00	0.00	0.00	1.68	14.12	14.27
130.00	6.00	0.00	0.00	1.68	14.12	14.27
131.00	6.00	0.00	0.00	1.68	14.12	14.26
132.00	6.00	0.00	0.00	1.68	14.12	14.26
133.00	6.00	0.00	0.00	1.68	14.12	14.26
134.00	6.00	0.00	0.00	1.68	14.12	14.25
135.00	6.00	0.00	0.00	1.68	14.12	14.25
136.00	6.00	0.00	0.00	1.68	14.12	14.24
137.00	6.00	0.00	0.00	1.68	14.12	14.24
138.00	6.00	0.00	0.00	1.68	14.12	14.24
139.00	6.00	0.00	0.00	1.68	14.12	14.23
140.00	6.00	0.00	0.00	1.68	14.12	14.23
141.00	6.00	0.00	0.00	1.68	14.12	14.23
142.00	6.00	0.00	0.00	1.68	14.12	14.22
143.00	6.00	0.00	0.00	1.68	14.12	14.22
144.00	6.00	0.00	0.00	1.68	14.12	14.21

STRUCTURE MAXIMUM AND MINIMUM DISCHARGE

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	0.59	20.40	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Basin 1	16.16	20.40	13.40	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Basin 1	2.08	0.00	1.68	0.31	0.71	0.00

ENVIRONMENTAL ASSESSMENT

6.87-ACRE PARCEL ALONG OKEECHOBEE ROAD

FT. PIERCE, ST. LUCIE COUNTY, FLORIDA

August 2019
Updated June 2020

For

Michael Moore
Arrow Investments
4512 North Flagler Drive, Ste. 216
West Palm Beach, Florida 33412

Prepared by:
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561-891-1572

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Environmental Assessment

Project Name: 6.87-Acre Parcel **Project No.** C19012

Work Date: August 7 and 8, 2019

Site Location: Just east of South 31st Street, north side of Okeechobee Road
Ft. Pierce, Florida

Objective of Work: David Nickerson, Inc., (DNI) conducted an environmental assessment to document occurrences of any significant environmental resources including vegetative communities, jurisdictional wetland areas, and listed plant or wildlife species.

Site Description: The 6.87acre parcel is a vacant commercially zoned lot established in a commercial district located in Section 19, Township 35 South, Range 40 East, in Ft. Pierce, Florida (Figure 1). The property comprises 6.87 acres and is located east of South 31st Street, north of Okeechobee Road, west of developed commercial enterprises and south of undeveloped land. A small wetland ditch exists near the northwestern corner of the property and is connected to the dry drainage ditch located along the western property boundary. The entire site is disturbed and is dominated by cleared land on which a variety of weedy herbaceous plants occur. Remnant forest communities occur along the northeastern, northern and northwestern portions of the site. Several small to large isolated Cabbage palm (*Sabal palmetto*)/Brazilian pepper (*Schinus terebinthifolius*) heads occur along the southern site boundary and interior to the property. The largest of these, near the southwestern portion, supports an active homeless camp. Two well-worn foot paths occur onsite. One servicing the homeless camp from offsite at the intersection of Nebraska Avenue and South 31st Street and the other occurs along the eastern portion from the northern property line south to the business located offsite at the extreme southeastern property corner. No structures or other site improvements occur on the parcel.

Methodology: Prior to the site visit, the U.S. Geological Survey 7.5-minute Quadrangle Topographic Map, Ft. Pierce Quadrangle (Photo-revised 2015) and the Soil Survey of St. Lucie County Florida (U.S. Department of Agriculture 2014) were reviewed to determine topographic features and site soil map



NORTH

David Nickerson, Inc. www.environmentalconsultflorida.com	**Location Map** **6.87-Acre Okeechobee Road Parcel** **Ft. Pierce, Florida**	**Figure 1** August 2019 Not To Scale

units. Copies of Google 2016 aerial photographs of the parcel were obtained and reviewed to determine potential location of environmental features.

Pedestrian surveys of the parcel were conducted on August 7 and 8, 2019 to map approximate locations and boundaries of significant environmental resources, vegetative communities and occurrence of listed plant or animal species. Approximate locations of vegetative community cover type boundaries and other features were mapped on an aerial photograph of the site. Vegetative communities were identified in accordance with Florida Land Use Cover and Forms Classification System Handbook (FLUCFCS) (Florida Department of Transportation 1999).

Listed species of plants and wildlife are found in Florida's Endangered Species, Threatened Species, and Species of Special Concern, Official Lists (Florida Fish and Wildlife Conservation Commission 2013) and Preservation of Native Flora of Florida, Chapter 5B-40 (Florida Department of Agriculture and Consumer Services, Division of Plant Industry, October 2017). Any occurrences of listed species were recorded.

Technical Staff: David Nickerson

Findings: The entire 6.87-acre parcel is disturbed including vegetation and soil surface. Site investigation confirmed mapped soils on the southern half of the property as Tantile and Pomona sands and the northern half is underlain by Nettles and Oldsmar sands. Natural Resource and Conservation Service mapped soils are shown in Attachment A. Relatively intact native upland habitat does not occur on the property. Due to previous clearing, exotic and nuisance plant pioneers have replaced the historic pine flatwood understory vegetation naturally occurring on Tantile and Pomona sands and Nettles and Oldsmar sands soils in this part of St. Lucie County. The narrow forested areas along western and southern portions comprise mostly exotic plant species and the wetland buffer also contains exotic canopy and subcanopy species. Following partial clearing and local/regional historic drainage, six cover types currently occur on site and include Disturbed Herbaceous, Brazilian Pepper, Disturbed Mixed Hardwoods, Brazilian Pepper Cabbage Palm, Disturbed Pine Oak Cabbage Palm and Ditches. The cover types are described below and their locations on the parcel are depicted in Figure 2.



NORTH

LEGEND

- Parcel Boundary
- Human Paths

3101 – Disturbed Herbaceous
4141 – Disturbed Pine Oak Cabbage Palm
4220 – Brazilian Pepper
4221 – Brazilian Pepper Cabbage Palm
4381 – Disturbed Mixed Hardwoods
5101– Ditches
Source – *Florida Land Use, Cover and Forms Classification System* 1999

David Nickerson, Inc. www.environmentalconsultflorida.com	**Vegetation Communities Map 6.87 Acre Okeechobee Road Parcel Ft. Pierce, Florida**	Figure 2 August 2019 Not to Scale

Disturbed Herbaceous – FLUCFCS 3101; Disturbed Herbaceous cover type is the dominant cover on site, occurring on approximately 2.25 acres of the 6.87-acre parcel. Because this cover type has been cleared of all but herbaceous plants, no canopy, subcanopy or shrub plants occur. Bahiagrass (*Paspalum notatum*), in the eastern and southern portions, and St. Augustine grass (*Stenotaphrum secundatum*), in the northern and western portions, dominate the vegetation in the ground cover layer. Additional exotic and native herbaceous plants found in the ground cover include creeping oxeye (*Sphagneticola trilobata*), beggarticks (*Bidens pilosa*), sandspur (*Cenchrus spinifex*), morning glory (*Ipomea imperati*), frostweed (*Verbesina virginica*), creeping beggar weed (*Desmodium incanum*), pepper vine (*Ampleopsis arborea*), creeping indigo (*Indigofera spicata*), large flower pusley (*Richardia grandiflora*), West Indian dropseed (*Sporobolus jacquemontii*), shrubby false button (*Spermacoce verticillata*) and Guinea grass (*Panicum maximum*). Occasionally, ragweed (*Ambrosia artimisifolia*), dayflower (*Commelina* sp.), wild grape (*Vitis rotundifolia*), broomsedge bluestem (*Andropogon virginicus*), catbriar (*Smilax* spp.), wild poinsettia (*Poinsettia cyathophora*), Florida threeawn (*Aristida rhizomophora*), and dog fennel (*Eupatorium capillifolium*) also occur. Select photographs of this cover type are provided in Attachment B.

Disturbed Pine Oak Cabbage Palm – FLUCFCS 4141: Disturbed Pine Oak Cabbage Palm cover type occurs along the northern and eastern property boundaries. It comprises 2.1 acres. Evidence of disturbance observed includes abundant solid waste, soil disturbance and invasion of exotic plants. Only a few slash pine (*Pinus elliottii*) remain in the community and they occur in the northern extreme of the cover type. Other canopy plants include cabbage palm, laurel oak (*Quercus laurifolia*), melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper with occasional horse bush (*Peltophorum dubium*), Mexican fan palm (*Washingtonia robusta*), and Queen Palm (*Syagrus romanzoffiana*). Subcanopy vegetation comprises Brazilian pepper, cabbage palm, melaleuca, Guinea grass and carrotwood (*Cupaniopsis anacardioides*). Ground cover includes Brazilian pepper, cabbage palm, carrotwood, Surinam cherry (*Ugenia uniflora*), blechnum fern (*Blechnum serrulatum*), with occasional marlberry (*Ardisia escallonioides*), beauty berry (*Callicarpa americana*), caesar weed (*Urena lobata*), frostweed, cat briar (*Smilax* sp.), and monk orchid (*Oceoclades maculata*).

Brazilian Pepper – FLUCFCS 4220; Brazilian Pepper cover type occurs south of the Disturbed Pine Oak Cabbage Palm and north of Disturbed Herbaceous and Disturbed Mixed Hardwoods in the northwestern forested portion of the property. It

comprises approximately 0.92 acres. Canopy trees are dominated by the exotic Brazilian pepper (*Schinus terebinthifolius*) with occasional representation by cabbage palm (*Sabal palmetto*), laurel oak and queen palm. Brazilian pepper also dominates the subcanopy with occasional laurel oak and cabbage palm. Ground cover plants are sparse and include seedlings of Brazilian pepper, Caesar weed (*Urena lobata*), pepper vine and frostweed (*Verbesina virginica*). Select photographs of this cover type are provided in Attachment B.

Brazilian Pepper Cabbage Palm – FLUCFCS 4221; Brazilian Pepper Cabbage Palm cover type occurs mostly as isolated tree "heads" within the Disturbed Herbaceous cover and includes an upland fringing community along the west central site boundary. It comprises approximately 0.92 acres. This community is highly disturbed as evidenced by dominance of exotic and invasive plants and scattered solid waste in each area. The largest of the heads contains an active homeless camp with several tents, makeshift tables and clothes lines (Figure 2) and Attachment B. Trees in the canopy layer of this cover type are dominated by the exotic Brazilian pepper and include Cabbage palm and an occasional laurel oak. Subcanopy plants include Brazilian pepper, strangler fig (*Ficus aurea*), occasional laurel oak and the invasive Surinam cherry (*Ugenia uniflora*). Ground cover plants are sparse but include Brazilian pepper, West Indian dropseed, Caesar weed, bahia grass and Florida threeawn. Select photographs of this cover type are provided in Attachment B.

Disturbed Mixed Hardwoods – FLUCFCS 4381; Disturbed Mixed Hardwoods cover type occurs in a small area along the west central portion of the property south of the Brazilian Pepper and north of the Disturbed Herbaceous cover type. It comprises 0.39 acres. Canopy vegetation comprises False Tamarind (*Lysiloma latisiliquum*), cabbage palm, rosewood (*Dalbergia sissoo*), Brazilian pepper and laurel oak. Subcanopy plants include Brazilian pepper, rosewood, cabbage palm, Surinam cherry and laurel oak. Ground cover comprises seedlings of canopy and subcanopy species as well as Guinea grass, pepper vine, frostweed, Bahia grass and Caesar weed. A photograph of this cover type is provided in Attachment B.

Ditches – FLUCFCS 5101; Ditches cover type occurs as a 10-20 foot wide mostly dry drainage ditch along and just within the western property boundary from Okeechobee Road north to the Disturbed Pine Oak Cabbage Palm community. It comprises approximately 0.29 acres. On the day of this assessment, standing water was observed to occur only in the northern half of the ditch. The southern two fifths of the ditch and its banks are open and without any shrubs or trees. The northern three fifths of the ditch length are covered by

overhanging vegetation and the portion west of the Disturbed Mixed Hardwoods community has Primrose willow (*Ludwigia peruviana*) plants growing in the ditch. No canopy trees actually grow in the ditch but overhanging Brazilian pepper predominates over the ditch in that community and an occasional laurel oak and Carolina willow (Salix caroliniana) overhang to the south. Herbaceous plants growing in the open portion of the ditch include Guinea grass, West Indian dropseed, pepper vine, Caesar weed, rattlebox, blechnum fern (*Blechnum serrulatum*), with occasional maidencane (*Panicum hemitomon*) and plants typically found in the Disturbed Herbaceous cover type to the east. Select photographs of this cover type are provided in Attachment B.

A Gopher Tortoise Burrow Survey was conducted on the property. No active or inactive burrows were found. No other animals listed as protected by federal, state, or local environmental regulatory agencies, nor any signs of such animals, were observed on the parcel. Unlisted animal species and/or sign observed on the parcel included southern leopard frog (*Lithobates utricularia*), common oak toad (*Bufo quercicus*), Cuban anole (*Anolis sagrei*), Southern black racer (*Coluber constrictor*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), mockingbird (*Mimus polyglottos*), loggerhead shrike (*Lanius ludovicianus*), zebra longwing butterfly (*Heliconius charitonia*) and a few other butterflies. Sign of animal occurrence observed include common rabbit (*Sylvilagus floridanus*) scat.

No plant species regulated by the Florida Department of Agriculture and Consumer Services were observed on the property.

Recommendations: Ft. Pierce Land Development Regulations address Tree Protection of native trees. A tree removal permit and a land clearing permit must be obtained prior to conducting any site work. No tree removal permit is required should only Brazilian pepper, Australian pine or Melaleuca trees be removed. Ft. Pierce Landscape Code defines material standards as to species and sizes. A tree survey may be necessary as the few native trees occurring onsite are required to be protected onsite or replaced with same species in future landscaping areas.

A small area of low land adjacent to and east of northern portions of the western drainage ditch is jurisdictional wetland and a wetland delineation was conducted to determine and mark the actual jurisdictional wetland limits on site in accordance with South Florida Water Management District (SFWMD) rules. The wetland delineation has been approved by SFWMD and the wetland has been determined to be an isolated wetland less than 0.5

acre in area. Should the wetland be maintained as part of the site plan, a 25 foot wide upland buffer must be maintained outside and surrounding the jurisdictional wetland line. Should the isolated wetland be impacted by the project, no mitigation would be required in accordance with SFWMD rules.

Because native upland habitat does not occur on site, Ft. Pierce Land Development Regulations (LDR) do not require any portion of onsite upland habitat to be protected in an upland preserve area on site.

Additionally, in accordance with Fort Pierce rules, all prohibited exotic plant species occurring on the property must be eradicated as a condition of building permit approval. Consequently, all prohibited species, including Brazilian pepper, camphor tree, Old World climbing fern and Guinea grass found on the site must be removed during the development process.

DNI can assist in addressing all of the above topics by conducting pre-permit application meetings with environmental regulatory agencies, preparing permit applications in cooperation with planners and engineers, and defining options that will assist in the development goals for the parcel.

Figures:

Figure 1 – Location Map
Figure 2 – Vegetative Communities Map

References:

Florida Association of Environmental Soil Scientists. 1995. Hydric Soils of Florida Handbook, second edition. University of Florida, United States Department of Agriculture, Florida Department of Environmental Protection, and St. Johns River Water Management District. 409p.

Florida Fish and Wildlife Conservation Commission. 2013. Florida's Endangered Species, Threatened Species and Species of Special Concern, Official Lists. Tallahassee, Florida. 12p.

U. S. Department of Agriculture, Soil Conservation Service. 2014. NRCS Web Soil Survey, Custom Soil Resource Report for St Lucie County

Attachment A

Area Soils Map



Map Scale: 1:8,520 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 400 800 1600 2400

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

Natural Resources Web Soil Survey **Conservation Service** National Cooperative Soil Survey Soil Map—St. Lucie County, Florida (6.87 Acre Parcel)

MAP LEGEND

Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Map Unit Polygons
Soil Map Unit Lines
Soil Map Unit Points
Special Line Features
Blowout
Borrow Pit
Clay Spot
Closed Depression
Gravel Pit
Gravelly Spot
Landfill
Lava Flow
Marsh or swamp
Mine or Quarry
Miscellaneous Water
Perennial Water
Rock Outcrop
Saline Spot
Sandy Spot
Severely Eroded Spot
Sinkhole
Slide or Slip
Sodic Spot
Spoil Area
Stony Spot
Very Stony Spot
Wet Spot
Other
Special Point Features
Water Features
Streams and Canals
Transportation
Rails
Interstate Highways
US Routes
Major Roads
Local Roads
Background
Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were m

Warning: Soil Map may not be valid at this

Enlargement of maps beyond the scale of misunderstanding of the detail of mapping line placement. The maps do not show th contrasting soils that could have been sho scale.

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

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

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

This product is ge NRCS certified data as of the version date(s) lis

Soil Survey Area: St. Lucie
Survey Area Data: Version 11, Sep 17, 2018

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

Date(s) aerial images were 2019—Mar 23, 2019

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

Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farmton sands	12.2	3.7%
4	Arents, 0 to 5 percent slopes	5.6	1.7%
21	Lawnwood and Myakka sands	1.9	0.6%
25	Nettles and Oldsmar sands	29.7	9.0%
31	Pepper and EauGallie sands	55.0	16.6%
32	Pineda sand, 0 to 2 percent slopes	1.5	0.4%
40	Samsula muck, frequently ponded, 0 to 1 percent slopes	2.7	0.8%
44	Tantile and Pomona sands	188.8	57.0%
50	Waveland and Immokalee fine sands	1.2	0.4%
52	Waveland-Urban land complex	29.7	9.0%
99	Water	2.6	0.8%
Totals for Area of Interest		**330.9**	**100.0%**

Attachment B
Selected Photographs



Brazilian Pepper Cabbage Palm Head & Disturbed Herbaceous cover at SE property corner view to W



Disturbed Herbaceous cover and Human Path at SE property corner view to N



Disturbed Pine Oak Cabbage Palm, Disturbed Herbaceous & Human Path at NE corner view to S



Disturbed Herbaceous and Pine Oak Cabbage Palm at NE corner view to W



Adjacent land, Ditch, Disturbed Herbaceous & Brazilian Pepper head at SW corner view to N



Ditch, Disturbed Herbaceous & Brazilian Pepper Cabbage Palm head at SW corner view to ENE



Disturbed Herbaceous & Brazilian Pepper Heads from S of Disturbed Mixed Hardwoods view to SE



BP head, Disturbed Herbaceous and Brazilian Pepper head along street near SW corner view to E



Eastern Disturbed Pine Oak Cabbage Palm interior view to SE



Northern Disturbed Pine Oak Cabbage Palm western interior view to SW



False Tamarind tree and Brazilian pepper in Disturbed Mixed Hardwoods View to NW



Disturbed Herbaceous, Wetland portion of Ditch and Mexican fan palms in NW portion view to NNW



Homeless camp in Largest Brazilian Pepper Cabbage Palm head in SW portion of site view to ESE

Kimley»Horn

June 22, 2020

Arrow Investment Group, LLC
c/o Michael Sanchez
4512 North Flagler Drive, Suite 206
West Palm Beach, Florida 33407

Re: Arrow Fort Pierce North Residential – Future Land Use Plan Amendment Analysis
Fort Pierce, Florida
Kimley-Horn #043264001

Dear Mr. Sanchez:

Kimley-Horn and Associates, Inc. has prepared a future land use plan amendment traffic analysis for the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The proposed plan of development includes changing the future land use designation from general commercial (GC) to medium density residential (RM). The parcel identification number for the site is 2417-504-0020-001-6.

The attached **Figure 1** shows the location of the site. The site plan and parcel number are attached for reference.

Table 1 summarizes the maximum development intensities for proposed future land use designation on the parcel based upon the proposed medium density residential (RM) designation. Per *City of Fort Pierce Comprehensive Plan* Policy 1.1.5, the City allows a density bonus of 5 dwelling units per acre for developments located within a ¼ mile of a rail station, multimodal transit center, or transit stop.

This analysis was conducted following short-term and long-term analysis procedures typically used to evaluate comprehensive plan amendments in Fort Pierce as outlined in the Comprehensive Plan. This report summarizes the findings of the comprehensive plan land use amendment traffic analysis.

TRIP GENERATION

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

The trip generation calculations are based on the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition* for the following:

- Scenario A: Maximum development potential under the existing FLU – General Commercial (GC)
- Scenario B: Maximum development potential under the future FLU – Medium Density Residential (RM)

The trip differential between the maximum development potential of the existing FLU site and maximum development potential of the proposed FLU was used for the short-range (year 2025) analysis and for the long-range (year 2040) analysis. As indicated in **Table 2**, the proposed development is a decrease in 26 net new external AM peak hour trips and a decrease in 32 net new external PM peak hour trips. Therefore, no further analysis is required for the proposed future lane use.

CONCLUSION

The foregoing comprehensive plan traffic analysis has been conducted to evaluate the proposed future land use to medium density residential at the site located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the trip generation calculation between the existing and proposed future land use, the proposed change in land use will be a decrease in project trips and will not impact roadways in the vicinity of the project. Therefore, the change in future land use for the subject parcel meets applicable criteria for an amendment to Fort Pierce's comprehensive plan.

Please contact me at (561) 840-0874 or adam.kerr@kimley-horn.com should you have any questions.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.

Adam B. Kerr, P.E.
Transportation Engineer

Florida Registration
Number 64773
Certificate of Authorization
Number 696

Attachments

k:\wpb_tpto\0432\043264001 - arrow fp north\flupa\2020-03-19 arrow flupa.docx

TABLE 1: MAXIMUM DEVELOPMENT INTENSITIES ARROW FORT PIERCE NORTH RESIDENTIAL			
Scenario	Maximum Intensity	Acreage	Max
Existing Future Land Use *General Commercial (GC)*	1.0 FAR	6.796	296,034 SF
Proposed Future Land Use *Medium Density Res (RM)*	17 DU per Acre	6.796	115 DU

TABLE 2
WEEKDAY TRIP GENERATION
ARROW FORT PIERCE NORTH RESIDENTIAL

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Future Land Use								
Commercial	296.034 KSF	12,576	99	26	73	126	77	49
Subtotal		*12,576*	*99*	*26*	*73*	*126*	*77*	*49*
Pass-By								
Commercial	34%	4,276	34	9	25	43	26	17
Net External Trips		*8,300*	*65*	*17*	*48*	*83*	*51*	*32*
Proposed Future Land Use								
Multifamily Residential (Mid-Rise)	115 DU	625	39	10	29	51	31	20
Net External Trips		*625*	*39*	*10*	*29*	*51*	*31*	*20*
Existing Future Land Use - Proposed Future Land Use		*(7,675)*	*(26)*	*(7)*	*(19)*	*(32)*	*(20)*	*(12)*

Trip generation was calculated using the following data:

Daily Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.68Ln(X) + 5.57 trips/1,000 SF
Multifamily Residential (Mid-Rise)	[ITE 221]	=	T = 5.45(X) - 1.75 trips/DU
AM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	T = 0.50(X) + 151.78 trips/1,000 SF (62% in, 38% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)
PM Peak Hour Trip Generation			
Commercial	[ITE 820]	=	Ln(T) = 0.74 Ln(X) + 2.89 trips/1,000 SF (48% in, 52% out)
Multifamily Residential (Mid-Rise)	[ITE 221]	=	Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Kimley»Horn


S 25TH STREET
VIRGINIA AVENUE
OKEECHOBEE ROAD
FIGURE 1
SITE LOCATION
ARROW FP NORTH RESIDENTIAL
Kimley»Horn
LEGEND
Project Site
NORTH

SITE INFORMATION

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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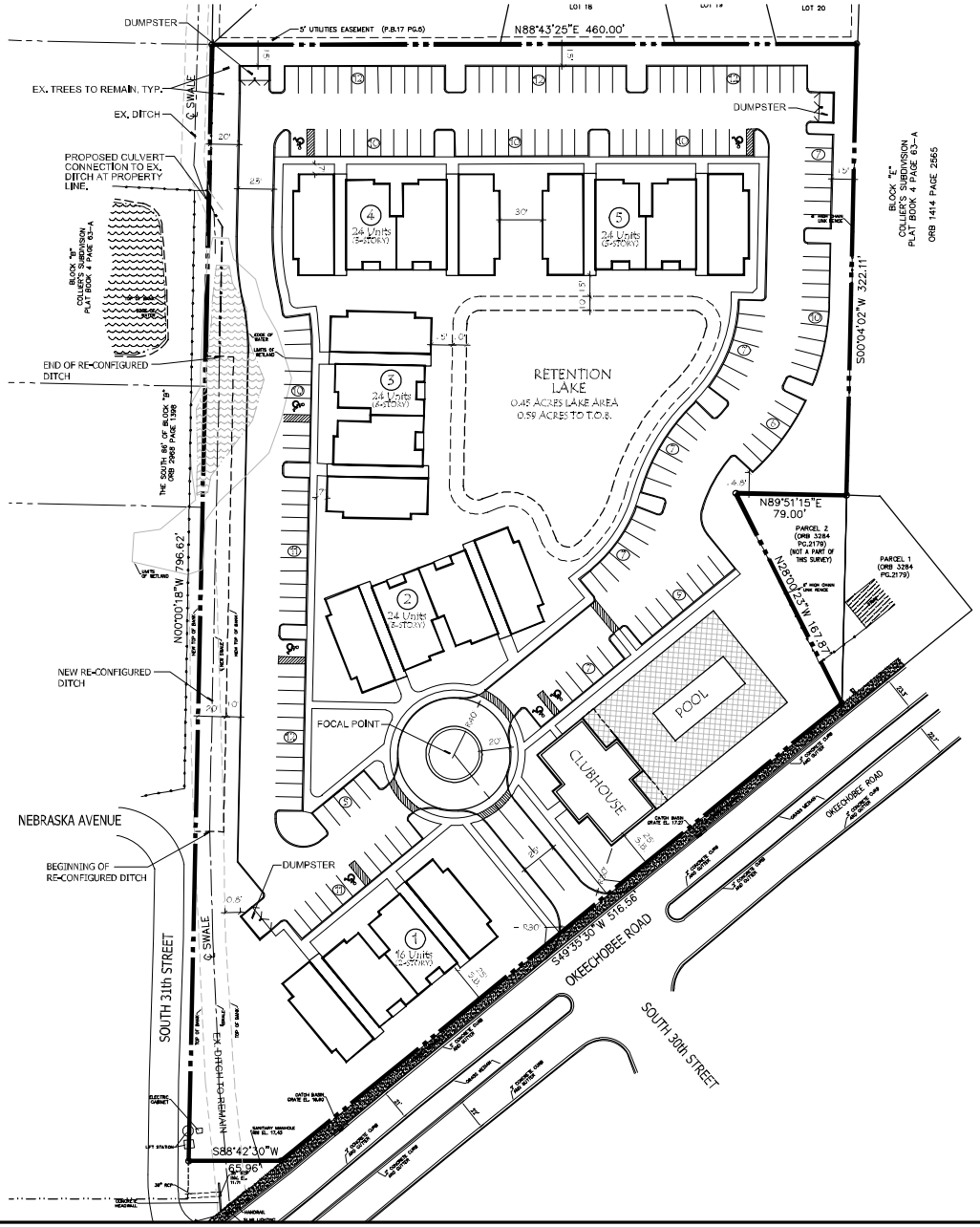


MANAGED LAND ENTITLEMENTS

3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8065

APPLICATION DATA:

NAME OF APPLICATION:	ARROW FP NORTH RESIDENTIAL
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	109,454.95 S.F. (36.9%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		175 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champions, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Dipner (561-622-6990)

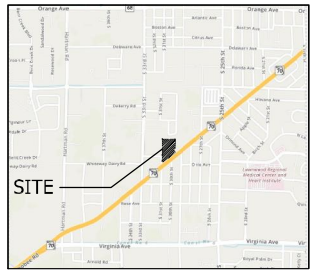
CIVIL ENGINEER/SURVEYOR
Michael G. Schorah & Associates, Inc.
1650 Forest Hill Blvd., Suite 208
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-368-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Florida 34990
Contact: Jason Litterick (561-719-3878)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-478-3888)

LOCATION MAP



Site Plan

0 25' 50' 100' 150' 200'

NORTH

Scale: 1" = 50'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3878
JasonLA1677@yahoo.com

Project Name

Arrow FP North Residential
Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA
LA0001677

Scale: 1" = 50'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	3/13/2020
Job No.	
Revisions:	

Sheet No.
SP-1

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS
FT PIERCE, FL

PREPARED FOR:
ARROW INVESTMENT GROUP, LLC.

Kimley»Horn

Project # 043264001
June 22, 2020
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

TRAFFIC IMPACT ANALYSIS

ARIA APARTMENTS

FT PIERCE, FL

Prepared by:
Kimley-Horn and Associates, Inc.
West Palm Beach, Florida

Project # 043264001
June 22, 2020
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL

Adam B. Kerr, P.E.
Florida Registration Number 64773

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Introduction

Kimley-Horn and Associates, Inc. has performed a traffic impact analysis to evaluate future traffic conditions associated with the proposed development located on the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. The traffic impact analysis has been conducted using a buildout year of 2025. Figure 1 illustrates the location of the project site. The Parcel ID for the site is 2417-504-0020-001-6.

The proposed site plan and parcel information are included in *Appendix A*.

Kimley-Horn and Associates, Inc was retained to prepare a traffic impact analysis for the proposed development. The study quantifies the project's impact on the adjacent transportation network. This report summarizes the project trip generation, distribution, and intersection analyses. This analysis followed the methodology and procedures determined by St Lucie County's *Standardized Traffic Impact Studies Methodology and Procedures.*



NORTH

LEGEND

Project Site

FIGURE 1
SITE LOCATION
ARIA APARTMENTS

Kimley»Horn

Inventory and Planning Data

The data used in this analysis was obtained from St. Lucie County and from the Florida Department of Transportation. The data included:

- Roadway link volume data
- Committed Developments
- Historical growth rate information

Turning movement counts were collected at the following intersections during the AM peak period (7:00 am to 9:00 am) and PM peak period (4:00 pm to 6:00 pm). Counts at the intersection of N 25th Street & Okeechobee Road were performed on Tuesday, October 22, 2019 and the interaction of Okeechobee Road & Virginia Avenue were performed on Wednesday, April 3, 2019:

- N 25th Street & Okeechobee Road
- Okeechobee Road & Virginia Avenue

Roadway link volumes and the committed developments are included in *Appendix B.* The growth rate calculation is included in *Appendix C* and turning movement counts are included in *Appendix D.*

Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The existing site is vacant. The proposed plan of development includes 112 multifamily (mid-rise) dwelling units.

Trip Generation

The trip generation potential for the proposed redevelopment was calculated using the trip generation rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. Land Use [221] rates and equations were used for multifamily residential (mid-rise) use. As indicated in Table 1, the proposed development is projected to generate 609 net new external daily trips, an increase in 38 net new AM peak hour trips (+10 in, +28 out), and an increase of 49 net new external PM peak hour trips (+30 in, +19 out). Based on the new external daily trips, the area of influence is one-mile.

Table 1: Trip Generation

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed								
Multifamily Residential (Mid-Rise)	112 DU	609	38	10	28	49	30	19
Driveway Volumes		609	38	10	28	49	30	19
Net External Trips		*609*	*38*	*10*	*28*	*49*	*30*	*19*

Trip generation was calculated using the following data:

Daily Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = T = 5.45(X) - 1.75 trips/DU

AM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.98Ln(X) - 0.98 trips/DU (26% in, 74% out)

PM Peak Hour Trip Generation
- Multifamily Residential (Mid-Rise) [ITE 221] = Ln(T) = 0.96Ln(X) - 0.63 trips/DU (61% in, 39% out)

Traffic Distribution

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. The project assignment on the study roadway links based on the characteristics of the proposed land use and existing travel demands.

The distribution is the following:

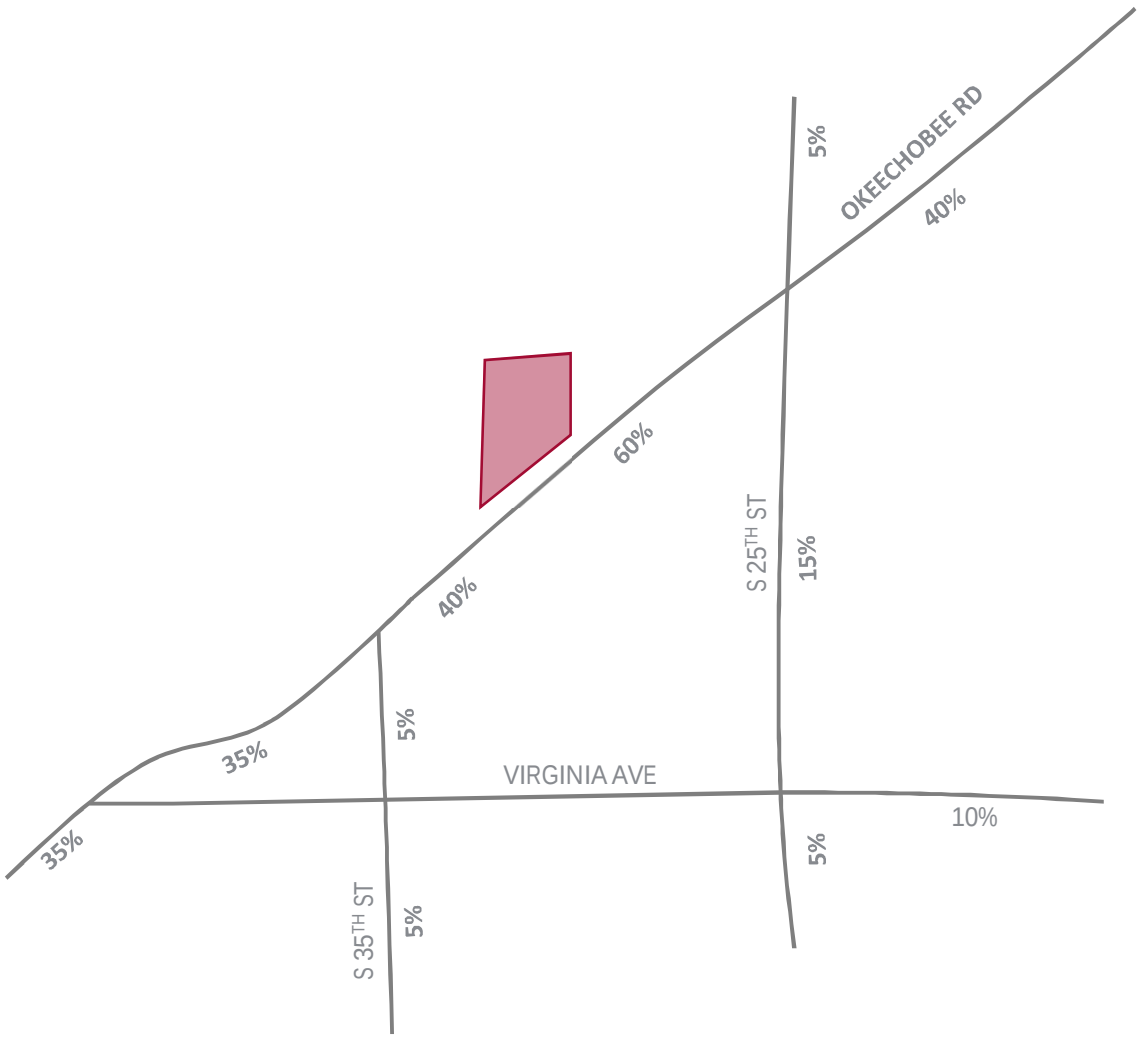
NORTH	5 percent
SOUTH	10 percent
WEST	35 percent
EAST	40 percent

Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns and the traffic distribution. The function classification of the surround roadways is the following:

- Okeechobee Road – Minor Arterial
- S 35th Street – Major Collector
- S 25th Street – Other Principal Arterial
- Virginia Avenue – Other Principal Arterial

Figure 2 illustrates the roadway link assignment. The AM and PM peak hour trips for the project were then assigned to the surrounding roadway network projected to be in place by 2025.



NORTH

LEGEND

Project Site

XX% Project Assignment

FIGURE 2
PROJECT ASSIGNMENT
ARIA APARTMENTS

Kimley»Horn

Background Traffic

Background traffic is calculated from historical annual growth rates and/or traffic from the unbuilt portions of committed developments. For this study, the areawide growth rate was calculated as 2.53% and was applied to links and intersections to account for background growth not related to the approved projects. Growth rate calculations are included in *Appendix C*. St Lucie County provided committed development projects in the area. The impacts of the approved projects were added to links and intersections that were subject to analysis.

A nominal 1% growth rate was applied to links and intersections (to which committed project traffic was already added) to account for background growth not related to the approved projects. The total background traffic for each significantly impacted link and intersection was then determined as the greater of the following:

- Existing traffic volumes plus growth due to a historic growth rate of 2.53%
- Existing traffic volumes plus growth due to committed projects and a nominal 1% background growth rate

Roadway Segment Analysis

The roadway segments within the adjacent influence area were analyzed and are summarized in Table 2. Significantly impacted roadways, where the project traffic consumes one percent or more of the existing peak hour peak direction service capacity, are considered significantly impacted and required further analysis. The following roadway segments were significantly impacted due to the project traffic:

AM Peak Hour and PM Peak Hour

- Okeechobee Road: S 25th Street to Georgia Avenue

The future volume on each significantly impacted roadway segment was analyzed in comparison to its peak hour directional service capacity volume. Committed development information for each significantly impacted link was provided by St Lucie County. It should be noted, committed developments which were identified to be insignificant (fewer than 20 peak hour trips) did not have a provided inbound/outbound distribution. Committed developments that generated greater traffic volumes were applied using the corresponding approved traffic study, attached in *Appendix B*. As seen in Table 2, the significantly impacted roadways are projected to operate acceptably during the AM and PM peak hours through buildout 2025.

Table 2: Peak Hour Peak Direction Roadway Segment Analysis

Roadway			Existing		Existing Base Peak Direction Volume/LOS		Peak Hour Peak Direction Project Traffic					Background Traffic			Capacity	
From	To		Lanes	Peak Hour Service Capacity			Last Count Year	% Assignment	Project Trips	% Impact	Significant Impact ?	Growth Rate (1)	2025 Background Growth	2025 Background Traffic	2025 Project	Over Capacity ?
AM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	687	C	2020	35%	10	0.61%	No	2.53%	91	778	788	-
S 35th Street	Project Driveway		4	1630	922	C	2020	35%	10	0.61%	No	2.53%	123	1,045	1,055	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	11	0.67%	No	2.53%	123	1,045	1,056	-
S 25th Street	Georgia Ave		4	1630	777	C	2020	60%	17	1.04%	Yes	2.53%	103	880	897	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	497	D	2020	5%	1	0.13%	No	2.53%	66	563	564	-
Virginia Ave	Okeechobee Rd		2	750	279	C	2016	5%	1	0.13%	No	2.53%	70	349	350	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1182	C	2020	5%	1	0.05%	No	2.53%	157	1,339	1,340	-
Virginia Ave	Okeechobee Rd		5	2000	1193	C	2017	15%	4	0.20%	No	2.53%	264	1,457	1,461	-
Okeechobee Rd	Georgia Ave		5	1630	1196	D	2017	5%	1	0.06%	No	2.53%	265	1,461	1,462	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 35th Street	S 25th Street		6	3020	1169	C	2017	0%	0	0.00%	No	2.53%	259	1,428	1,428	-
S 25th Street	13th Street		6	3020	1093	C	2017	10%	3	0.10%	No	2.53%	242	1,335	1,338	-
PM PEAK HOUR PEAK DIRECTION																
Okeechobee Rd																
Virginia Ave	S 35th Street		4	1630	727	C	2020	35%	11	0.67%	No	2.53%	97	824	835	-
S 35th Street	Project Driveway		4	1630	902	C	2020	35%	11	0.67%	No	2.53%	120	1,022	1,033	-
Project Driveway	S 25th Street		4	1630	922	C	2020	40%	12	0.74%	No	2.53%	123	1,045	1,057	-
S 25th Street	Georgia Ave		4	1630	738	C	2020	60%	18	1.10%	Yes	2.53%	98	836	854	No
S 35th Street																
Cortez Blvd	Virginia Ave		2	790	406	D	2020	5%	2	0.25%	No	2.53%	54	460	462	-
Virginia Ave	Okeechobee Rd		2	750	280	C	2016	5%	2	0.27%	No	2.53%	71	351	353	-
S 25th Street																
Cortez Blvd	Virginia Ave		5	2000	1261	C	2020	5%	2	0.10%	No	2.53%	168	1,429	1,431	-
Virginia Ave	Okeechobee Rd		5	2000	1069	C	2017	15%	5	0.25%	No	2.53%	237	1,306	1,311	-
Okeechobee Rd	Georgia Ave		5	1630	1159	D	2017	5%	2	0.12%	No	2.53%	256	1,415	1,417	-
Virginia Avenue																
Okeechobee Rd	S 35th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 35th Street	S 25th Street		6	3020	1126	C	2017	0%	0	0.00%	No	2.53%	249	1,375	1,375	-
S 25th Street	13th Street		6	3020	1164	C	2017	10%	3	0.10%	No	2.53%	258	1,422	1,425	-

Intersection Analysis

The operating conditions for the existing, background, and future total buildout was analyzed using Trafficware's *Synchro 10.0* Software during the AM peak hour and the PM peak hour at the following intersections because the intersection is part of the impacted roadway:

1. S 25th Street & Okeechobee Road (signalized)

In addition to the intersection of S 25th Street & Okeechobee Road, the intersection of Okeechobee Road & Virginia Avenue was analyzed for the existing, background, and future total buildout.

These analyses use the methodologies outlined in the *Highway Capacity Manual*, 6th *Edition* in order to determine the overall intersection level of service and delay. The signal timing sheet was provided by the City of Ft Pierce and is included in *Appendix E.* Table 3 summarizes the level of service and delay at the study intersections under existing, background, and future total conditions. As shown in Table 3, the intersection operates at an acceptable overall level of service during the existing, background, and future total (with project traffic) conditions.

Table 3: Intersection Analysis

Intersection	Type	Movement	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
Existing Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	42.7	D	35.4	D
		WB	31.1	C	34.2	C
		NB	32.9	C	45.3	D
		SB	52.1	D	58.8	E
		Overall	41.1	D	45.3	D
Okeechobee Road & Virginia Avenue	Signalized	EB	6.3	A	10.1	B
		WB	53.8	D	45.8	D
		SB	5.6	A	10.6	B
		Overall	16.3	B	20.7	C
Background Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.4	C	44.0	D
		WB	20.5	C	40.8	D
		NB	43.9	D	47.0	D
		SB	85.6	F	67.5	E
		Overall	49.3	D	51.5	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	14.8	B
		WB	51.5	D	42.3	D
		SB	7.1	A	15.8	B
		Overall	17.1	B	23.0	C
Future Total Scenario						
S 25th Street & Okeechobee Road	Signalized	EB	24.2	C	40.7	D
		WB	20.2	C	34.8	C
		NB	43.9	D	47.8	D
		SB	85.9	F	62.6	E
		Overall	49.3	D	49.0	D
Okeechobee Road & Virginia Avenue	Signalized	EB	8.0	A	27.0	C
		WB	51.5	D	26.4	C
		SB	7.1	A	29.1	C
		Overall	17.0	B	27.2	C

The 95th percentile queue lengths are summarized in Table 4 for the study intersection of S 25th Street & Okeechobee Road. As shown in Table 4, the queues will remain within the provided storage through future total buildout year.

Table 4: 95th Percentile Queue Lengths

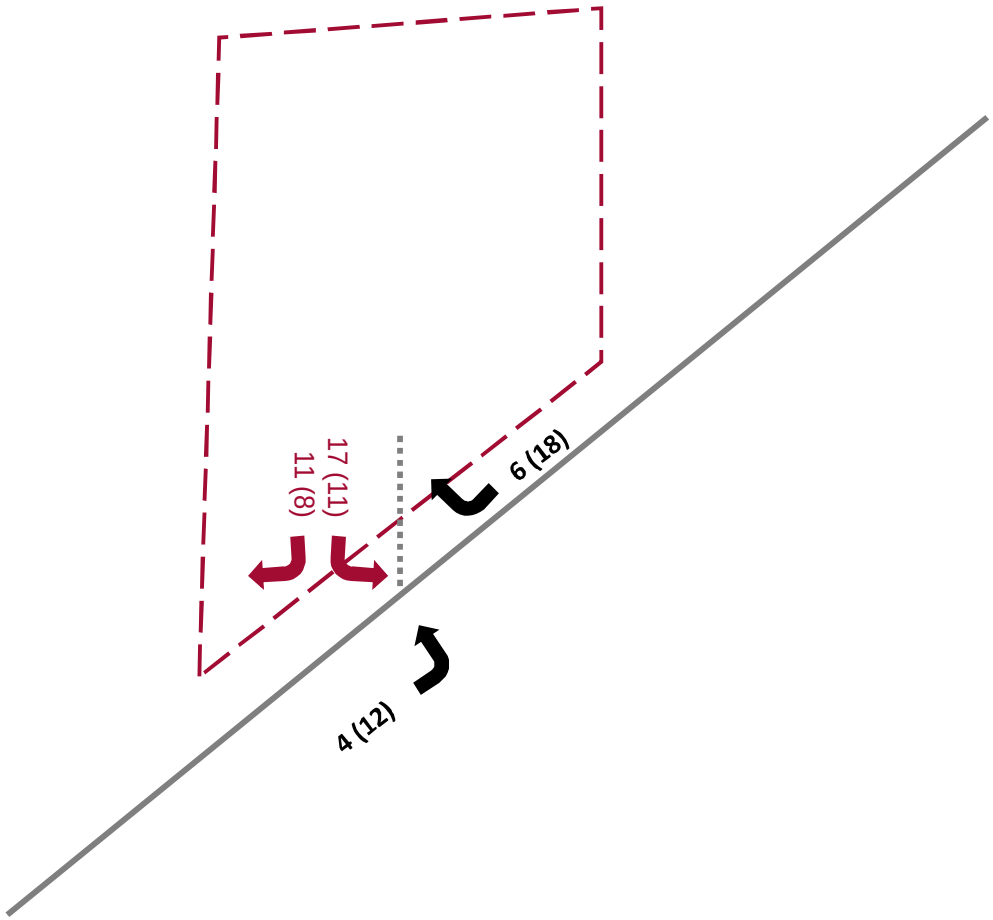
Movement	EBL	WBL	NBL	SBL
Provided Storage	225	200	225	200
Existing Scenario				
AM Peak Hour	108	84	80	33
PM Peak Hour	184	154	145	43
Background Scenario				
AM Peak Hour	125	97	102	37
PM Peak Hour	266	199	182	48
Future Total Scenario				
AM Peak Hour	126	97	109	37
PM Peak Hour	186	141	149	47

The volume development sheet is included in *Appendix F*. The Synchro output sheets are included in *Appendix G*.

Access Review

Access to the proposed site includes one proposed full-access driveway on Okeechobee Road *Figure 3* illustrates the AM peak hour and PM peak hour driveway volumes. According to the FDOT's Driveway Information Guide, exclusive right-turn lanes are recommended at unsignalized intersections for roadways with a posted speed limit of 45 mph or less when the volume of right turns per hour exceed 80 vehicles. As shown in *Figure 3,* the project driveway volume on Okeechobee Road is not expected to generate 80 vehicles; therefore, a right-turn lane is not required. The need for left-turn lanes is evaluated based on the Pennsylvania Department of Transportation's (PennDOT) Publication 46. This warrant considers the left-turn volume, the adjacent volume ("advancing" volume), the conflicting volume ("opposing" volume), and the posted speed limit to determine whether the percentage of left-turns justifies the presence of an exclusive left-turn lane.

Under existing conditions, the advancing volume is the eastbound through volume and the opposing volume is the westbound through volume. The highest eastbound left-turn volume is anticipated to be 12 vehicles per hour, which is projected to occur during the PM peak hour and constitutes approximately 1.8% percent of the total advancing volume. The opposing volume during this hour is 733 vehicles. The volumes were compared to the thresholds defined for a four-lane divided highway with a speed of 35 mph. The left-turn lane warrant worksheet is included in *Appendix H* for Okeechobee Road. The results of the analysis show that an eastbound left turn lane is warranted on Okeechobee Road at the proposed project driveway under current conditions. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.



NORTH

LEGEND

Project Site

XX (XX) AM (PM) Inbound Driveway Volumes

XX (XX) AM (PM) Outbound Driveway Volumes

FIGURE 3
DRIVEWAY VOLUMES
ARIA APARTMENTS

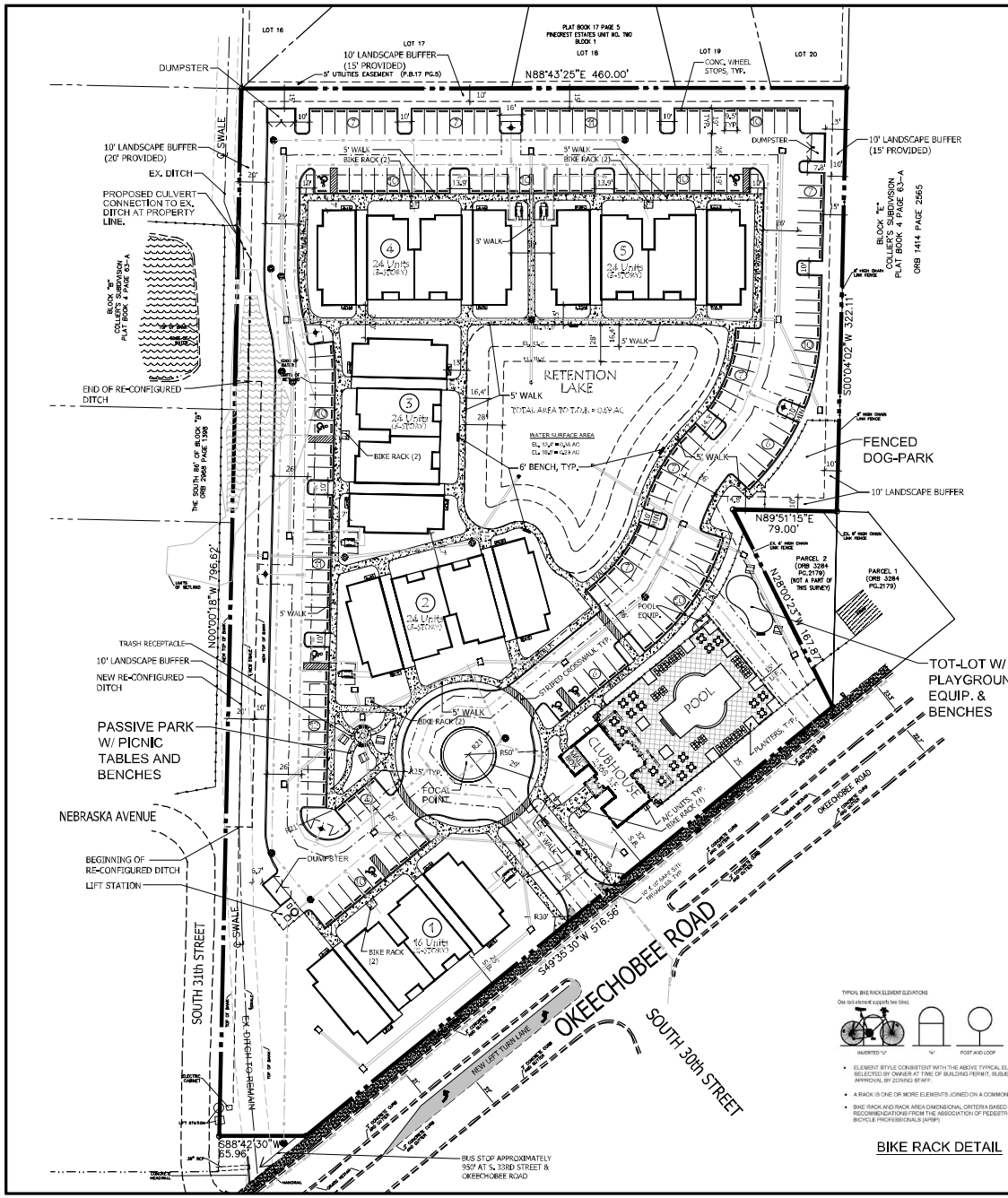
Kimley»Horn

Conclusion

The proposed plan of development includes 112 multifamily (mid-rise) dwelling units located in the northeast corner of Okeechobee Road & S 31st Street in Fort Pierce, Florida. Based on the analysis undertaken, the roadway links are sufficient to accommodate the project traffic during the AM and PM peak hours.

An intersection analysis was conducted at the signalized intersection of S 25th Street & Okeechobee Road, which is the intersection that was part of a significantly impacted roadway. In addition, an intersection analysis was conducted at Okeechobee Road & Virginia Avenue. Based on the intersection analysis, the existing geometry is expected to operate acceptably under existing, background, and future total conditions. The 95th percentile queue lengths at S 25th Street & Okeechobee Road are within the provided storage through future total conditions. An eastbound left turn lane is required per Pennsylvania Department of Transportation's (PennDOT) Publication 46 warrant criteria. With the buildout of the proposed development, a left turn lane will be provided on Okeechobee Road.

Appendix A: Project Site Data



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-3020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (CG)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,912.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	109,454.95 S.F. (36.9%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	135,129.58 S.F. (45.6%)

PARKING DATA:

PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES



TRASH RECEPTACLE DETAIL
N.T.S.

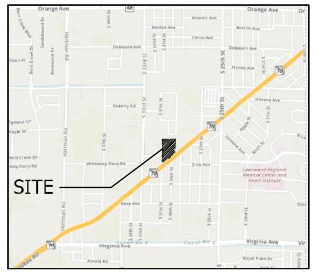
BIKE RACK DETAIL



LANDSCAPE FORMS • CHASE PARK BENCH CAST ALUM./W STEEL FRAMES & ARMREST ARMS

BENCH DETAIL
N.T.S.

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champions, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Dilsher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
Michael B. Schaarsh & Associates, Inc.
1650 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-368-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Florida 34990
Contact: Jason Litterick (561-719-3878)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-478-3888)

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3878
Jasonl.LA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

Jason M. Litterick FLA 0001677

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/15/2020
Job No.	
Revisions:	

Sheet No.

SP-1

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: OKEECHOBEE RD	Parcel ID: 2417-504-0020-001-6	Account #: 26668	Sec/Town/Range: 17/35S/40E
Use Type: 1000	Jurisdiction: Fort Pierce	Map ID: 24/17N	Zoning: General Co

Ownership

Arrow Investment Group LLC
4512 N Flagler DR # 2056
West Palm Beach, FL 33407

Legal Description

COLLIER`S S/D BLK D ALL BLK D-LESS S 27 FT AND SELY 7 FT FOR RD R/W AND LESS THAT PART MPDAF: BEG INT OF SE COR OF BLK D AND NLY RD R/W LI OF OKEEC RD RUN N 28 00 23 W 167.87 FT,TH N 89 51 15 E 79 FT TO E LI OF BLK D,TH S 00 04 02 W ALG E LI 148.41 FT TO NLY RD R/W LI OF OKEEC RD AND POB- (6.86 AC)

Current Values

Just/Market:	$732,700	Assessed:	$732,700
Exemptions:	$0	Taxable:	$732,700

Historical Values 3-year

Year	Just/Market	Assessed	Exemptions	Taxable
2019	$732,700	$732,700	$0	$732,700
2018	$732,700	$732,700	$0	$732,700
2017	$732,700	$732,700	$0	$732,700

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
09-26-2019	4327 / 0333	0112	SP	Cypress Trust Company (TR)	$450,000
05-27-2010	3204 / 0743	0112	SP	Cypress Trust Company (TR)	$100
12-17-2008	3049 / 2156	XX01	CT	Mid South Acquisitions LLC	$299,000

Primary Building Information

Finished Area of this building: 0 SF
Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:	Building Type:
Year Built: N/A	Frame:	Grade:	Effective Year: N/A
Primary Wall:	Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	A/C %: 0%	Electric:	Primary Int Wall:
Full Baths: 0	Heated %: N/A%	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Sprinkled %: 0%	Heat Fuel:	Primary Floors:



Image or Sketch unavailable for display

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	6.87
Land Size (SF):	299,058
Total Building Count:	1

Special Features and Yard Items

Type	Qty	Units	Year Blt

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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Appendix B: St Lucie County Traffic Data

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE Q	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	18,275	2017	2,100	1,310	C	0.652	1,222	C	0.608
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	22,049	2017	2,000	1,405	C	0.736	1,401	C	0.734
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	19,612	2017	1,630	1,021	D	0.626	1,015	D	0.623
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE Q	940050	15,331	2017	1,630	807	D	0.495	784	D	0.481
25TH ST	AVENUE Q to JUANITA AVE	945152	13,301	2017	2,000	752	C	0.394	689	C	0.361
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	5,924	2017	2,100	340	C	0.169	380	C	0.189
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	4,991	2017	790	230	C	0.622	230	C	0.622
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIO RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIO RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

Appendix C: Growth Rate Calculations

Road Segment	2015 Volume	2018 Volume	Growth Rate	Yearly Growth
Virginia Ave	22,000	22,000	0.00%	0
S 35th Street	7,900	10,900	11.33%	1235
S 25th Street	22,000	22,500	0.75%	169
Sum		55,400		1,404
Area Wide Growth Rate =			2.53%	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0032 - SR 70/VIRGINIA AVE - W OF SR 615/25 ST

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22000 C	E 11000	W 11000	9.00	51.30	6.10
2017	20900 C	E 9900	W 11000	9.00	50.90	4.10
2016	20800 C	E 9800	W 11000	9.00	50.90	4.10
2015	22000 C	E 11000	W 11000	9.00	51.00	4.10
2014	21000 C	E 11000	W 10000	9.00	50.80	4.20
2013	21000 C	E 10500	W 10500	9.00	50.80	3.70
2012	23000 F	E 12000	W 11000	9.00	56.80	4.30
2011	23000 C	E 12000	W 11000	9.00	57.20	5.10
2010	22500 C	E 11500	W 11000	10.32	55.40	5.10
2009	22500 C	E 11500	W 11000	10.27	57.35	5.10
2008	23500 C	E 11500	W 12000	10.45	58.06	4.10
2007	25000 C	E 13000	W 12000	10.31	58.74	4.10
2006	21500 C	E 11500	W 10000	10.73	65.89	4.10
2005	23500 C	E 12000	W 11500	10.80	60.70	6.00
2004	22500 C	E 11500	W 11000	10.30	57.70	6.00
2003	20500 C	E 10500	W 10000	10.20	59.60	2.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0083 - S 35 ST- NORTH OFARNOLD RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	10900 C	N 6500	S 4400	9.00	51.30	5.80
2017	8100 V	0	0	9.00	50.90	10.00
2016	8000 R	0	0	9.00	50.90	6.20
2015	7900 T	0	0	9.00	51.00	41.80
2014	7900 S			9.00	50.80	49.50
2013	7900 F	0	0	9.00	50.80	11.90
2012	7900 C	N 0	S 0	9.00	56.80	7.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 94 - ST.LUCIE

SITE: 0015 - SR 615/25 ST - N OF SR 70/VIRGINIA AVE (COUNTY 15)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	22500 C	N 11500	S 11000	9.00	51.30	5.40
2017	20500 C	N 11000	S 9500	9.00	50.90	4.80
2016	22500 C	N 11000	S 11500	9.00	50.90	4.80
2015	22000 C	N 11000	S 11000	9.00	51.00	4.80
2014	21000 C	N 10000	S 11000	9.00	50.80	4.20
2013	20500 C	N 10500	S 10000	9.00	50.80	4.20
2012	22500 C	N 11500	S 11000	9.00	56.80	4.20
2011	22500 C	N 12000	S 10500	9.00	57.20	3.00
2010	23000 C	N 12000	S 11000	10.32	55.40	3.00
2009	22500 C	N 12000	S 10500	10.27	57.35	3.00
2008	21500 C	N 11000	S 10500	10.45	58.06	3.90
2007	25000 C	N 13000	S 12000	10.31	58.74	3.90
2006	23000 C	N 11500	S 11500	10.73	65.89	3.90
2005	24000 C	N 12000	S 12000	10.80	60.70	3.10
2004	23000 C	N 11500	S 11500	10.30	57.70	3.10
2003	22500 C	N 11500	S 11000	10.20	59.60	3.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix D: Turning Movement Counts

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- ALL VEHICLES

	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	5	135	26	0	26	49	2	0	19	162	24	0	37	40	9	534
07:15	0	6	159	33	0	25	50	4	0	24	162	35	0	37	52	14	601
07:30	0	5	177	35	0	26	46	1	0	30	158	37	0	28	74	27	644
07:45	0	11	186	28	2	26	62	4	0	27	171	50	0	38	95	30	730
Total	0	27	657	122	2	103	207	11	0	100	653	146	0	140	261	80	2509
08:00	0	13	197	33	1	27	75	6	0	24	115	45	0	37	124	25	722
08:15	0	11	155	22	0	27	64	3	0	25	131	41	1	39	98	23	640
08:30	0	18	152	18	2	28	48	3	0	23	106	41	1	36	49	12	537
08:45	0	11	164	19	1	27	71	3	0	21	97	26	0	25	63	23	551
Total	0	53	668	92	4	109	258	15	0	93	449	153	2	137	334	83	2450
16:00	0	7	162	24	0	42	76	7	0	29	137	49	1	30	73	16	653
16:15	0	10	155	29	3	41	84	3	0	31	151	32	1	37	82	26	685
16:30	0	10	160	23	0	44	88	2	0	32	141	48	1	44	51	18	662
16:45	0	7	171	25	0	28	112	3	0	36	154	31	1	42	78	31	719
Total	0	34	648	101	3	155	360	15	0	128	583	160	4	153	284	91	2719
17:00	0	13	182	43	0	46	112	3	0	33	166	39	0	39	75	34	785
17:15	0	12	194	37	1	28	96	5	0	24	162	41	0	42	93	25	760
17:30	0	9	194	35	0	36	80	2	0	33	157	33	0	43	111	22	755
17:45	0	6	157	26	0	33	66	5	0	22	148	25	1	28	98	16	631
Total	0	40	727	141	1	143	354	15	0	112	633	138	1	152	377	97	2931
Grand Total	0	154	2700	456	10	510	1179	56	0	433	2318	597	7	582	1256	351	10609
Apprch %	0	4.7	81.6	13.8	0.6	29.1	67.2	3.2	0	12.9	69.2	17.8	0.3	26.5	57.2	16	
Total %	0	1.5	25.5	4.3	0.1	4.8	11.1	0.5	0	4.1	21.8	5.6	0.1	5.5	11.8	3.3	

Traffic Survey Specialists, Inc.
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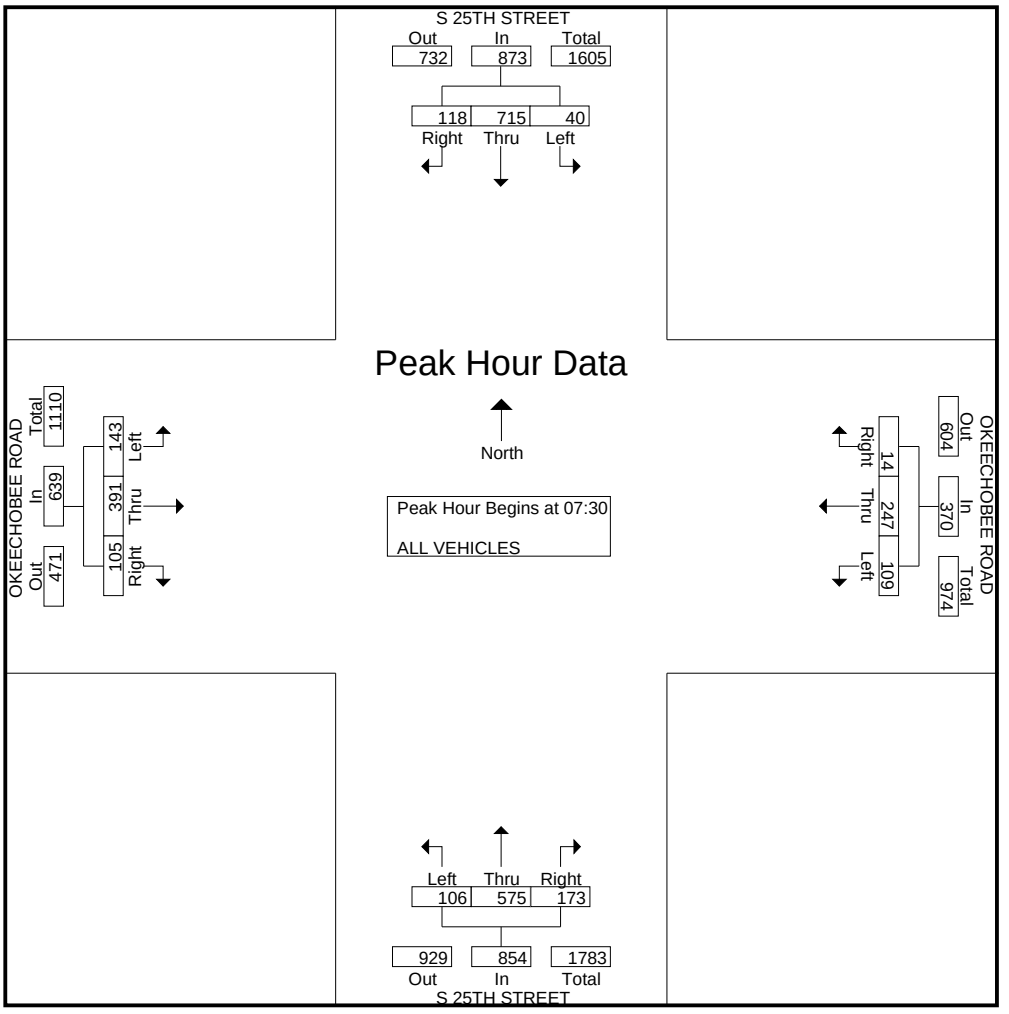
S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 2

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	5	177	**35**	217	0	26	46	1	73	0	**30**	158	37	225	0	28	74	27	129	644
07:45	0	11	186	28	225	**2**	26	62	4	94	0	27	**171**	**50**	**248**	0	38	95	**30**	163	**730**
08:00	0	**13**	**197**	33	**243**	1	**27**	**75**	**6**	**109**	0	24	115	45	184	0	37	**124**	25	**186**	722
08:15	0	11	155	22	188	0	27	64	3	94	0	25	131	41	197	**1**	**39**	98	23	161	640
Total Volume	0	40	715	118	873	3	106	247	14	370	0	106	575	173	854	1	142	391	105	639	2736
% App. Total	0	4.6	81.9	13.5		0.8	28.6	66.8	3.8		0	12.4	67.3	20.3		0.2	22.2	61.2	16.4		
PHF	.000	.769	.907	.843	.898	.375	.981	.823	.583	.849	.000	.883	.841	.865	.861	.250	.910	.788	.875	.859	.937



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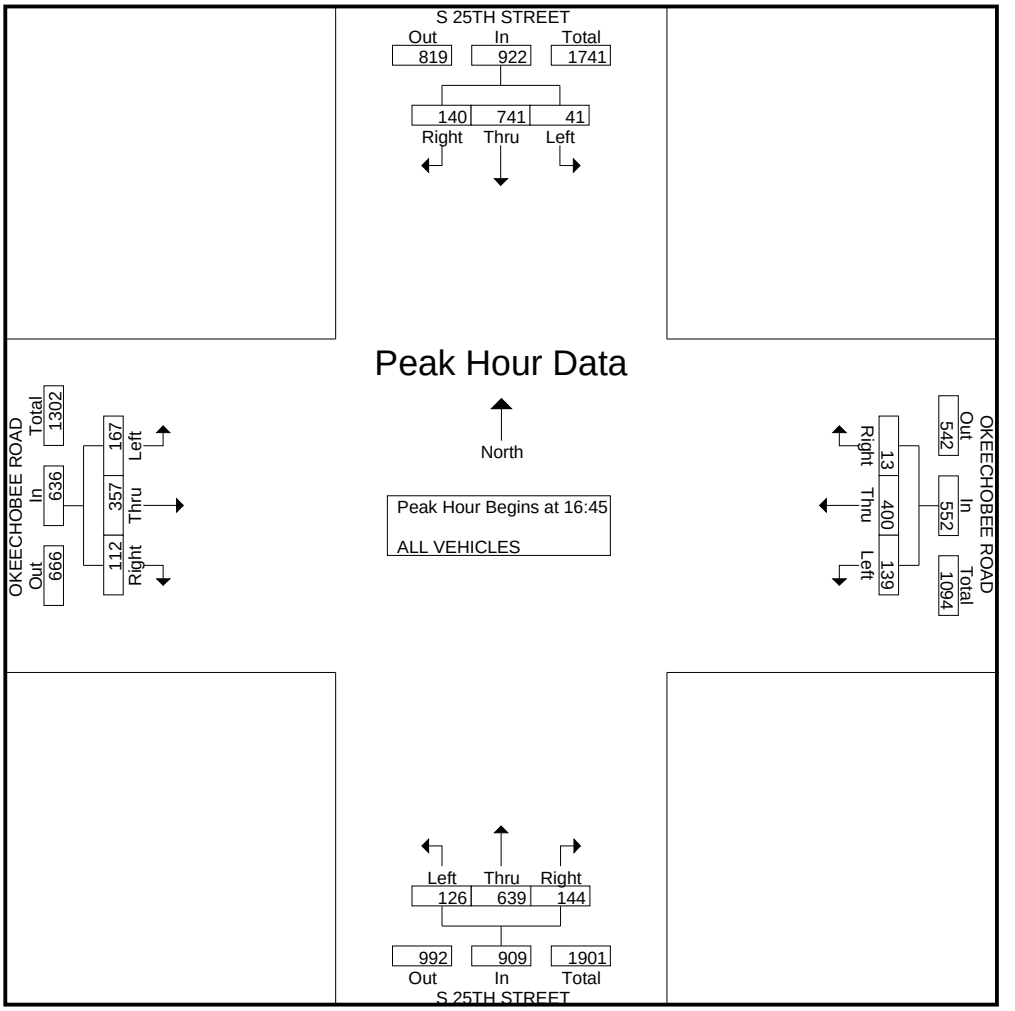
S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 3

	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	7	171	25	203	0	28	**112**	3	143	0	**36**	154	31	221	**1**	42	78	31	152	719
17:00	0	**13**	182	**43**	238	0	**46**	112	3	**161**	0	33	**166**	39	**238**	0	39	75	**34**	148	**785**
17:15	0	12	**194**	37	**243**	**1**	28	96	**5**	130	0	24	162	**41**	227	0	42	93	25	160	760
17:30	0	9	194	35	238	0	36	80	2	118	0	33	157	33	223	0	**43**	**111**	22	**176**	755
Total Volume	0	41	741	140	922	1	138	400	13	552	0	126	639	144	909	1	166	357	112	636	3019
% App. Total	0	4.4	80.4	15.2		0.2	25	72.5	2.4		0	13.9	70.3	15.8		0.2	26.1	56.1	17.6		
PHF	.000	.788	.955	.814	.949	.250	.750	.893	.650	.857	.000	.875	.962	.878	.955	.250	.965	.804	.824	.903	.961



Traffic Survey Specialists, Inc.

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S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

File Name : 25TH & OKEECHOBEE
Site Code : 190177
Start Date : 10/22/2019
Page No : 1

Groups Printed- PEDESTRIANS & BIKES

	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
08:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
16:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
16:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	4
Total	0	0	2	0	0	0	0	0	0	0	1	0	1	0	2	0	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	4
17:45	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	0	1	0	0	0	1	0	1	0	2	0	1	0	1	0	7
Grand Total	1	0	4	0	0	0	1	0	2	0	3	0	2	0	3	0	16
Apprch %	20	0	80	0	0	0	100	0	40	0	60	0	40	0	60	0	
Total %	6.2	0	25	0	0	0	6.2	0	12.5	0	18.8	0	12.5	0	18.8	0	

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
07:00	0	0	47	0	0	0	102	0	0	0	0	0	0	0	70	114	333
07:15	0	0	71	0	0	0	114	0	0	0	0	0	0	0	82	165	432
07:30	0	0	104	0	0	0	136	0	0	0	0	0	0	0	126	252	618
07:45	0	0	99	0	0	0	124	0	0	0	0	0	0	0	134	317	674
Hr Total	0	0	321	0	0	0	476	0	0	0	0	0	0	0	412	848	2057
08:00	0	0	97	0	0	0	133	0	0	0	0	0	0	0	113	258	601
08:15	0	0	89	0	0	0	133	0	0	0	0	0	0	0	104	259	585
08:30	0	0	103	0	0	0	144	0	0	0	0	0	0	0	112	244	603
08:45	0	0	103	0	0	0	149	0	0	0	0	0	0	0	90	216	558
Hr Total	0	0	392	0	0	0	559	0	0	0	0	0	0	0	419	977	2347
---------- * BREAK * ----------																	
16:00	0	0	129	0	0	0	229	0	0	0	0	0	0	0	128	207	693
16:15	0	0	105	0	0	0	197	0	0	0	0	0	0	0	128	225	655
16:30	0	0	149	0	0	0	203	0	0	0	0	0	0	0	119	227	698
16:45	0	0	141	0	0	0	231	0	0	0	0	0	0	0	123	215	710
Hr Total	0	0	524	0	0	0	860	0	0	0	0	0	0	0	498	874	2756
17:00	0	0	161	0	0	0	272	0	0	0	0	0	0	0	109	233	775
17:15	0	0	167	0	0	0	200	0	0	0	0	0	0	0	160	223	750
17:30	0	0	130	0	0	0	210	0	0	0	0	0	0	0	145	256	741
17:45	0	0	137	0	0	0	202	0	0	0	0	0	0	0	144	245	728
Hr Total	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	2994
TOTAL	0	0	1832	0	0	0	2779	0	0	0	0	0	0	0	1887	3656	10154

TRAFFIC SURVEY SPECIALISTS, INC.

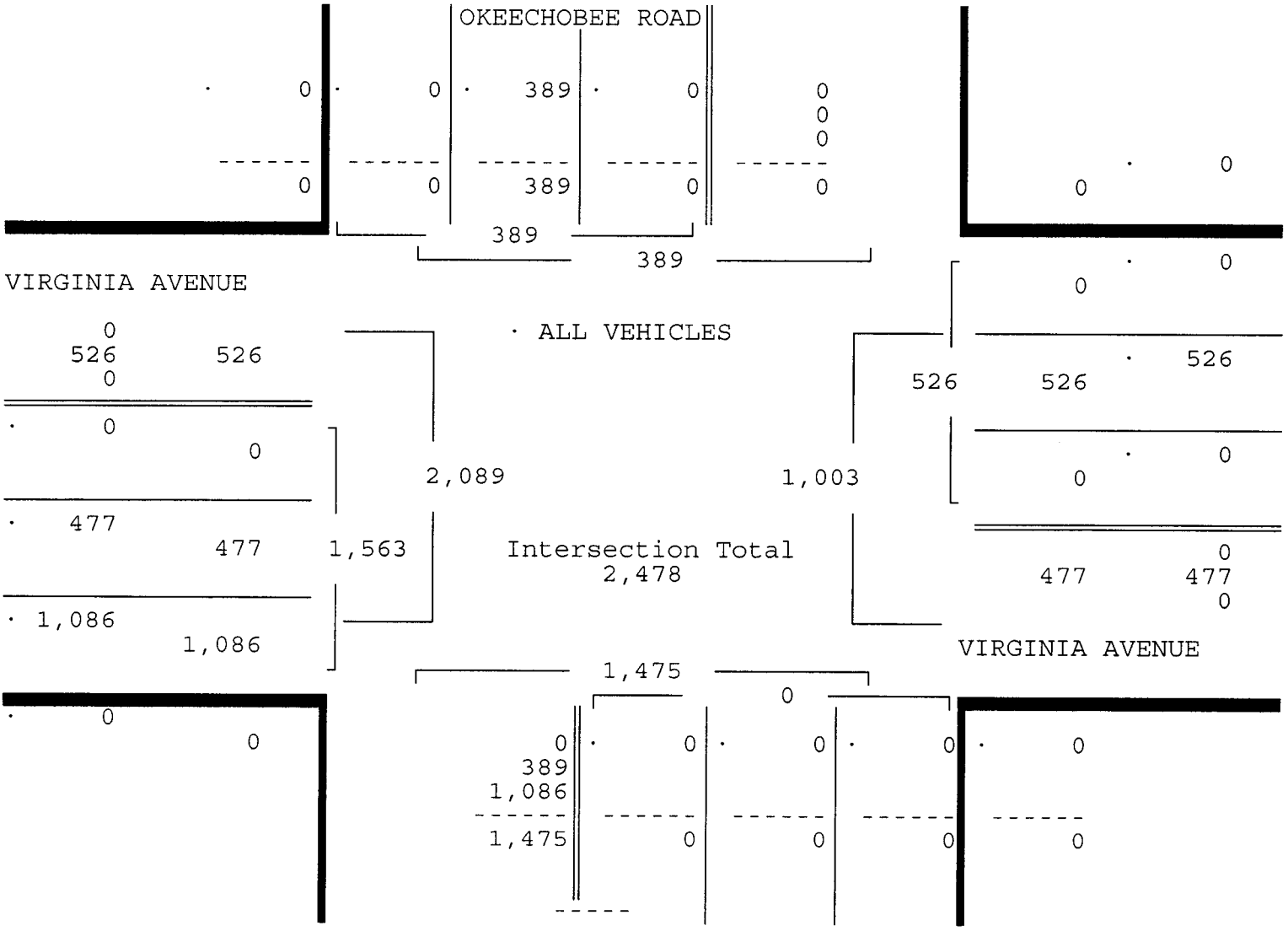
VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 04/03/19																	
Peak start	07:30				07:30				07:30				07:30				
Volume	0	0	389	0	0	0	526	0	0	0	0	0	0	0	477	1086	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	31%	69%	
Pk total	389				526				0				1563				
Highest	07:30				07:30				07:00				07:45				
Volume	0	0	104	0	0	0	136	0	0	0	0	0	0	0	134	317	
Hi total	104				136				0				451				
PHF	.94				.97				.0				.87				



TRAFFIC SURVEY SPECIALISTS, INC.

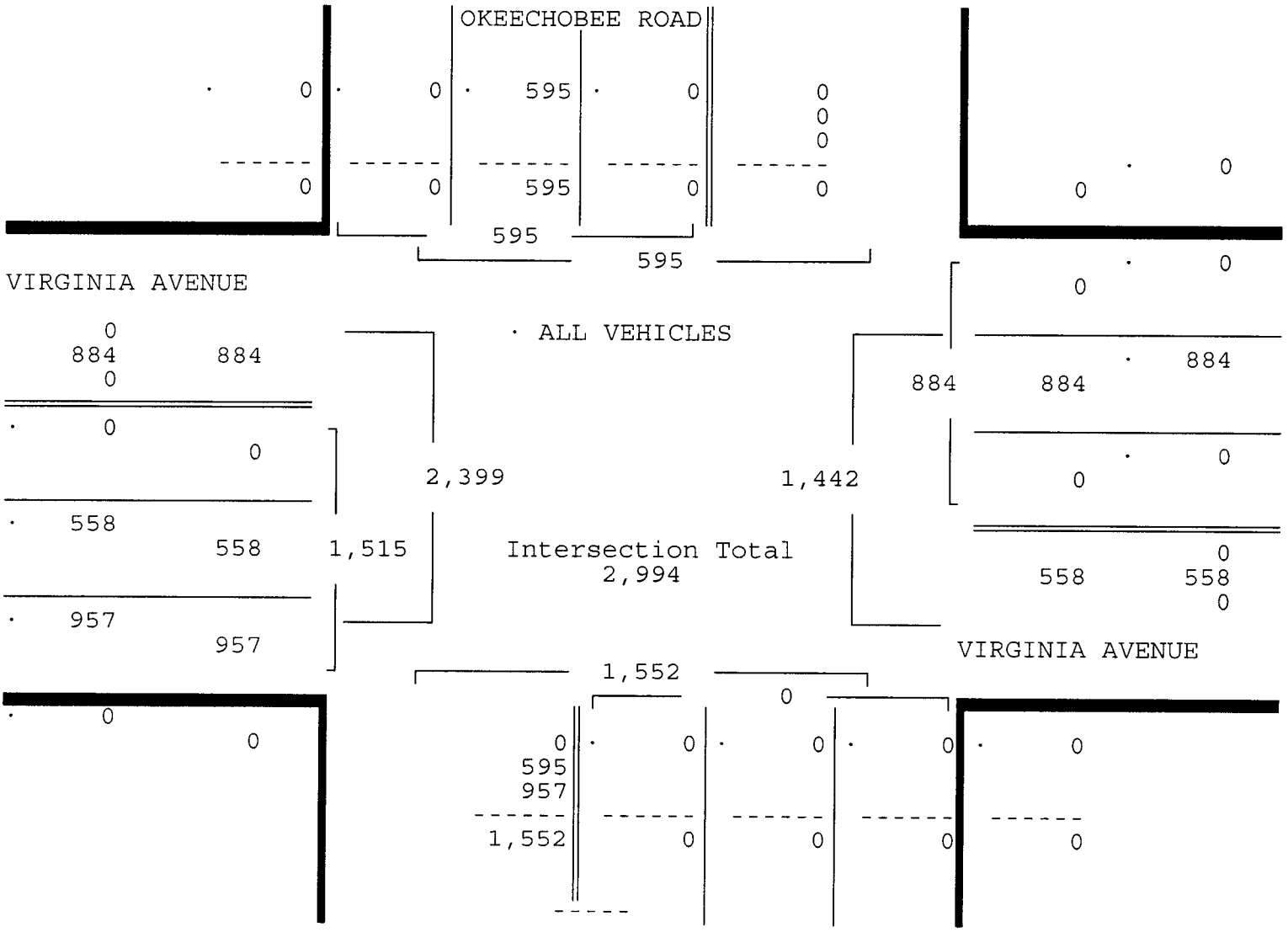
VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 3

ALL VEHICLES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 04/03/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 04/03/19																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	0	595	0	0	0	884	0	0	0	0	0	0	0	558	957	
Percent	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	37%	63%	
Pk total	595				884				0				1515				
Highest	17:15				17:00				07:00				17:30				
Volume	0	0	167	0	0	0	272	0	0	0	0	0	0	0	145	256	
Hi total	167				272				0				401				
PHF	.89				.81				.0				.94				



TRAFFIC SURVEY SPECIALISTS, INC.

VIRGINIA AVENUE & OKEECHOBEE ROAD
FT PIERCE, FLORIDA
COUNTED BY: S. SALVO & L. PALOMINO (V)
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00190070
Start Date: 04/03/19
File I.D. : VIRG_OKE
Page : 1

PEDESTRIANS & BIKES

	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 04/03/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
* BREAK *																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2

Appendix E: Signal Timing Sheet

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-615 at Okeechobee Road**

Part I — Actuated Timing Information

Non-coordinated Operation

Phase	1	2	3	4	5	6	7	8		
Approach	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB		
Initial	12	12	9	12	12	12	9	12		
Passage	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Max1	15.0	35.0	20.0	45.0	15.0	35.0	20.0	45.0		
Yellow	4.0	3.7	4.0	4.4	3.7	4.0	4.4	4.0		
Red	2.6	2.7	2.0	2.1	2.6	2.7	2.0	2.1		
Walk		7.0		7.0		7.0		7.0		
Ped Clear		28.0		25.0		30.0		29.0		
Recall		Min				Min				
LT Type	Prot+Perm		Prot+Perm		Prot+Perm		Prot+Perm			

Part II — Coordinated Timing Information

Pattern Tables

PHASE	1	2	3	4	5	6	7	8	Cycle	Offset
Split Pattern 1	17	25	15	33	17	25	15	33	90	59
Split Pattern 2	18	31	15	36	18	31	15	36	100	50
Split Pattern 3	17	44	15	64	17	44	23	56	140	49
Split Pattern 4	15	22	15	28	15	22	15	28	80	42
Split Pattern 5	15	33	15	37	15	33	15	37	100	30

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Split	Start	End	Split			
0:00	6:30	100	0:00	7:00	100			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	100			
21:00	0:00	100						

Part III — Notes and Comments

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)

Office DEPOT®

City of Fort Pierce Engineering Department

Intersection Timing Sheet

Name **SR-70 at Okeechobee Road**

Part I — *Actuated Timing Information*

Non-coordinated Operation

Phase	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*		
Approach		EB/SBR		WBT						
Initial		12		12						
Passage		5.0		5.0						
Max1		60.0		60.0						
Max2										
Yellow		4.8		4.8						
Red		2.5		2.5						
Walk		5.0								
Ped Clear		9.0								
Recall				Min						
LT Type										

Part II — *Coordinated Timing Information*

Pattern Tables

PHASE	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*Cycle*	*Offset*
Split Pattern 1		60		70					130	34
Split Pattern 2		65		65					130	22
Split Pattern 3		65		65					130	103
Split Pattern 4		50		50					100	70
Split Pattern 5		55		65					120	80

Schedule Implementation

Schedule Notes

Day Plan 1 (WEEKDAYS)			Day Plan 2 (WEEKENDS)			Day Plan 3 (Special)		
Start	End	Pattern	Start	End	Pattern			
0:00	6:30	Free	0:00	7:00	Free			
6:30	10:00	1	7:00	10:00	4			
10:00	15:00	2	10:00	18:00	5			
15:00	19:00	3	18:00	21:00	4			
19:00	21:00	4	21:00	0:00	Free			
21:00	0:00	Free						

Part III — *Notes and Comments*

1. Installed new system and signal timing by AECOM (FDOT Retiming Contract C9O28; FM 230017 7 32 01)
2. Coord offset reference - Phase 4

Appendix F: Volume Development Worksheet

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
OKEECHOBEE ROAD & VIRIGNIA AVENUE

Peak Season =	1.01	1.01
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	389	0	0	477	1,086	0	526	0
Peak Season Volume	0	0	0	0	393	0	0	482	1,097	0	531	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	64	0	0	78	177	0	86	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					5						15	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								19	56			
Project Traffic	0	0	0	0	5	0	0	19	56	0	15	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					38						38	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								51	51			
Project Traffic	0	0	0	0	38	0	0	51	51	0	38	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					7							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	7	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					2						11	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								1	3			
Project Traffic	0	0	0	0	2	0	0	1	3	0	11	0
Total Committed Projects	0	0	0	0	52	0	0	71	110	0	64	0
1.0% Traffic Volume Growth	0	0	0	0	24	0	0	30	67	0	33	0
Committed + 1.0% Growth	0	0	0	0	76	0	0	101	177	0	97	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	76	0	0	101	177	0	97	0
Background Traffic Volumes	0	0	0	0	469	0	0	583	1,274	0	628	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								4				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					10							
Project Traffic	0	0	0	0	10	0	0	4	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	479	0	0	587	1,274	0	628	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	479	0	0	587	1,274	0	628	0

PM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 04/03/2019	0	0	0	0	595	0	0	558	957	0	884	0
Peak Season Volume	0	0	0	0	601	0	0	564	967	0	893	0
Growth Rate				2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	0	0	0	0	97	0	0	91	156	0	144	0
Committed Celebration Pointe												
Inbound Traffic Assignment					5.0%						15.0%	
Inbound Traffic Volumes					20						60	
Outbound Traffic Assignment								5.0%	15.0%			
Outbound Traffic Volumes								11	32			
Project Traffic	0	0	0	0	20	0	0	11	32	0	60	0
Committed Bent Creek												
Inbound Traffic Assignment					10.0%						10.0%	
Inbound Traffic Volumes					23						23	
Outbound Traffic Assignment								10.0%	10.0%			
Outbound Traffic Volumes								63	63			
Project Traffic	0	0	0	0	23	0	0	63	63	0	23	0
Committed Carriage Pointe												
Inbound Traffic Assignment					20.0%							
Inbound Traffic Volumes					25							
Outbound Traffic Assignment												
Outbound Traffic Volumes												
Project Traffic	0	0	0	0	25	0	0	0	0	0	0	0
Committed Camping World												
Inbound Traffic Assignment					5.0%						25.0%	
Inbound Traffic Volumes					3						17	
Outbound Traffic Assignment								5.0%	25.0%			
Outbound Traffic Volumes								4	20			
Project Traffic	0	0	0	0	3	0	0	4	20	0	17	0
Total Committed Projects	0	0	0	0	71	0	0	78	115	0	100	0
1.0% Traffic Volume Growth	0	0	0	0	37	0	0	35	59	0	55	0
Committed + 1.0% Growth	0	0	0	0	108	0	0	113	174	0	155	0
Max (Committed + 1.0% or Historic Growth)	0	0	0	0	108	0	0	113	174	0	155	0
Background Traffic Volumes	0	0	0	0	709	0	0	677	1,141	0	1,048	0
Project Traffic												
Inbound Traffic Assignment								35.0%				
Inbound Traffic Volumes								11				
Outbound Traffic Assignment					35.0%							
Outbound Traffic Volumes					7							
Project Traffic	0	0	0	0	7	0	0	11	0	0	0	0
Total Traffic w/o RTOR	0	0	0	0	716	0	0	688	1,141	0	1,048	0
RTOR Reduction												
TOTAL TRAFFIC	0	0	0	0	716	0	0	688	1,141	0	1,048	0

VOLUME DEVELOPMENT SHEET
ARROW FORT PIERCE NORTH RESIDENTIAL
S 25TH STREET & OKEECHOBEE ROAD

Peak Season =	1.11	1.11
Buildout Year =	2025	2025
Years =	6	6

AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	106	575	173	40	715	118	143	391	105	109	247	14
Peak Season Volume	118	638	192	44	794	131	159	434	117	121	274	16
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	19	103	31	7	128	21	26	70	19	20	44	3
1.0% Traffic Volume Growth	7	39	12	3	49	8	10	27	7	7	17	1
Committed + 1.0% Growth	7	39	12	3	49	8	10	27	7	7	17	1
Max (Committed + 1.0% or Historic Growth)	19	103	31	7	128	21	26	70	19	20	44	3
Background Traffic Volumes	137	741	223	51	922	152	185	504	136	141	318	19
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	2				1						4	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	11	4			
Project Traffic	2	0	0	0	1	0	1	11	4	0	4	0
Total Traffic w/o RTOR	139	741	223	51	923	152	186	515	140	141	322	19
RTOR Reduction												
TOTAL TRAFFIC	139	741	223	51	923	152	186	515	140	141	322	19

PM Peak Hour

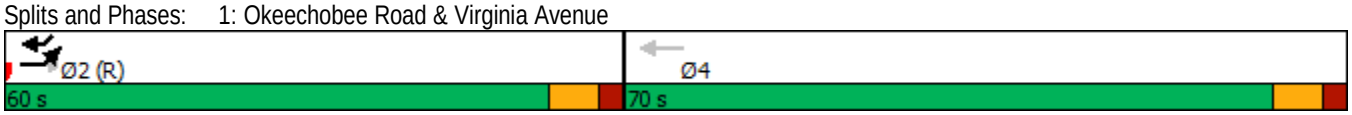
	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 10/22/2019	126	639	144	41	741	140	167	357	112	139	400	13
Peak Season Volume	140	709	160	46	823	155	185	396	124	154	444	14
Growth Rate	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%	2.53%
Traffic Volume Growth	23	115	26	7	133	25	30	64	20	25	72	2
1.0% Traffic Volume Growth	9	44	10	3	51	10	11	24	8	9	27	1
Committed + 1.0% Growth	9	44	10	3	51	10	11	24	8	9	27	1
Max (Committed + 1.0% or Historic Growth)	23	115	26	7	133	25	30	64	20	25	72	2
Background Traffic Volumes	163	824	186	53	956	180	215	460	144	179	516	16
Project Traffic												
Inbound Traffic Assignment	15.0%				5.0%						40.0%	
Inbound Traffic Volumes	5				2						12	
Outbound Traffic Assignment							5.0%	40.0%	15.0%			
Outbound Traffic Volumes							1	8	3			
Project Traffic	5	0	0	0	2	0	1	8	3	0	12	0
Total Traffic w/o RTOR	168	824	186	53	958	180	216	468	147	179	528	16
RTOR Reduction												
TOTAL TRAFFIC	168	824	186	53	958	180	216	468	147	179	528	16

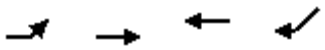
Appendix G: Synchro Analyses

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	482	1097	531	393
Future Volume (vph)	482	1097	531	393
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	94.5	94.5	20.9	94.5
Actuated g/C Ratio	0.73	0.73	0.16	0.73
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
LOS	A	A	E	A
Approach Delay		6.6	55.6	
Approach LOS		A	E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 36.2%	ICU Level of Service A
Analysis Period (min) 15	

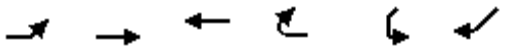
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	507	1155	559	414
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
Queue Length 50th (ft)	62	112	164	0
Queue Length 95th (ft)	96	155	198	15
Internal Link Dist (ft)		358	1207	
Turn Bay Length (ft)				
Base Capacity (vph)	2494	3694	2452	2141
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.31	0.23	0.19

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	482	1097	531	0	0	393
Future Volume (vph)	482	1097	531	0	0	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	507	1155	559	0	0	414
RTOR Reduction (vph)	0	0	0	0	0	113
Lane Group Flow (vph)	507	1155	559	0	0	301
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	94.5	94.5	20.9			94.5
Effective Green, g (s)	94.5	94.5	20.9			94.5
Actuated g/C Ratio	0.73	0.73	0.16			0.73
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2495	3696	817			2025
v/s Ratio Prot	0.15					0.11
v/s Ratio Perm		c0.23	c0.11			
v/c Ratio	0.20	0.31	0.68			0.15
Uniform Delay, d1	5.7	6.3	51.4			5.4
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.2	2.4			0.2
Delay (s)	5.9	6.5	53.8			5.6
Level of Service	A	A	D			A
Approach Delay (s)		6.3	53.8		5.6	
Approach LOS		A	D		A	

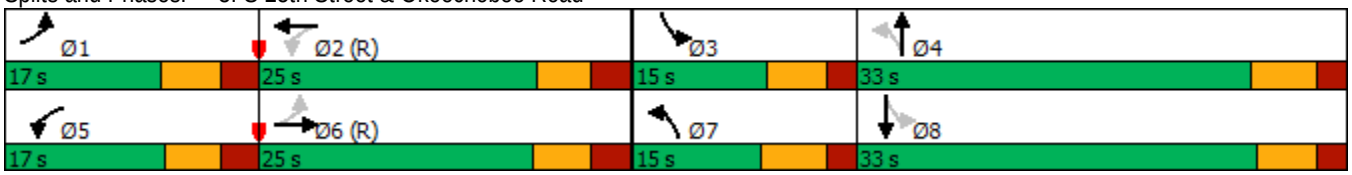
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

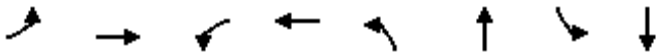
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	159	434	121	274	118	638	44	794
Future Volume (vph)	159	434	121	274	118	638	44	794
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	25.0	17.0	25.0	15.0	33.0	15.0	33.0
Total Split (%)	18.9%	27.8%	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	28.9	18.4	29.5	18.7	37.7	32.4	35.9	26.8
Actuated g/C Ratio	0.32	0.20	0.33	0.21	0.42	0.36	0.40	0.30
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
LOS	C	D	C	C	C	C	B	D
Approach Delay		37.3		29.5		28.0		44.9
Approach LOS		D		C		C		D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 35.7	Intersection LOS: D
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

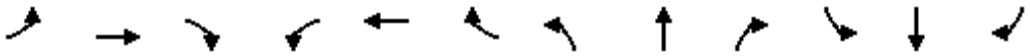




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	580	127	305	124	874	46	974
v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93
Control Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.7	22.5	32.4	23.7	28.6	14.7	46.3
Queue Length 50th (ft)	62	156	46	77	39	233	14	276
Queue Length 95th (ft)	108	#234	84	117	80	#333	33	#402
Internal Link Dist (ft)		1962		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	409	725	305	732	243	1259	298	1050
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.80	0.42	0.42	0.51	0.69	0.15	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Future Volume (vph)	159	434	117	121	274	16	118	638	192	44	794	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3427		1770	3510		1770	3417		1770	3464	
Flt Permitted	0.54	1.00		0.25	1.00		0.12	1.00		0.22	1.00	
Satd. Flow (perm)	1001	3427		457	3510		230	3417		405	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	457	123	127	288	17	124	672	202	46	836	138
RTOR Reduction (vph)	0	28	0	0	5	0	0	28	0	0	14	0
Lane Group Flow (vph)	167	552	0	127	300	0	124	846	0	46	960	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Effective Green, g (s)	26.4	16.0		27.0	16.3		41.0	32.4		34.6	29.2	
Actuated g/C Ratio	0.29	0.18		0.30	0.18		0.46	0.36		0.38	0.32	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	609		293	635		251	1230		237	1123	
v/s Ratio Prot	0.05	c0.16		c0.05	0.09		c0.05	c0.25		0.01	c0.28	
v/s Ratio Perm	0.08			0.08			0.18			0.06		
v/c Ratio	0.44	0.91		0.43	0.47		0.49	0.69		0.19	0.85	
Uniform Delay, d1	24.8	36.3		24.2	33.0		17.5	24.5		18.1	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	19.6		1.0	2.5		1.5	1.6		0.4	6.5	
Delay (s)	25.6	55.8		25.2	35.5		19.1	26.1		18.5	34.9	
Level of Service	C	E		C	D		B	C		B	C	
Approach Delay (s)		49.1			32.5			25.2			34.2	
Approach LOS		D			C			C			C	

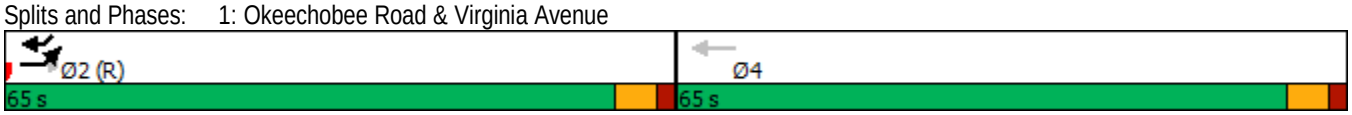
Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

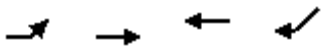
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	564	967	893	601
Future Volume (vph)	564	967	893	601
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	84.5	84.5	33.5	84.5
Actuated g/C Ratio	0.65	0.65	0.26	0.65
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
LOS	B	B	D	A
Approach Delay		10.7	46.9	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

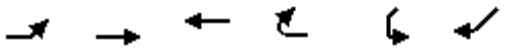
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	594	1018	940	633
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
Queue Length 50th (ft)	102	128	265	100
Queue Length 95th (ft)	153	178	293	159
Internal Link Dist (ft)		326	1056	
Turn Bay Length (ft)				
Base Capacity (vph)	2230	3304	2307	1853
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.31	0.41	0.34

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	564	967	893	0	0	601
Future Volume (vph)	564	967	893	0	0	601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0			6.0
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	594	1018	940	0	0	633
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	594	1018	940	0	0	591
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	84.5	84.5	33.5			84.5
Effective Green, g (s)	84.5	84.5	33.5			84.5
Actuated g/C Ratio	0.65	0.65	0.26			0.65
Clearance Time (s)	6.0	6.0	6.0			6.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2231	3305	1310			1811
v/s Ratio Prot	0.17					c0.21
v/s Ratio Perm		0.20	c0.18			
v/c Ratio	0.27	0.31	0.72			0.33
Uniform Delay, d1	9.6	10.0	43.9			10.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.2	1.9			0.5
Delay (s)	9.9	10.2	45.8			10.6
Level of Service	A	B	D			B
Approach Delay (s)		10.1	45.8		10.6	
Approach LOS		B	D		B	

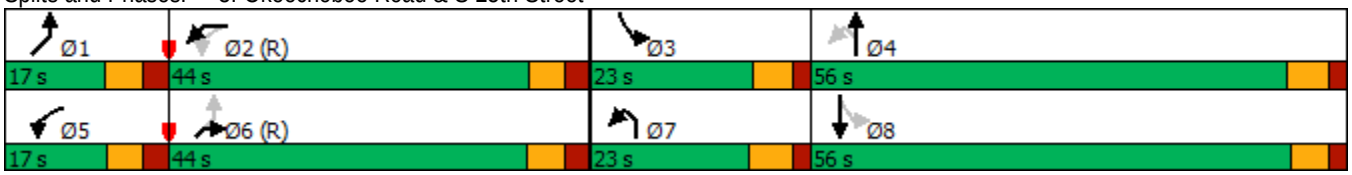
Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	154	444	140	709	46	823	185	396
Future Volume (vph)	154	444	140	709	46	823	185	396
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	53.6	42.1	65.6	54.6	56.6	47.5	54.2	42.4
Actuated g/C Ratio	0.38	0.30	0.47	0.39	0.40	0.34	0.39	0.30
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
LOS	C	C	D	D	C	D	D	D
Approach Delay		31.5		38.1		50.1	35.2	
Approach LOS		C		D		D	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	162	482	147	914	48	1029	195	548
v/c Ratio	0.53	0.43	0.67	0.68	0.20	0.87	0.55	0.59
Control Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	30.6	42.8	37.3	20.3	51.4	35.3	35.1
Queue Length 50th (ft)	93	138	77	357	22	445	115	192
Queue Length 95th (ft)	154	193	145	414	43	533	184	267
Internal Link Dist (ft)		574		2034		690	3530	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	1122	260	1360	337	1249	354	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.43	0.57	0.67	0.14	0.82	0.55	0.59

Intersection Summary

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Future Volume (vph)	154	444	14	140	709	160	46	823	155	185	396	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3442		1770	3455		1770	2787	
Flt Permitted	0.29	0.95		0.08	1.00		0.19	1.00		0.36	1.00	
Satd. Flow (perm)	539	3431		142	3442		363	3455		679	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	467	15	147	746	168	48	866	163	195	417	131
RTOR Reduction (vph)	0	91	0	0	13	0	0	11	0	0	91	0
Lane Group Flow (vph)	162	391	0	147	901	0	48	1018	0	195	457	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Effective Green, g (s)	52.4	41.0		67.8	54.6		55.8	48.6		53.0	41.3	
Actuated g/C Ratio	0.37	0.29		0.48	0.39		0.40	0.35		0.38	0.29	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	301	1004		222	1342		217	1199		348	822	
v/s Ratio Prot	0.04	0.11		c0.06	c0.26		0.01	c0.29		c0.05	0.16	
v/s Ratio Perm	0.16			0.26			0.08			c0.17		
v/c Ratio	0.54	0.39		0.66	0.67		0.22	0.85		0.56	0.56	
Uniform Delay, d1	31.0	39.5		29.1	35.3		27.3	42.3		30.8	41.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	1.1		7.2	1.3		0.5	5.8		2.1	2.7	
Delay (s)	32.8	40.6		36.4	36.6		27.8	48.1		32.9	44.3	
Level of Service	C	D		D	D		C	D		C	D	
Approach Delay (s)		38.7			36.6			47.2		41.3		
Approach LOS		D			D			D		D		

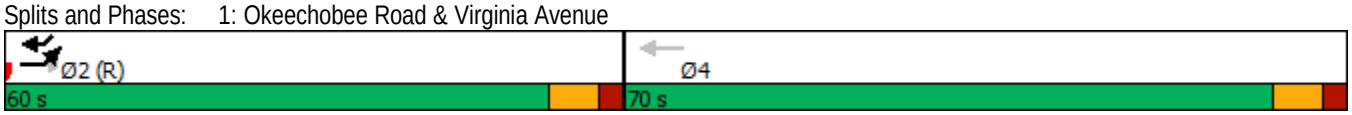
Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

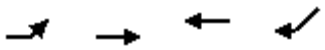
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	583	1274	628	469
Future Volume (vph)	583	1274	628	469
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 40.9%	ICU Level of Service A
Analysis Period (min) 15	

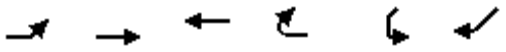
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	614	1341	661	494
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
Queue Length 50th (ft)	88	153	191	24
Queue Length 95th (ft)	132	207	225	51
Internal Link Dist (ft)		282	721	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.24

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	583	1274	628	0	0	469
Future Volume (vph)	583	1274	628	0	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	614	1341	661	0	0	494
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	614	1341	661	0	0	399
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.14
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.20
Uniform Delay, d1	7.1	7.9	49.3			6.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

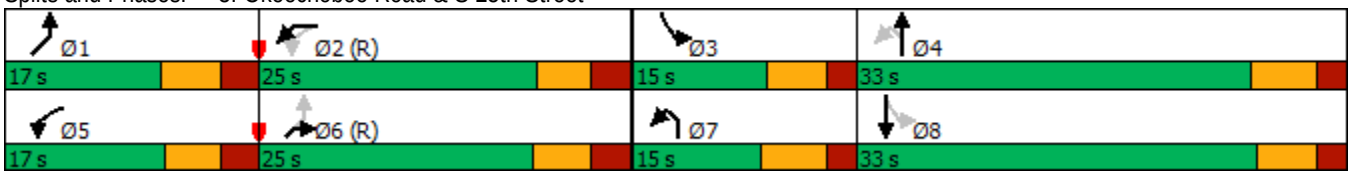
Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	318	137	741	51	922	185	504
Future Volume (vph)	141	318	137	741	51	922	185	504
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.5		32.4		79.2	40.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 47.3	Intersection LOS: D
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	355	144	1015	54	1131	195	674
v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93
Control Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	14.7	27.6	33.0	15.6	82.3	24.2	45.7
Queue Length 50th (ft)	54	38	46	288	16	~377	74	155
Queue Length 95th (ft)	97	76	#102	#427	37	#507	125	#276
Internal Link Dist (ft)		574		2034		690	2264	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	386	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.59	0.80	0.21	1.08	0.51	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Future Volume (vph)	141	318	19	137	741	223	51	922	152	185	504	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.48	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		888	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	335	20	144	780	235	54	971	160	195	531	143
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	191	0	144	986	0	54	1117	0	195	509	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		361	492	
v/s Ratio Prot	0.06	0.06		c0.05	c0.29		0.02	c0.32		c0.06	c0.18	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.31		0.57	0.80		0.28	0.99		0.54	1.04	
Uniform Delay, d1	25.0	32.0		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.3		3.2	3.7		0.8	24.5		1.7	50.0	
Delay (s)	26.4	33.4		22.3	29.6		19.6	54.7		27.0	87.0	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.3			28.7			53.1		73.6		
Approach LOS		C			C			D		E		

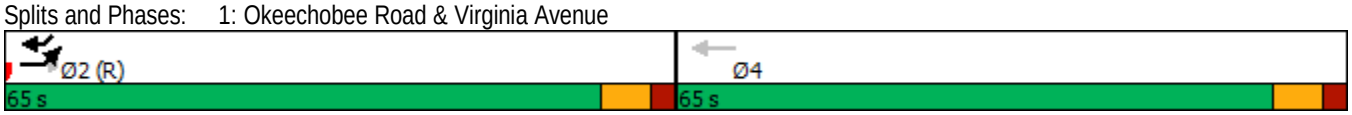
Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

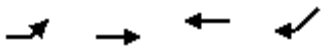
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	677	1141	1048	709
Future Volume (vph)	677	1141	1048	709
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	76.3	76.3	39.1	76.3
Actuated g/C Ratio	0.59	0.59	0.30	0.59
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
LOS	B	B	D	B
Approach Delay		15.6	43.1	
Approach LOS		B	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

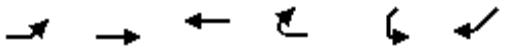
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	713	1201	1103	746
v/c Ratio	0.35	0.40	0.72	0.45
Control Delay	15.4	15.7	43.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.4	15.7	43.1	15.3
Queue Length 50th (ft)	154	191	304	172
Queue Length 95th (ft)	224	259	326	259
Internal Link Dist (ft)		557	1265	
Turn Bay Length (ft)				
Base Capacity (vph)	2015	2984	2256	1663
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.40	0.49	0.45

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	677	1141	1048	0	0	709
Future Volume (vph)	677	1141	1048	0	0	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	713	1201	1103	0	0	746
RTOR Reduction (vph)	0	0	0	0	0	28
Lane Group Flow (vph)	713	1201	1103	0	0	718
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	76.3	76.3	39.1			76.3
Effective Green, g (s)	76.3	76.3	39.1			76.3
Actuated g/C Ratio	0.59	0.59	0.30			0.59
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2014	2984	1529			1635
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.35	0.40	0.72			0.44
Uniform Delay, d1	14.0	14.5	40.6			14.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	0.4	1.7			0.9
Delay (s)	14.5	14.9	42.3			15.8
Level of Service	B	B	D			B
Approach Delay (s)		14.8	42.3		15.8	
Approach LOS		B	D		B	

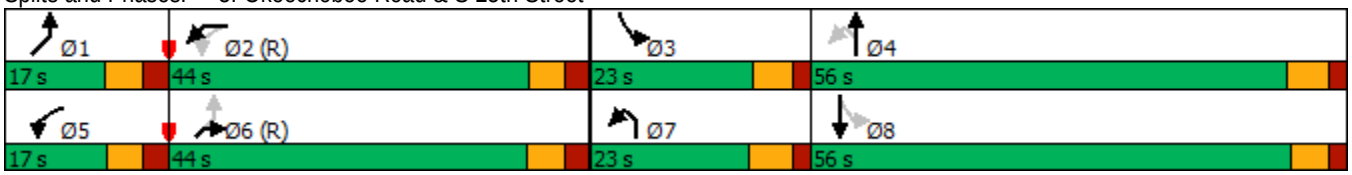
Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	179	516	163	824	53	956	215	460
Future Volume (vph)	179	516	163	824	53	956	215	460
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	44.0	23.0	56.0	23.0	56.0	17.0	44.0
Total Split (%)	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%	12.1%	31.4%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	49.2	38.3	70.9	59.2	60.3	51.1	49.3	38.3
Actuated g/C Ratio	0.35	0.27	0.51	0.42	0.43	0.36	0.35	0.27
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
LOS	E	D	D	D	C	E	D	D
Approach Delay		40.5		38.9		55.3	46.1	
Approach LOS		D		D		E	D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 45.7	Intersection LOS: D
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street





Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	188	560	172	1063	56	1195	226	636
v/c Ratio	0.80	0.54	0.74	0.72	0.26	0.94	0.80	0.74
Control Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	35.3	50.9	36.9	20.4	56.9	55.0	42.9
Queue Length 50th (ft)	116	174	101	421	25	540	143	246
Queue Length 95th (ft)	#200	234	182	511	48	#705	#261	327
Internal Link Dist (ft)		574		2034		690	4088	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	235	1031	260	1467	319	1271	282	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.54	0.66	0.72	0.18	0.94	0.80	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Future Volume (vph)	179	516	16	163	824	186	53	956	180	215	460	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	1.00		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3431		1770	3441		1770	3455		1770	2787	
Flt Permitted	0.19	0.95		0.07	1.00		0.15	1.00		0.28	1.00	
Satd. Flow (perm)	360	3431		128	3441		285	3455		527	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	543	17	172	867	196	56	1006	189	226	484	152
RTOR Reduction (vph)	0	95	0	0	12	0	0	11	0	0	95	0
Lane Group Flow (vph)	188	465	0	172	1051	0	56	1184	0	226	541	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Effective Green, g (s)	47.9	37.1		72.5	59.2		59.5	52.2		48.1	37.2	
Actuated g/C Ratio	0.34	0.27		0.52	0.42		0.42	0.37		0.34	0.27	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	909		234	1455		198	1288		277	740	
v/s Ratio Prot	0.06	0.14		c0.08	c0.31		0.01	c0.34		c0.06	0.19	
v/s Ratio Perm	0.21			0.31			0.11			c0.22		
v/c Ratio	0.81	0.51		0.74	0.72		0.28	0.92		0.82	0.73	
Uniform Delay, d1	35.8	43.7		36.5	33.6		25.9	41.9		38.1	46.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.3	2.1		11.3	1.8		0.8	10.6		16.7	6.3	
Delay (s)	55.1	45.8		47.8	35.4		26.7	52.5		54.8	53.1	
Level of Service	E	D		D	D		C	D		D	D	
Approach Delay (s)		48.1			37.1			51.3		53.6		
Approach LOS		D			D			D		D		

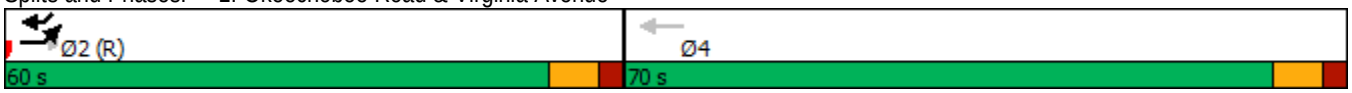
Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

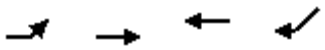
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	587	1274	628	479
Future Volume (vph)	587	1274	628	479
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	60.0	60.0	70.0	60.0
Total Split (%)	46.2%	46.2%	53.8%	46.2%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	91.0	91.0	24.4	91.0
Actuated g/C Ratio	0.70	0.70	0.19	0.70
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
LOS	A	A	D	A
Approach Delay		8.4	53.0	
Approach LOS		A	D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 34 (26%), Referenced to phase 2:EBTL and 6:, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

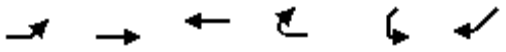
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	618	1341	661	504
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
Queue Length 50th (ft)	89	153	191	26
Queue Length 95th (ft)	132	207	225	53
Internal Link Dist (ft)		281	1314	
Turn Bay Length (ft)				
Base Capacity (vph)	2402	3559	2452	2046
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.38	0.27	0.25

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	587	1274	628	0	0	479
Future Volume (vph)	587	1274	628	0	0	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	618	1341	661	0	0	504
RTOR Reduction (vph)	0	0	0	0	0	95
Lane Group Flow (vph)	618	1341	661	0	0	409
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	91.0	91.0	24.4			91.0
Effective Green, g (s)	91.0	91.0	24.4			91.0
Actuated g/C Ratio	0.70	0.70	0.19			0.70
Clearance Time (s)	7.3	7.3	7.3			7.3
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	2403	3559	954			1950
v/s Ratio Prot	0.18					0.15
v/s Ratio Perm		c0.26	c0.13			
v/c Ratio	0.26	0.38	0.69			0.21
Uniform Delay, d1	7.1	7.9	49.3			6.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.3	0.3	2.2			0.2
Delay (s)	7.4	8.3	51.5			7.1
Level of Service	A	A	D			A
Approach Delay (s)		8.0	51.5		7.1	
Approach LOS		A	D		A	

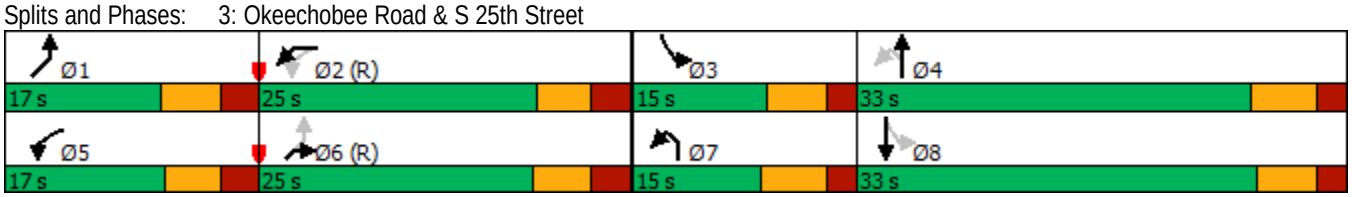
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations								
Traffic Volume (vph)	141	322	139	741	51	923	186	515
Future Volume (vph)	141	322	139	741	51	923	186	515
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector Phase	5	2	7	4	3	8	1	6
Switch Phase								
Minimum Initial (s)	10.7	12.0	8.6	12.0	9.0	12.0	10.4	12.0
Minimum Split (s)	17.0	24.7	15.0	24.5	15.0	24.1	17.0	24.7
Total Split (s)	17.0	25.0	15.0	33.0	15.0	33.0	17.0	25.0
Total Split (%)	18.9%	27.8%	16.7%	36.7%	16.7%	36.7%	18.9%	27.8%
Yellow Time (s)	3.7	3.7	4.4	4.4	4.0	4.0	4.0	4.0
All-Red Time (s)	2.6	2.7	2.0	2.1	2.0	2.1	2.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	6.5	6.0	6.1	6.6	6.7
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	C-Max
Act Effct Green (s)	29.4	18.6	37.8	32.5	36.0	26.9	28.8	18.3
Actuated g/C Ratio	0.33	0.21	0.42	0.36	0.40	0.30	0.32	0.20
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
LOS	C	B	C	C	B	F	C	D
Approach Delay		17.6		32.4		79.5	43.9	
Approach LOS		B		C		E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 48.1	Intersection LOS: D
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Okeechobee Road & S 25th Street



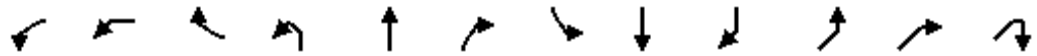


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Group Flow (vph)	148	359	146	1015	54	1132	196	689
v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95
Control Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	15.0	28.1	33.0	15.6	82.6	24.4	49.4
Queue Length 50th (ft)	54	39	47	288	16	~377	74	161
Queue Length 95th (ft)	97	77	#109	#427	37	#507	126	#286
Internal Link Dist (ft)		574		2034		690	4876	
Turn Bay Length (ft)	200	200	225		200		225	
Base Capacity (vph)	306	866	243	1261	258	1050	383	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.60	0.80	0.21	1.08	0.51	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	WBL2	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER	NER2
Lane Configurations												
Traffic Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Future Volume (vph)	141	322	19	139	741	223	51	923	152	186	515	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Lane Util. Factor	1.00	0.97		1.00	0.95		1.00	0.95		1.00	0.88	
Frt	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.85	
Flt Protected	0.95	0.95		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3416		1770	3464		1770	2787	
Flt Permitted	0.25	0.95		0.12	1.00		0.15	1.00		0.47	1.00	
Satd. Flow (perm)	460	3422		229	3416		272	3464		878	2787	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	339	20	146	780	235	54	972	160	196	542	147
RTOR Reduction (vph)	0	164	0	0	29	0	0	14	0	0	165	0
Lane Group Flow (vph)	148	195	0	146	986	0	54	1118	0	196	524	0
Turn Type	pm+pt	Prot		pm+pt	NA		pm+pt	NA		pm+pt	Prot	
Protected Phases	5	2		7	4		3	8		1	6	
Permitted Phases	2			4			8			6		
Actuated Green, G (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Effective Green, g (s)	26.9	16.2		41.1	32.5		34.7	29.3		26.3	15.9	
Actuated g/C Ratio	0.30	0.18		0.46	0.36		0.39	0.33		0.29	0.18	
Clearance Time (s)	6.3	6.4		6.4	6.5		6.0	6.1		6.6	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	615		251	1233		194	1127		359	492	
v/s Ratio Prot	0.06	0.06		c0.06	c0.29		0.02	c0.32		c0.06	c0.19	
v/s Ratio Perm	0.09			0.21			0.09			0.10		
v/c Ratio	0.51	0.32		0.58	0.80		0.28	0.99		0.55	1.07	
Uniform Delay, d1	25.0	32.1		19.1	25.8		18.8	30.2		25.4	37.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.4		3.4	3.7		0.8	24.7		1.7	59.2	
Delay (s)	26.4	33.4		22.6	29.6		19.6	55.0		27.1	96.3	
Level of Service	C	C		C	C		B	D		C	F	
Approach Delay (s)		31.4			28.7			53.3		80.9		
Approach LOS		C			C			D		F		

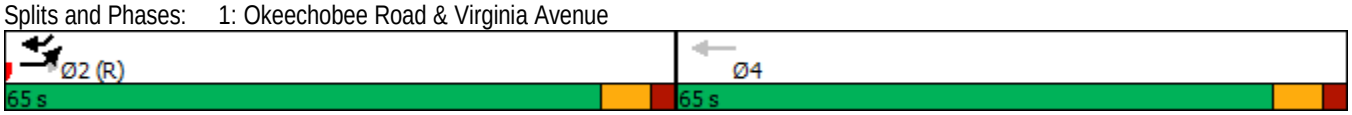
Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

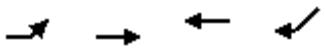
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SWR
Lane Configurations				
Traffic Volume (vph)	688	1141	1048	716
Future Volume (vph)	688	1141	1048	716
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (s)	25.3	25.3	25.3	25.3
Total Split (s)	65.0	65.0	65.0	65.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	7.3
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	Max	Max	Max	Max
Act Effct Green (s)	57.7	57.7	57.7	57.7
Actuated g/C Ratio	0.44	0.44	0.44	0.44
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
LOS	C	C	C	C
Approach Delay		27.2	26.6	
Approach LOS		C	C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 103 (79%), Referenced to phase 2:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

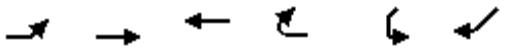
Splits and Phases: 1: Okeechobee Road & Virginia Avenue





Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	724	1201	1103	754
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
Queue Length 50th (ft)	218	265	237	244
Queue Length 95th (ft)	272	310	279	315
Internal Link Dist (ft)		228	779	
Turn Bay Length (ft)				
Base Capacity (vph)	1523	2256	2256	1274
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.53	0.49	0.59

Intersection Summary



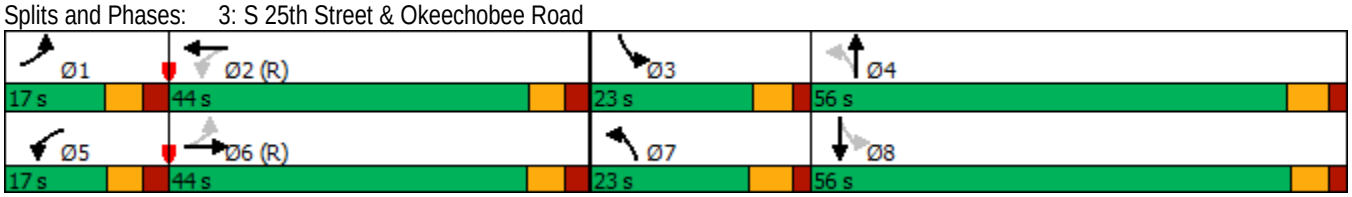
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	688	1141	1048	0	0	716
Future Volume (vph)	688	1141	1048	0	0	716
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	3433	5085	5085			2787
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	3433	5085	5085			2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	724	1201	1103	0	0	754
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	724	1201	1103	0	0	717
Turn Type	Prot	NA	NA			Over
Protected Phases	2					2
Permitted Phases		2	4			
Actuated Green, G (s)	57.7	57.7	57.7			57.7
Effective Green, g (s)	57.7	57.7	57.7			57.7
Actuated g/C Ratio	0.44	0.44	0.44			0.44
Clearance Time (s)	7.3	7.3	7.3			7.3
Lane Grp Cap (vph)	1523	2256	2256			1236
v/s Ratio Prot	0.21					c0.26
v/s Ratio Perm		0.24	c0.22			
v/c Ratio	0.48	0.53	0.49			0.58
Uniform Delay, d1	25.5	26.3	25.7			27.1
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.1	0.9	0.8			2.0
Delay (s)	26.5	27.2	26.4			29.1
Level of Service	C	C	C			C
Approach Delay (s)		27.0	26.4		29.1	
Approach LOS		C	C		C	

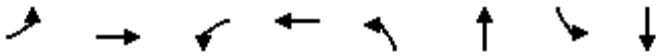
Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	186	515	141	322	139	741	51	923
Future Volume (vph)	186	515	141	322	139	741	51	923
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	1	6	5	2	7	4	3	8
Switch Phase								
Minimum Initial (s)	10.4	12.0	10.7	12.0	8.6	12.0	9.0	12.0
Minimum Split (s)	17.0	24.7	17.0	24.7	15.0	24.5	15.0	24.1
Total Split (s)	17.0	44.0	17.0	44.0	23.0	56.0	23.0	56.0
Total Split (%)	12.1%	31.4%	12.1%	31.4%	16.4%	40.0%	16.4%	40.0%
Yellow Time (s)	4.0	4.0	3.7	3.7	4.4	4.4	4.0	4.0
All-Red Time (s)	2.6	2.7	2.6	2.7	2.0	2.1	2.0	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.7	6.3	6.4	6.4	6.5	6.0	6.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)	51.5	40.4	51.0	40.1	68.3	57.3	59.5	50.3
Actuated g/C Ratio	0.37	0.29	0.36	0.29	0.49	0.41	0.42	0.36
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
LOS	C	D	D	D	D	D	C	D
Approach Delay		44.7		40.5		38.0		51.2
Approach LOS		D		D		D		D

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 49 (35%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 86.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: S 25th Street & Okeechobee Road

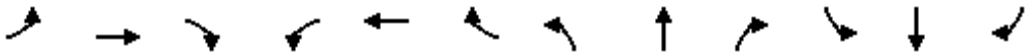




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	689	148	359	146	1015	54	1132
v/c Ratio	0.51	0.69	0.60	0.36	0.68	0.72	0.24	0.90
Control Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	47.5	38.9	41.2	44.5	37.1	20.5	52.7
Queue Length 50th (ft)	122	293	89	139	77	390	24	486
Queue Length 95th (ft)	186	367	141	186	149	475	47	#641
Internal Link Dist (ft)		2355		574		2034		690
Turn Bay Length (ft)	225		200		225		200	
Base Capacity (vph)	384	1004	247	1009	258	1414	321	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.69	0.60	0.36	0.57	0.72	0.17	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Future Volume (vph)	186	515	140	141	322	19	139	741	223	51	923	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3426		1770	3510		1770	3416		1770	3464	
Flt Permitted	0.46	1.00		0.21	1.00		0.07	1.00		0.16	1.00	
Satd. Flow (perm)	848	3426		385	3510		130	3416		299	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	196	542	147	148	339	20	146	780	235	54	972	160
RTOR Reduction (vph)	0	17	0	0	3	0	0	18	0	0	9	0
Lane Group Flow (vph)	196	672	0	148	356	0	146	997	0	54	1123	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Effective Green, g (s)	50.1	39.1		49.7	38.9		70.3	57.3		58.9	51.6	
Actuated g/C Ratio	0.36	0.28		0.36	0.28		0.50	0.41		0.42	0.37	
Clearance Time (s)	6.6	6.7		6.3	6.4		6.4	6.5		6.0	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	956		243	975		217	1398		202	1276	
v/s Ratio Prot	0.04	c0.20		c0.05	0.10		c0.06	c0.29		0.01	c0.32	
v/s Ratio Perm	0.15			0.17			0.27			0.10		
v/c Ratio	0.52	0.70		0.61	0.37		0.67	0.71		0.27	0.88	
Uniform Delay, d1	32.7	45.2		33.3	40.6		31.6	34.5		26.2	41.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	4.3		4.3	1.1		8.0	1.7		0.7	7.2	
Delay (s)	34.0	49.5		37.6	41.7		39.5	36.2		26.9	48.5	
Level of Service	C	D		D	D		D	D		C	D	
Approach Delay (s)		46.1			40.5			36.7			47.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix H: Turn Lane Warrant Worksheet

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:	N/A	Analysis Date:	3/19/2020
County:	Saint Lucie	Conducted By:	MAG
FDOT District:	5	Checked By:	ABK
		Agency/Company Name:	Kimley Horn

Intersection & Approach Description: Okeechobee Road and Project Driveway

Analysis Scenario:	Existing 2020	Number of Approach Lanes:	2
Design Hour:	PM Peak Hour	Undivided or Divided Highway:	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	12	2.0%	13
	Through	-	705	2.0%	713
	Right	No		0.0%	N/A
Opposing	Left	No		0.0%	N/A
	Through	-	739	2.0%	747
	Right	Yes	18	2.0%	19

Advancing Volume:	726
Opposing Volume:	766
Left Turn Volume:	13
% Left Turns in Advancing Volume:	1.79%

TURN LANE WARRANT FINDINGS

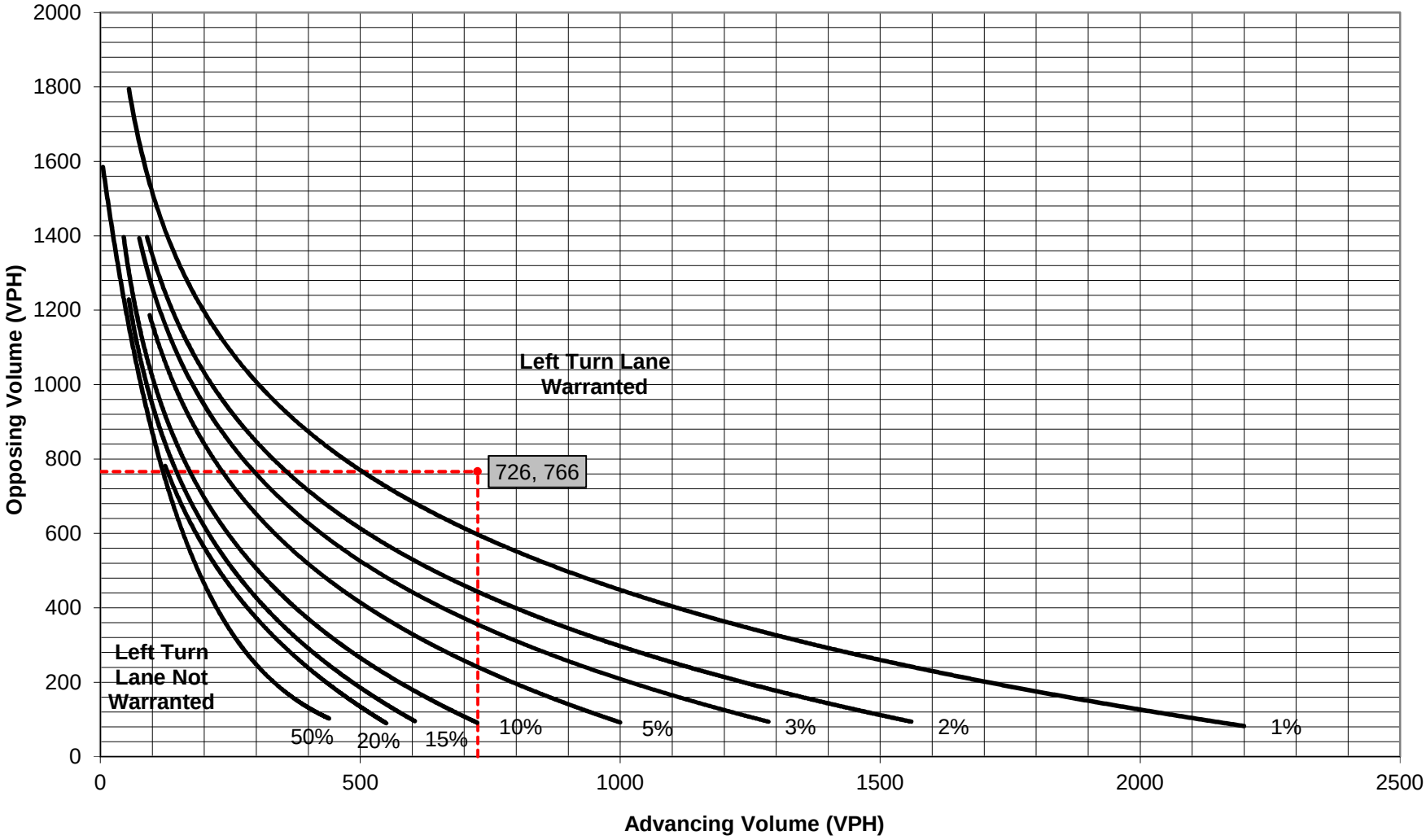
Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

Warrant Met?: Yes

Additional Comments / Justifications:

Figure 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)





REAR ELEVATION
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

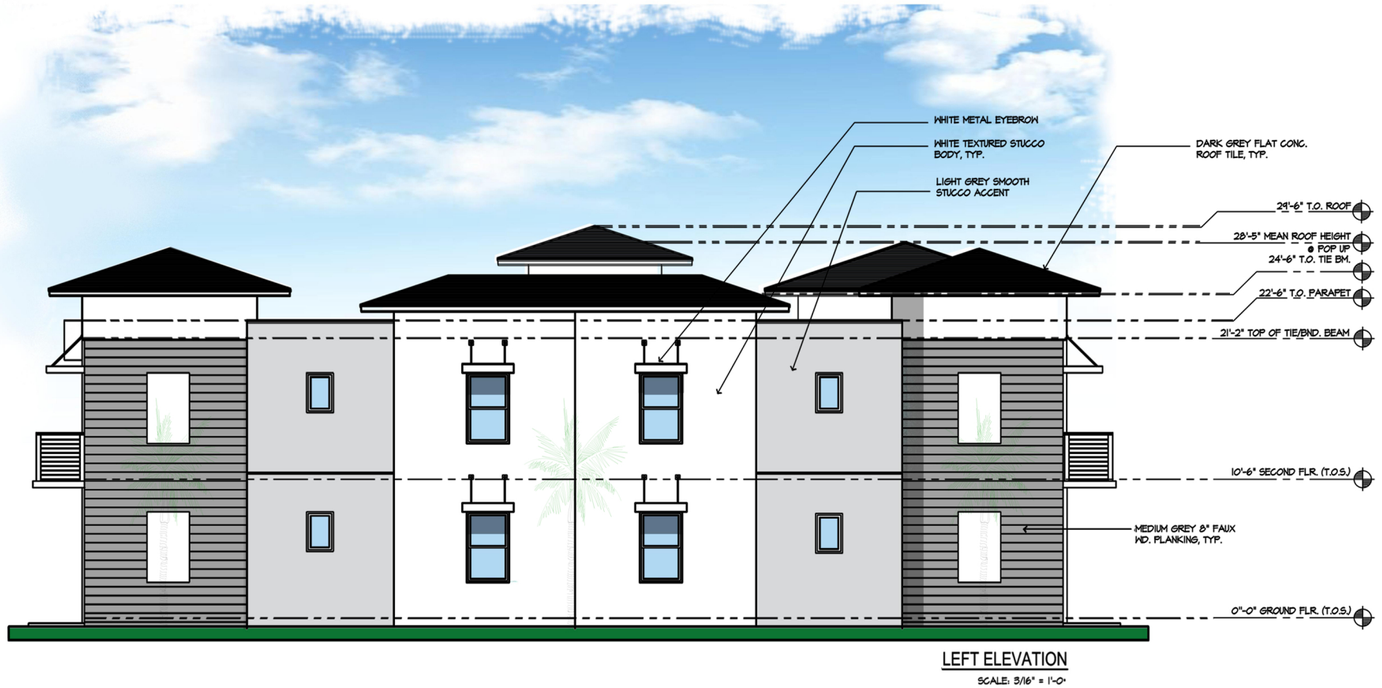
project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC

ARCHITECTURAL Studio, Inc.
Architecture • Planning
300 Avenue of Champions
Suite 260
Palm Beach Gardens, Florida 33418
Phone 561.202.6990
Fax 561.296.2494
archstudiofl.com

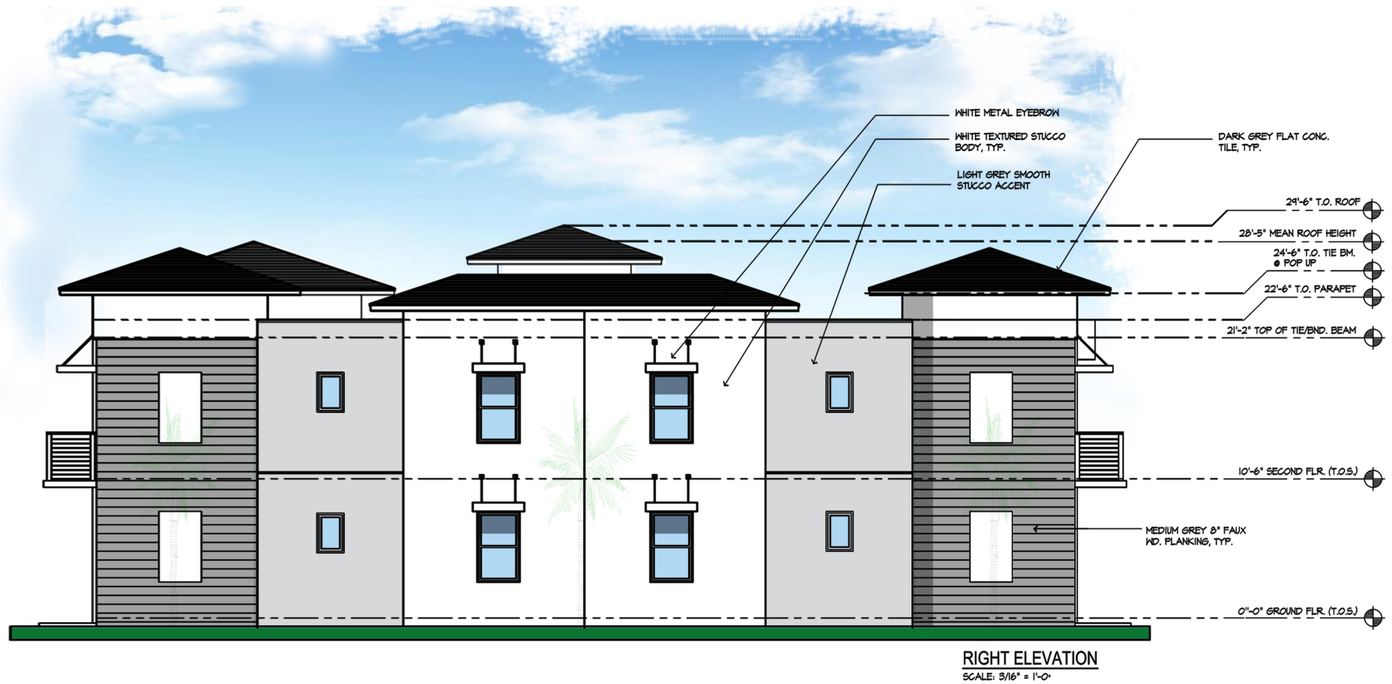
drawing
COLORED ELEVATIONS

sheet
A-3



LEFT ELEVATION

SCALE: 3/16" = 1'-0"



RIGHT ELEVATION

SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

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•
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Fax 561.296.2494
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drawing

COLORED ELEVATIONS

sheet

A-4

CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
AC (3)	UNIT C	957 SF
AC (2)	UNIT B	1227 SF
AC	UNIT A	735 SF
	TTL.	7752 SF

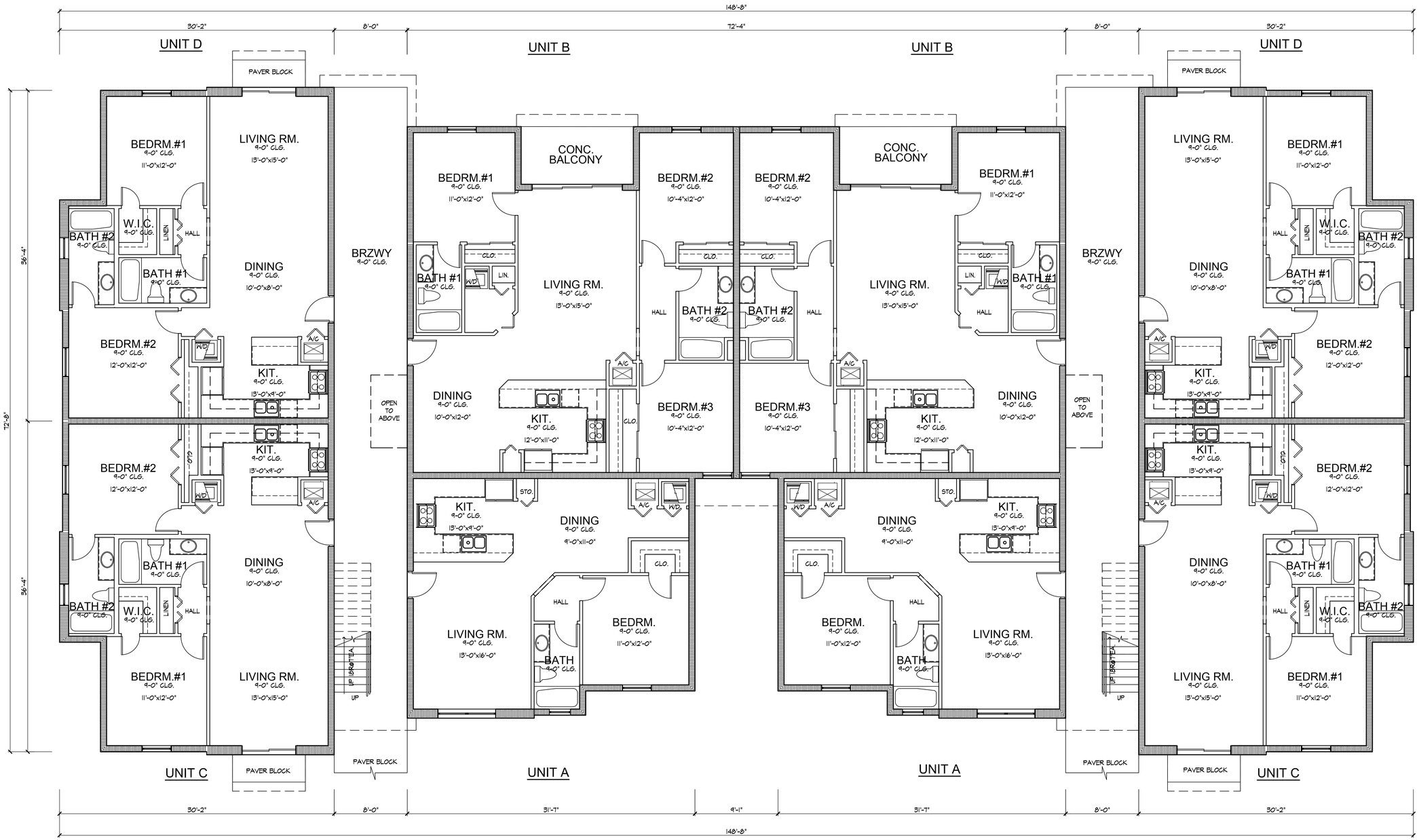
NON CONDITIONED AREAS

NC	BREEZEWAY	522 SF
NC (2)	BREEZEWAY	522 SF
NC (4)	BALCONY(B)	96 SF
NC (8)	BALCONY(B)	96 SF
NC (3)	BALCONY(C)	32 SF
NC (5)	BALCONY(C)	32 SF
NC (7)	BALCONY(D)	32 SF
NC (6)	BALCONY(D)	32 SF
	TTL.	1364 SF

GROSS AREA

GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
TOTAL AC AREA:	23256 SF
TOTAL NON-AC AREA:	4092 SF
TOTAL GROSS AREA:	24477 SF



Scott Blakeslee Disher
AR-0011586 AA-0003285

revisions

no.		date
REVIEW		6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

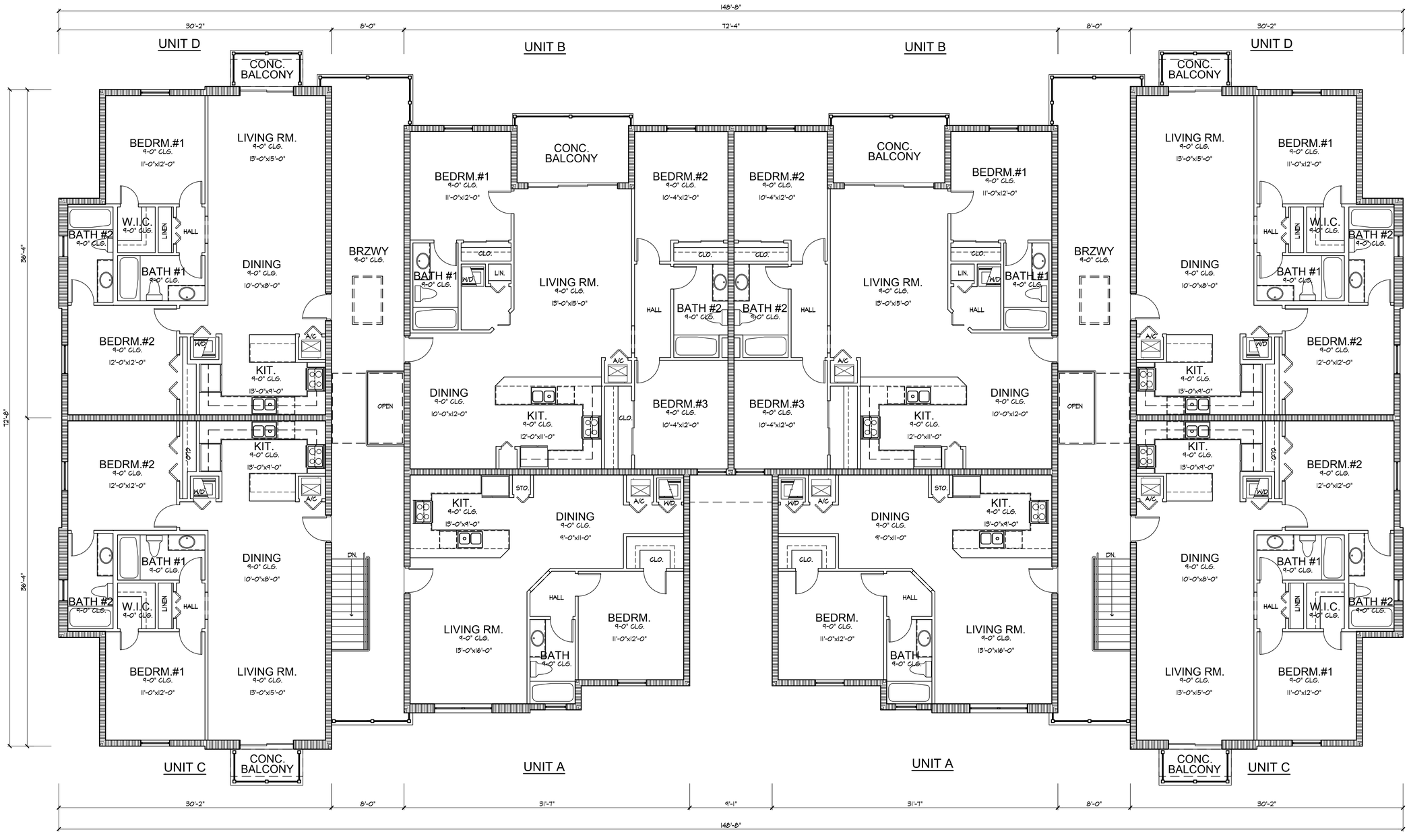
ARCHITECTURAL Studio, Inc.
Architecture
▪
Planning

300 Avenue of Champions
Suite 260
Palm Beach Gardens, Florida 33418

Phone 561.202.6990
Fax 561.296.2494
archstudiofl.com

drawing
GROUND FLOOR PLAN

sheet
A-1



revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

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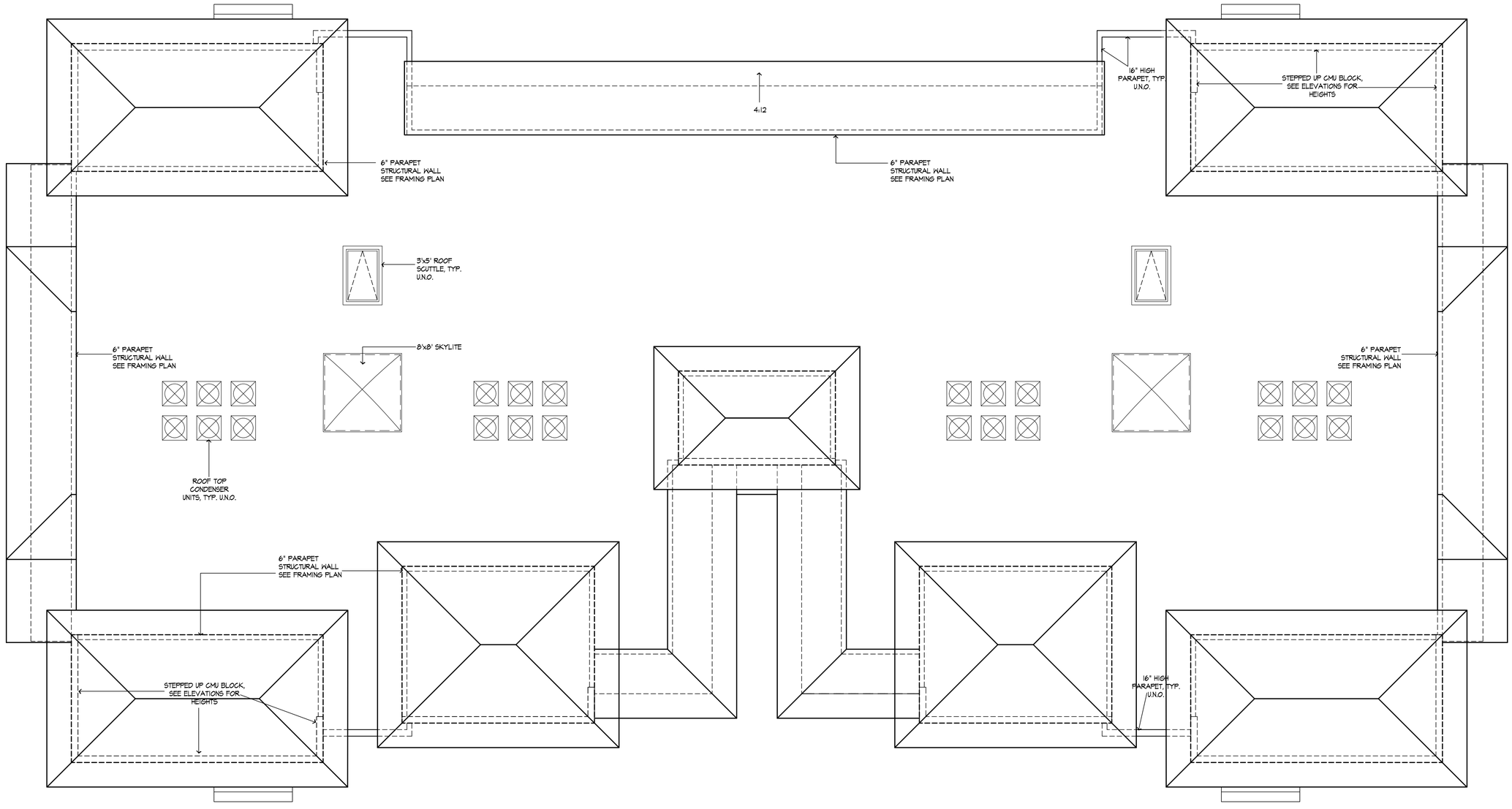
drawing

SECOND FLOOR PLAN

sheet

A-3



revisions

no.	date
REVIEW	6/17/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
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Scott Blakeslee Disher
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project

16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

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drawing

ROOF PLAN

sheet

A-6



REAR ELEVATION

SCALE: 3/16" = 1'-0"



FRONT ELEVATION

SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC

project

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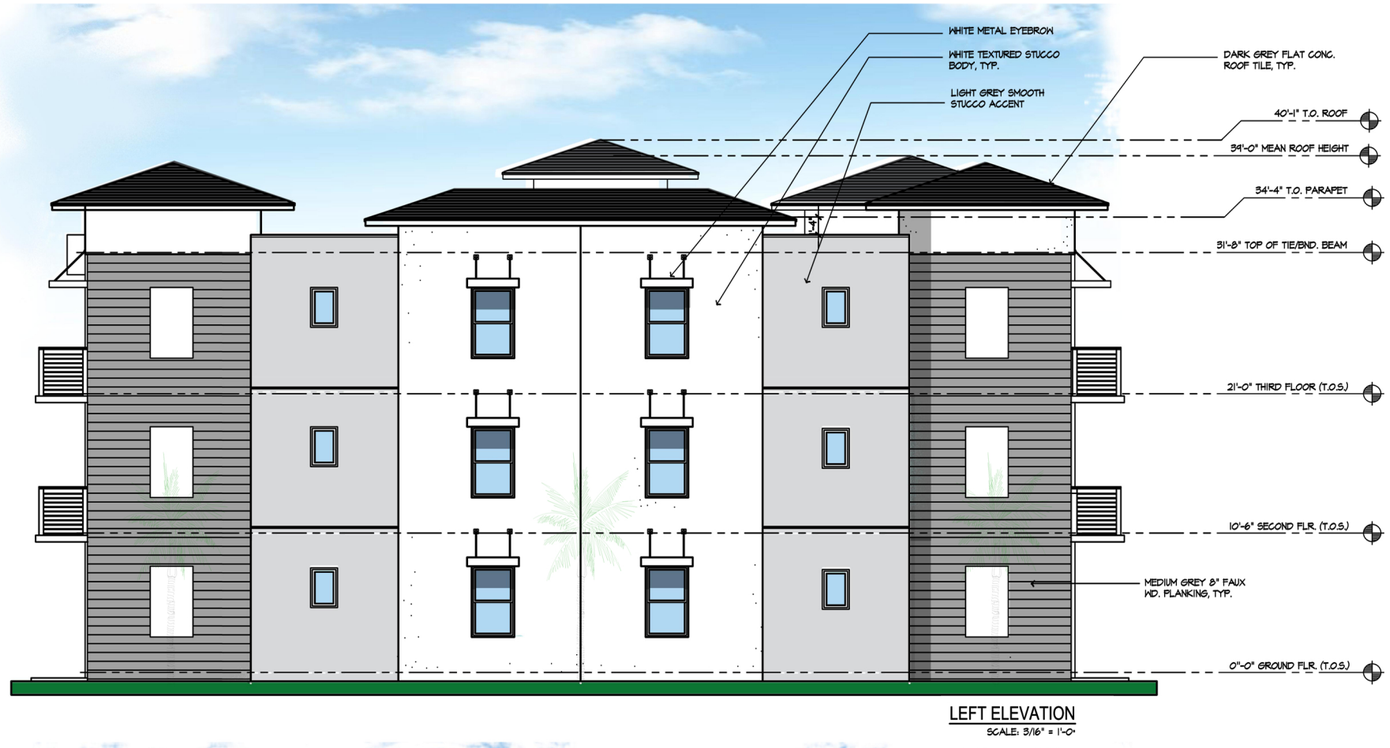
drawing

COLORED ELEVATIONS

sheet

A-4



LEFT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

project
24 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

ARCHITECTURAL Studio, Inc.
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drawing
COLORED ELEVATIONS

sheet
A-5

CALCULATIONS
(PER LEVEL)

AIR CONDITIONED AREAS

AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
AC (3)	UNIT C	957 SF
AC (2)	UNIT B	1227 SF
AC	UNIT A	735 SF
	TTL.	7752 SF

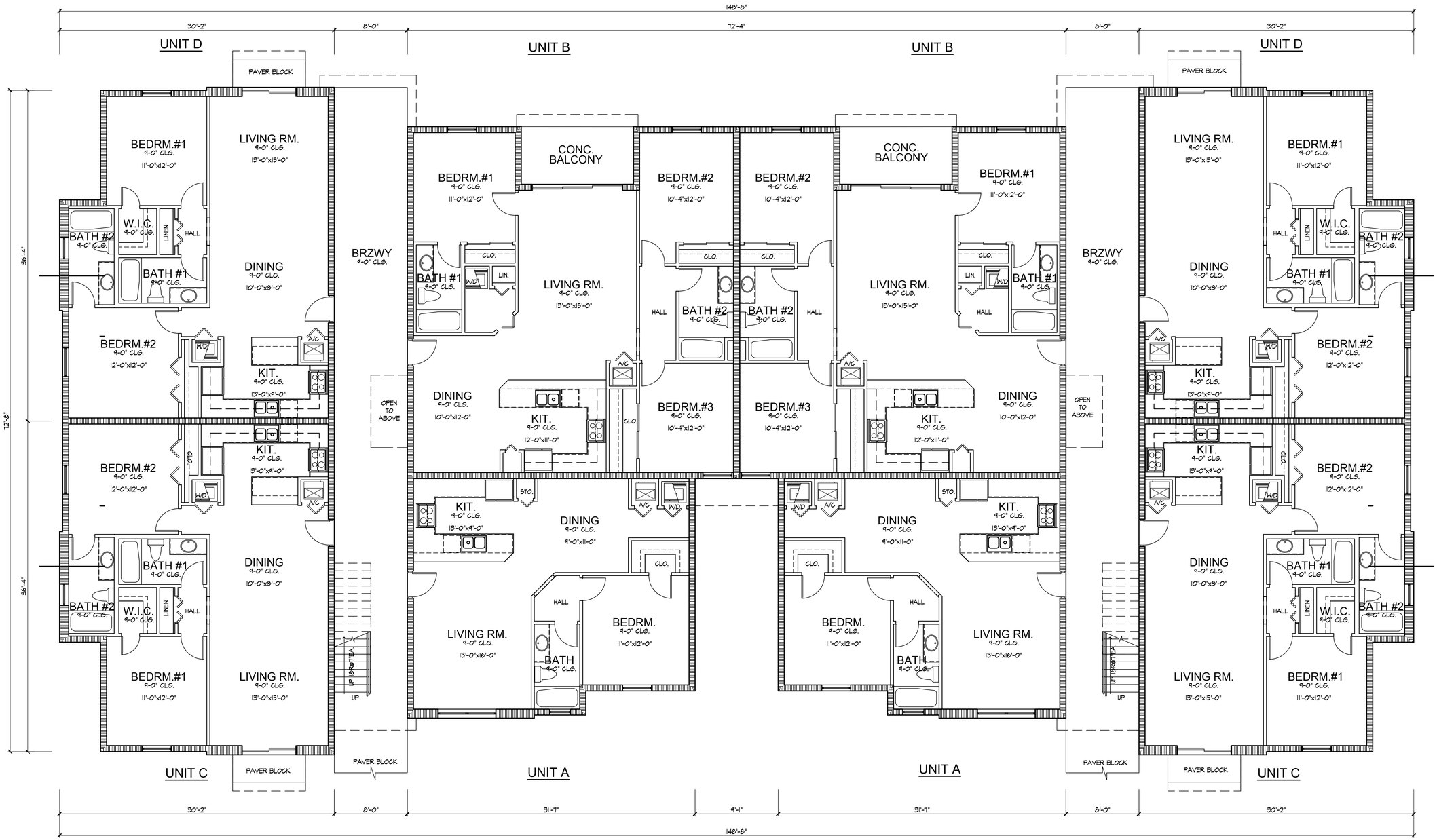
NON CONDITIONED AREAS

NC	BREEZEWAY	522 SF
NC (2)	BREEZEWAY	522 SF
NC (4)	BALCONY(B)	96 SF
NC (8)	BALCONY(B)	96 SF
NC (3)	BALCONY(C)	32 SF
NC (5)	BALCONY(C)	32 SF
NC (7)	BALCONY(D)	32 SF
NC (6)	BALCONY(D)	32 SF
	TTL.	1364 SF

GROSS AREA

GROSS AREA	8159 SF

TOTAL ALL LEVELS:	
TOTAL AC AREA:	23256 SF
TOTAL NON-AC AREA:	4092 SF
TOTAL GROSS AREA:	24477 SF



Scott Blakeslee Disher
AR-0011586 AA-0003285

revisions

no.		date
REVIEW		6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

project

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC.

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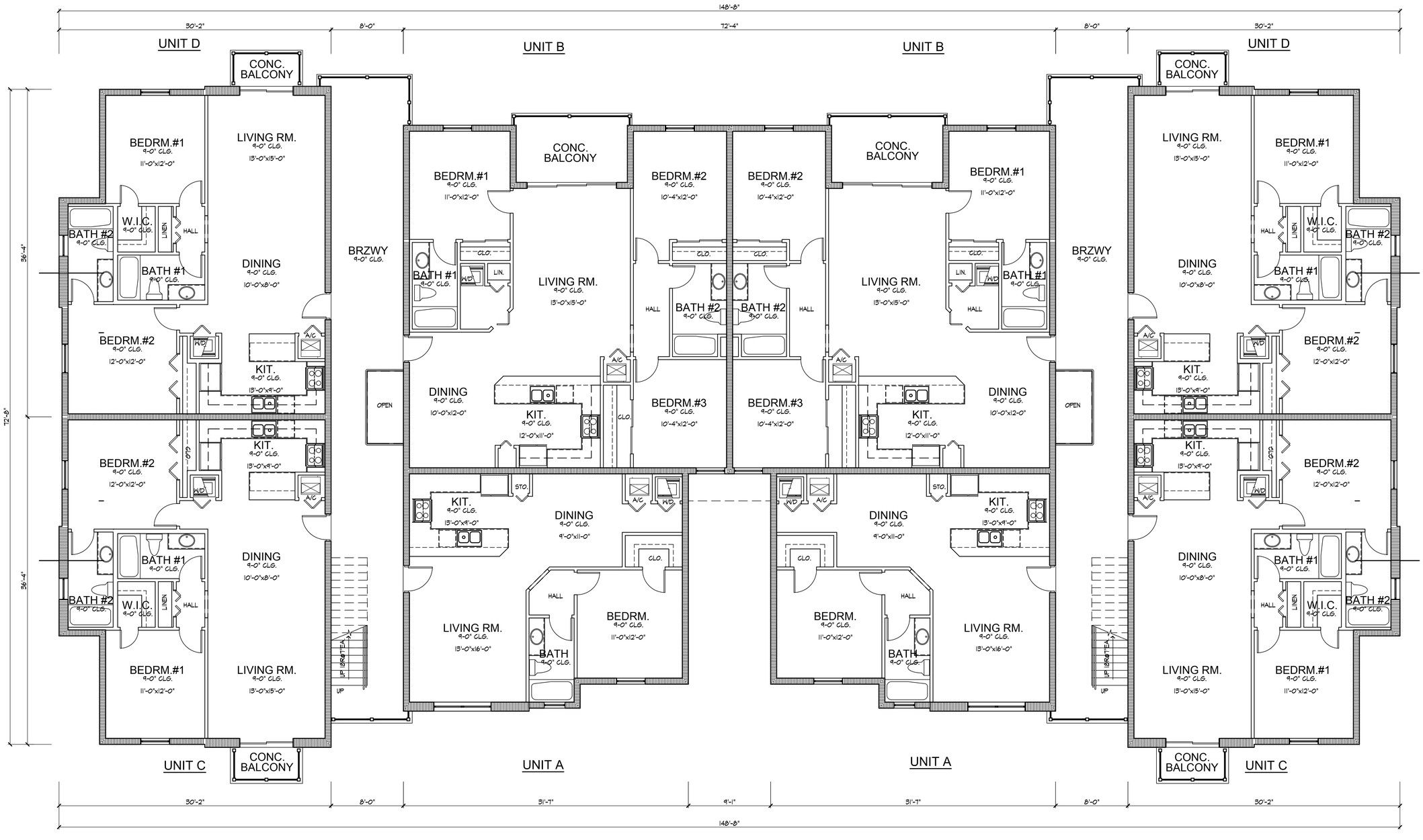
drawing

GROUND FLOOR PLAN

sheet

A-1



revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC.

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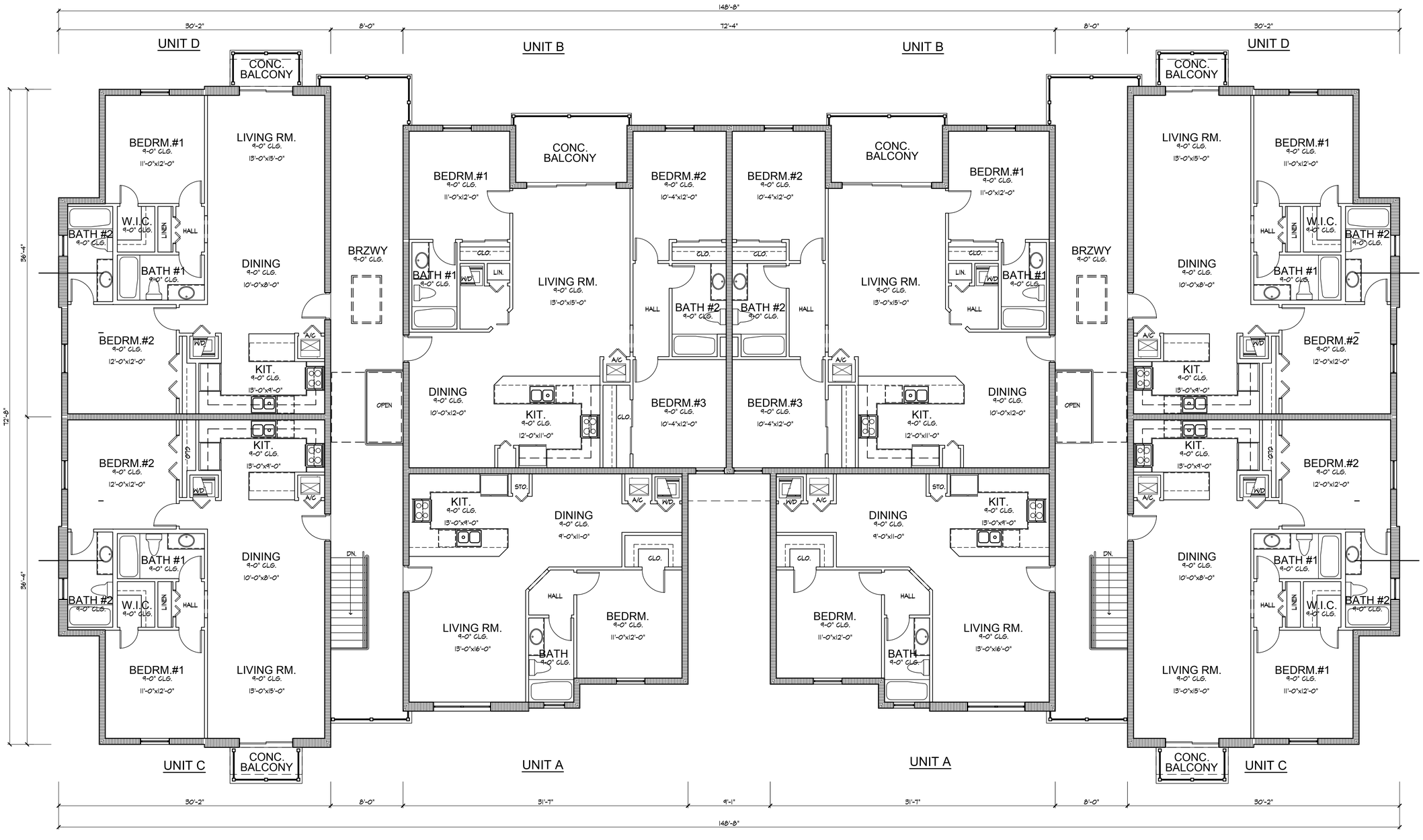
SECOND FLOOR PLAN

sheet

A-2



revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	05/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

24 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESMENT GROUP, LLC.

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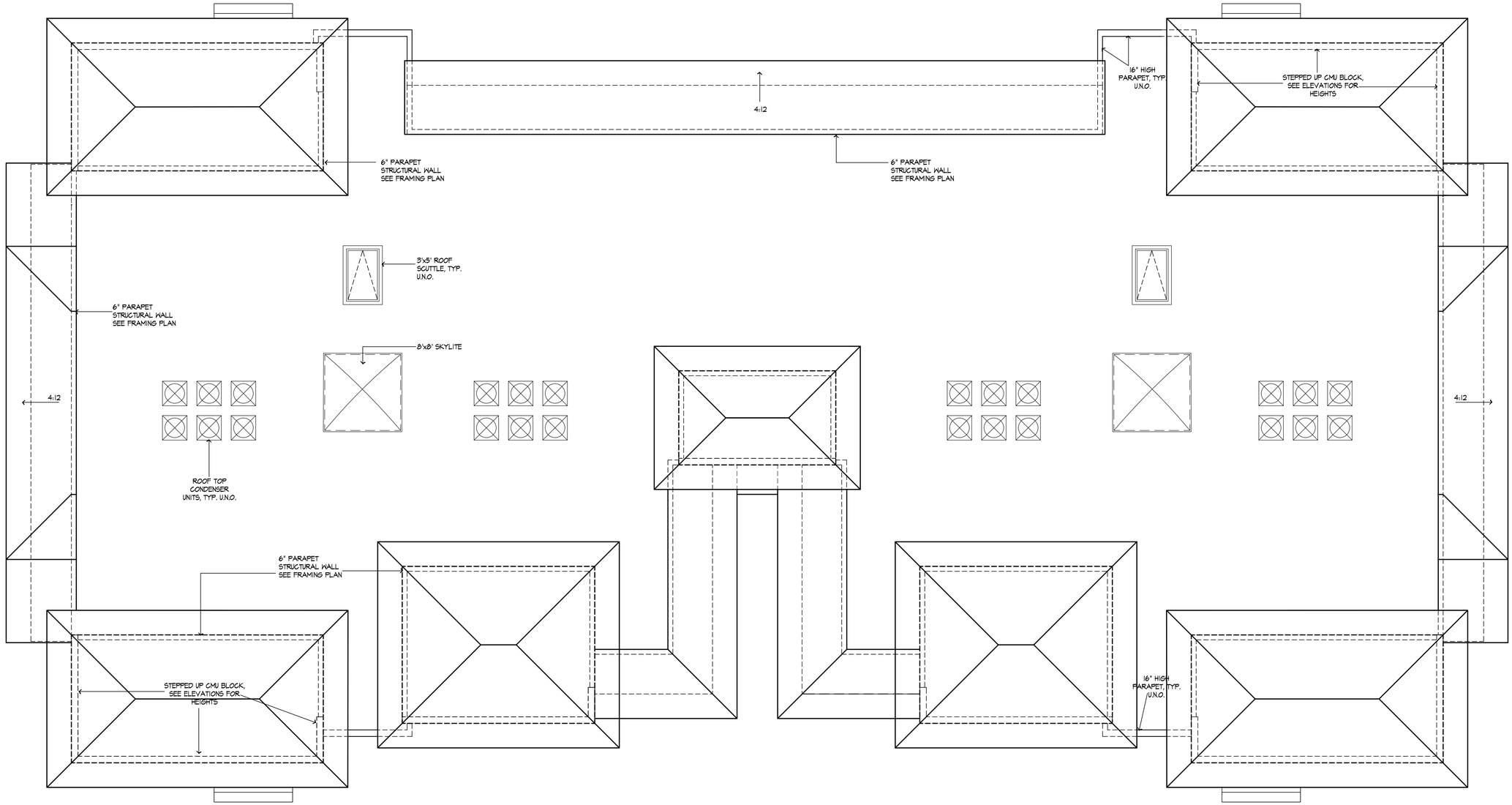
drawing

THIRD FLOOR PLAN

sheet

A-3



revisions

no.	date
REVIEW	6/18/20

designed	SBD
drawn	LTH, ST
checked	SBD
date	03/25/2020
scale	3/16"=1'-0" (U.O.N.)
job no.	190725_AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

24 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA

by: ARROW INVESMENT GROUP, LLC.

project

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drawing

ROOF PLAN

sheet

A-6



LEFT ELEVATION



REAR ELEVATION



FRONT ELEVATION

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190123_CH.AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

ARCHITECTURAL Studio, Inc.

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drawing

ELEVATIONS

sheet

A-2



LEFT ELEVATION



RIGHT ELEVATION

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190123_CH.AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

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drawing

ELEVATIONS

sheet

A-3

CALCULATIONS

AIR CONDITIONED AREAS

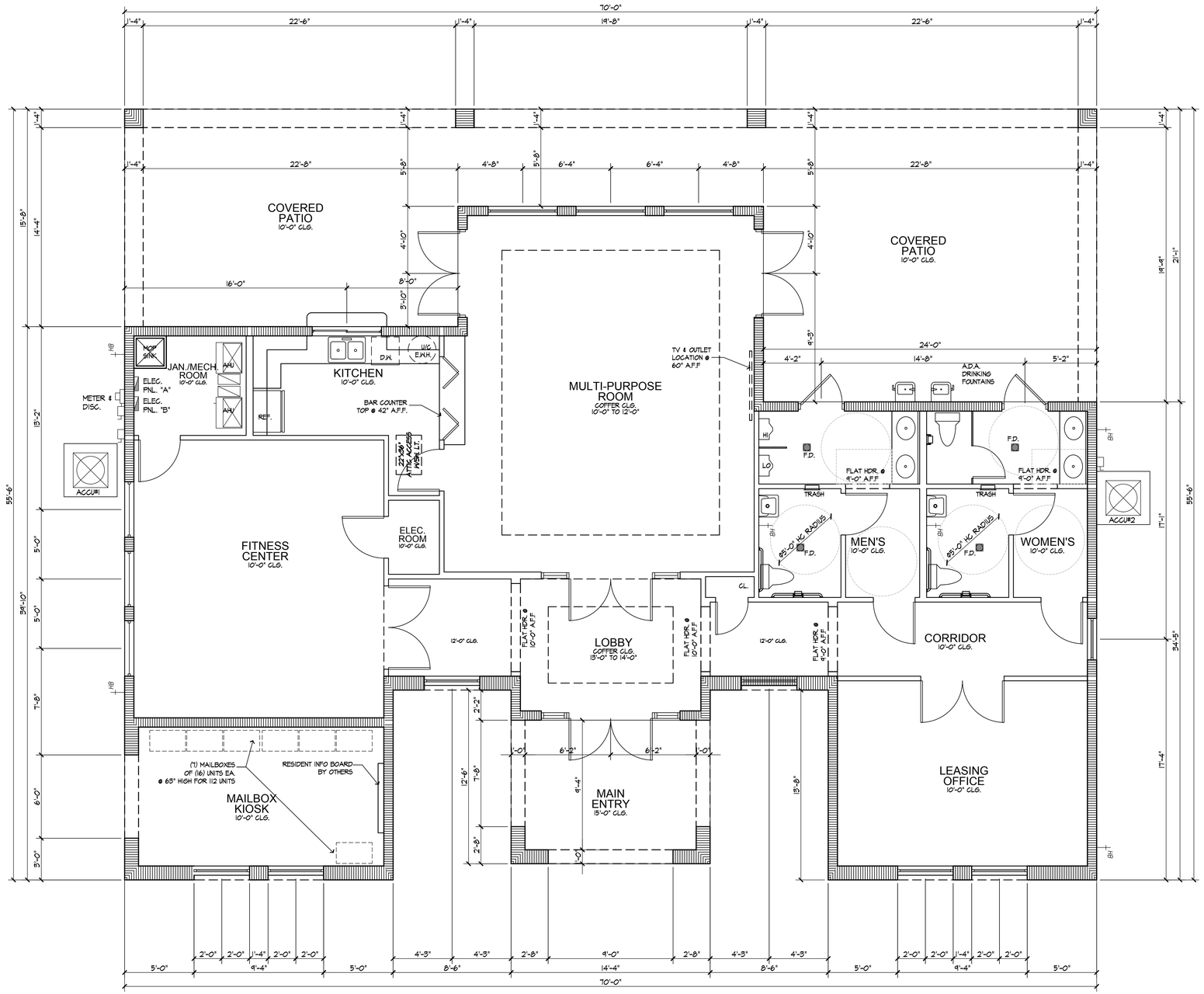
CLUBHOUSE A/C	2239 SF
	2239 SF

NON CONDITIONED AREAS

MAIN ENTRY	148 SF
MAILBOX KIOSK	213 SF
COVERED PATIO	1036 SF
	1397 SF

GROSS AREA

GROSS AREA	3636 SF



revisions

no.	date
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designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190723_CH.AIG

Scott Blakeslee Disher
AR-0011586 AA-0003285

project

CLUBHOUSE

ARIA APARTMENTS
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

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drawing

FLOOR PLAN

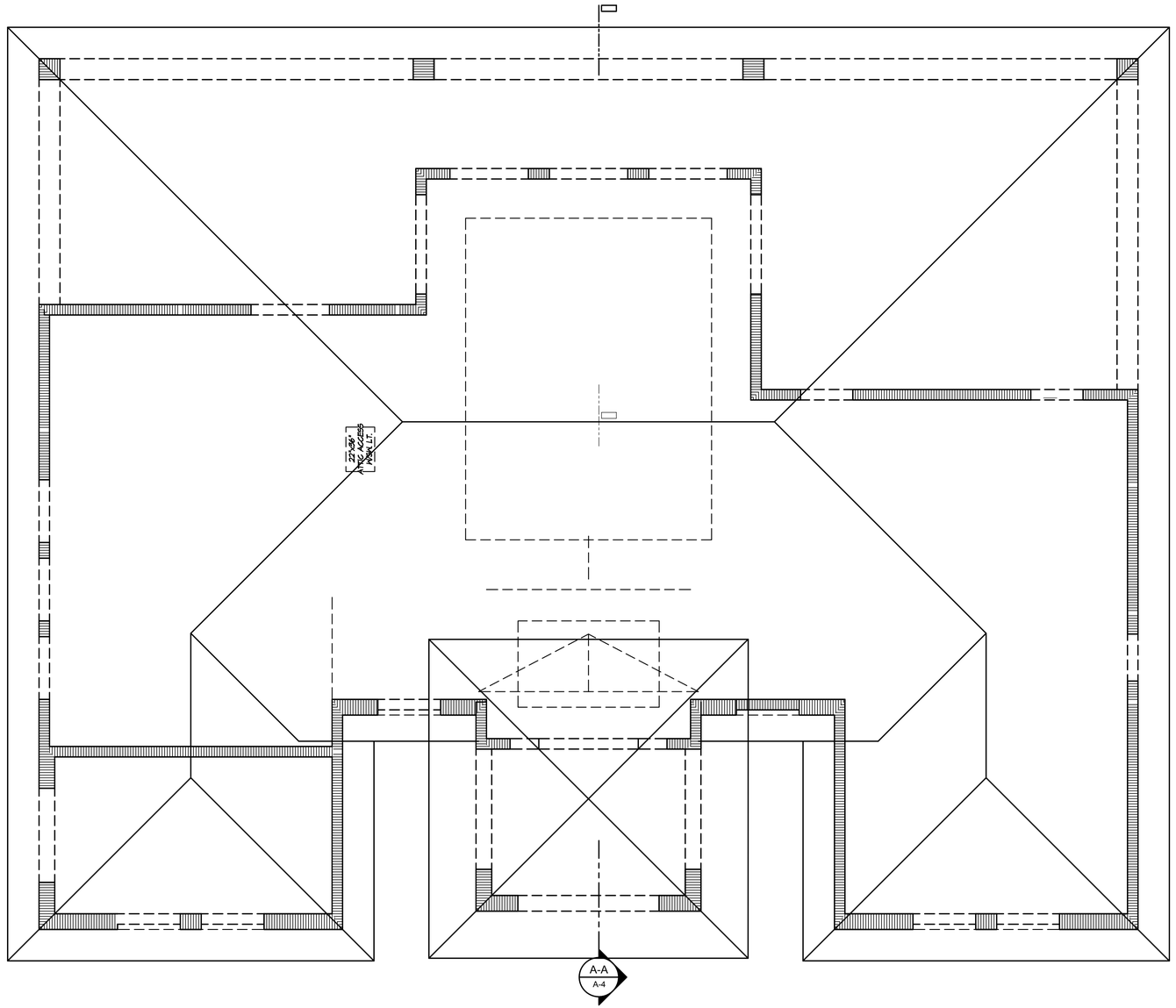
sheet

A-1

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	6/19/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190723_CH.AIG



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AR-0011586 AA-0003285

CLUBHOUSE
project

ARIA APARTMENTS
FT. PIERCE, FLORIDA

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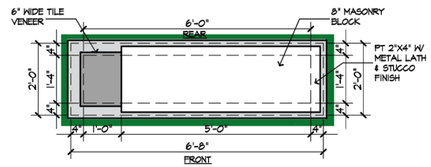
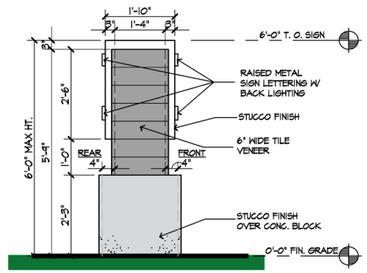
drawing
ROOF
FRAMING
PLAN

sheet
S-2



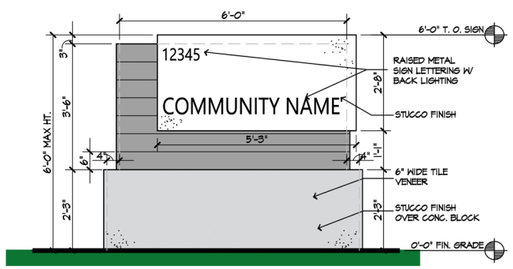
ENTRY MONUMENT PLAN

SCALE: 1/2" = 1'-0"



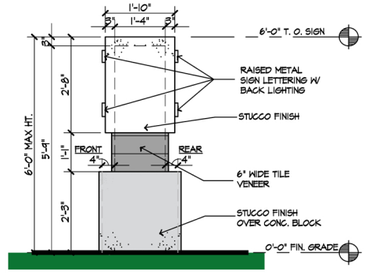
ENTRY MONUMENT LEFT SIDE ELEVATION

SCALE: 1/2" = 1'-0"



ENTRY MONUMENT FRONT ELEVATION

SCALE: 1/2" = 1'-0" (REAR ELEVATION TO MATCH FRONT ELEVATION)



ENTRY MONUMENT RIGHT SIDE ELEVATION

SCALE: 1/2" = 1'-0"

revisions

no.	date
0	//

designed	SBD
drawn	VHV
checked	SBD
date	06/12/20
scale	1/4"= 1'-0" (U.O.N.)
job no.	190724_EM.dig

Scott Blakeslee Disher
AR-0011586 AA-0003285

PROGRESS SET
06/15/20

project

ENTRY MONUMENT

FORT PIERCE NORTH APTS. & COMMERCIAL CENTER
FT. PIERCE, FLORIDA

by: ARROW INVESMENT GROUP

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drawing

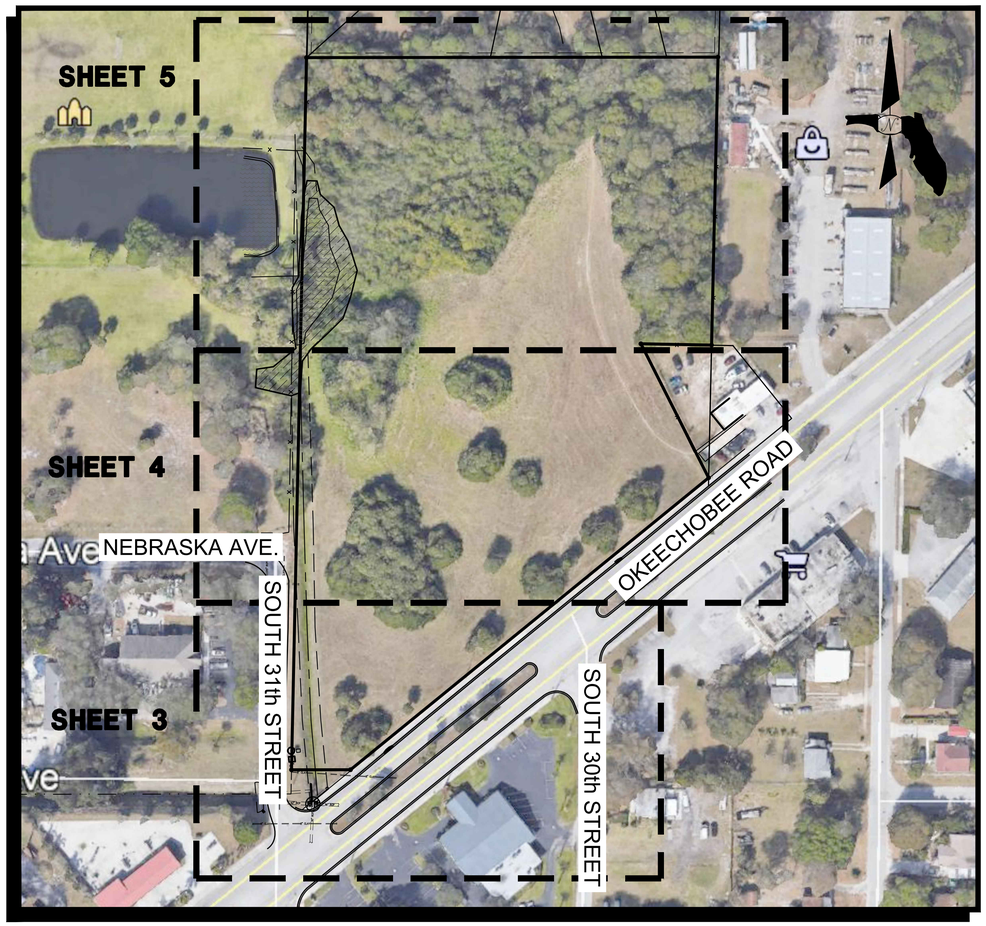
ENTRY MONUMENT

sheet

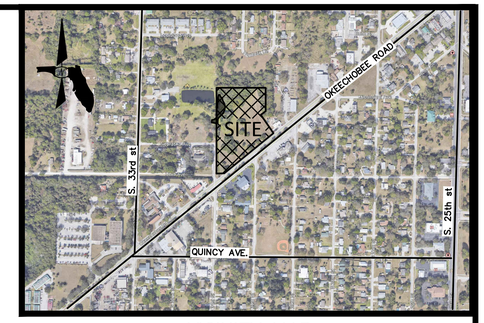
A-1

ST. LUCIE COUNTY
STATE OF FLORIDA

SKETCH OF BOUNDARY SURVEY
FOR
FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD



KEY MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS:
P.O.C.– POINT OF COMMENCEMENT
P.O.B. – POINT OF BEGINNING
P.B. – PLAT BOOK
ORB – OFFICIAL RECORD BOOK
D.B. – DEED BOOK
PG. – PAGE
R/W – RIGHT–OF–WAY
R – RADIUS
Δ – CENTRAL ANGLE
A – ARC LENGTH
U.E. – UTILITY EASEMENT
D.E. – DRAINAGE EASEMENT
(P) – PLAT DIMENSION
(D) – DEED DIMENSION
(M) – MEASURED DIMENSION
℄ – CENTERLINE
IR – IRON ROD
IR/C – IRON ROD WITH CAP AS NOTED
C.M. – 4"x4" CONCRETE MONUMENT
PRM – PERMANENT REFERENCE MONUMENT
PCP – PERMANENT CONTROL POINT
N/D – NAIL & DISK
PK – PARKER KALON
NAD – NORTH AMERICAN DATUM
NAVD – NORTH AMERICAN VERTICAL DATUM
LB – LICENSED BUSINESS
WM – WATER MAIN
TOW – TOP OF WALL
INV – INVERT
DIP – DUCTILE IRON PIPE
PVC – POLYVINYL CHLORIDE PIPE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
MON – MONUMENT
RCP – REINFORCED CONCRETE PIPE
HDPE – HIGH DENSITY POLYETHYLENE PIPE
EL. – ELEVATION

LEGAL DESCRIPTION (ORB 3204, PAGE 743):

BLOCK "D", LESS RIGHTS–OF–WAY, COLLIER SUBDIVISION, ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A RAILROAD SPIKE AT THE SOUTHWEST CORNER OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST, LUCIE COUNTY, FLORIDA;
THENCE RUN N 88°42'30"E, ALONG THE SOUTH LINE OF THE SAID NORTHEAST 1/4, A DISTANCE OF 661.40 FEET TO THE WEST LINE OF BLOCK "D" OF COLLIER'S SUBDIVISION, AS RECORDED IN PLAT BOOK 4, PAGE 63, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA;
THENCE RUN N 00°00'18" W, ALONG THE WEST LINE OF SAID BLOCK D, A DISTANCE OF 27.01 FEET, TO THE POINT OF BEGINNING;
THENCE CONTINUE N 00°00'18" W, A DISTANCE OF 796.62 FEET, TO THE NORTHWEST CORNER OF SAID BLOCK D;
THENCE RUN N 88°43'25" E, ALONG THE NORTH LINE OF SAID BLOCK D, A DISTANCE OF 460.00 FEET;
THENCE RUN S 00°04'02" W, A DISTANCE OF 470.52 FEET, TO THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE RUN S 49°35'30" W, ALONG THE SAID NORTHERLY RIGHT–OF–WAY LINE, A DISTANCE OF 516.56 FEET;
THENCE RUN S 88°42'30" W, A DISTANCE OF 65.96 FEET, TO THE POINT OF BEGINNING,
ALL LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THE FOLLOWING:

A PORTION OF BLOCK "D", COLLIER'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 4, PAGE 63, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID BLOCK "D", SAID CORNER BEING SITUATED ON THE NORTHERLY RIGHT–OF–WAY LINE OF OKEECHOBEE ROAD [STATE ROAD 70];
THENCE, NORTH 28°00'23" W, A DISTANCE OF 167.87 FEET;
THENCE, NORTH 89°51'15" E, A DISTANCE OF 79.00 FEET TO THE EAST LINE OF SAID BLOCK D;
THENCE, SOUTH 00°04'02" W, ALONG SAID EAST LINE, A DISTANCE OF 148.41 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.
SAID LANDS SITUATE, LYING AND BEING IN SECTION 17, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

SURVEY REPORT:

1. THIS IS A BOUNDARY SURVEY, PREPARED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF THE STANDARDS OF PRACTICE SET FORTH IN RULE 5J–17.051 THROUGH 5J–17.053, FLORIDA ADMINISTRATIVE CODE. THE FIELD WORK WAS COMPLETED ON SEPTEMBER 30, 2019.
2. THE SURVEY WAS BASED ON INSTRUCTIONS FROM CLIENT, AND ST. LUCIE COUNTY SURVEY DEPARTMENT INFORMATION.
3. BEARINGS ARE BASED ON S49°35'30"W (DEED) ALONG THE NORTH RIGHT–OF–WAY OF OKEECHOBEE ROAD.
4. THE LEGAL DESCRIPTION IS RECORDED IN OFFICIAL RECORD BOOK 3204 PAGE 743.
5. AREA = 6.796 ACRES, MORE OR LESS.
6. EASEMENTS, RESTRICTIONS, AND OTHER ITEMS OF RECORD SHOWN ARE PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO.756647, DATED JULY 8, 2019.

   NO SEARCH OF THE PUBLIC RECORDS HAS BEEN PERFORMED BY BROWN & PHILLIPS, INC.

   THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ST. LUCIE COUNTY.
7. ALL DISTANCES ARE MEASURED UNLESS NOTED OTHERWISE.
8. THE PROPERTY WAS VACANT AS OF THE DATE OF SURVEY. THE PROPOSED USE IS FOR SITE PLANNING.
9. ALL FIELD–MEASURED CONTROL MEASUREMENTS EXCEEDED AN ACCURACY OF 1:7,500.
10. THE CONTRACTED PURPOSE OF THIS SURVEY IS FOR SITE PLANNING THIS SURVEY IS NOT VALID FOR ANY OTHER USE.
11. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
12. THIS SURVEY WAS PREPARED FOR THE PARTIES LISTED BELOW AND IS NOT ASSIGNABLE:
    –ARROW INVESTMENT GROUP, LLC
    –LIGHTHOUSE GLOBAL INVESTMENTS, INC.
    –OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
13. THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' (SHEET 2) AND 1"=50' (SHEETS 3–5), ON 24"x 36" SHEETS.
14. SOME TOPOGRAPHIC FEATURES MAY BE EXAGGERATED IN SCALE FOR CLARITY. THE CENTER OF THE SYMBOL OF SUCH FEATURES IS THE CORRECT LOCATION.
15. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED AS PART OF THIS SURVEY.
16. ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988, AND ARE REFERENCED TO ST. LUCIE COUNTY BENCHMARK "VIR 3–10", ELEVATION=17.47.
17. +10.0 DENOTES SPOT ELEVATION, REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.
18. © COPYRIGHT 2019 BY BROWN & PHILLIPS, INC. REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND STAMP, OR A DIGITALLY VERIFIED ELECTRONIC SIGNATURE AND SEAL, OF A FLORIDA LICENSED SURVEYOR AND MAPPER EMPLOYED BY BROWN & PHILLIPS, INC.

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988, 615–3991 FAX

DATE	REVISIONS	#
12/19/19	ADD WETLANDS & TREE CHART	1
3/12/20	ADD'L WETLANDS DATA	2

DRAWN: JAO
CHECKED: JEP
F.B.ST. LUCIE CO.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: N.T.S.
DATE: SEPT 2019
SHT. 1 OF 6

JOHN E. PHILLIPS III
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA No. 4826
DATE: _____

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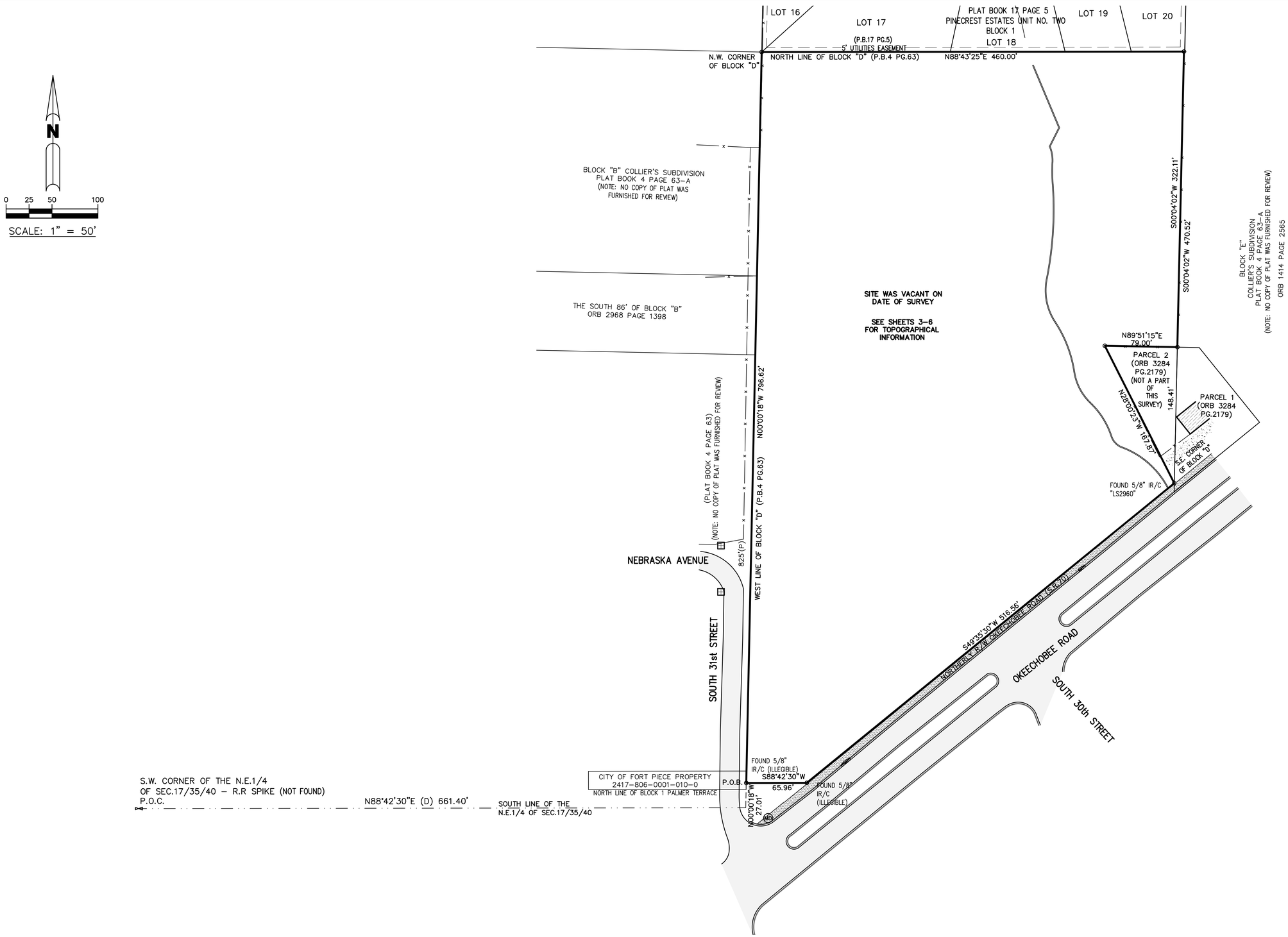

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=50'
DATE: SEPT. 2019
SHEET 2 OF 6

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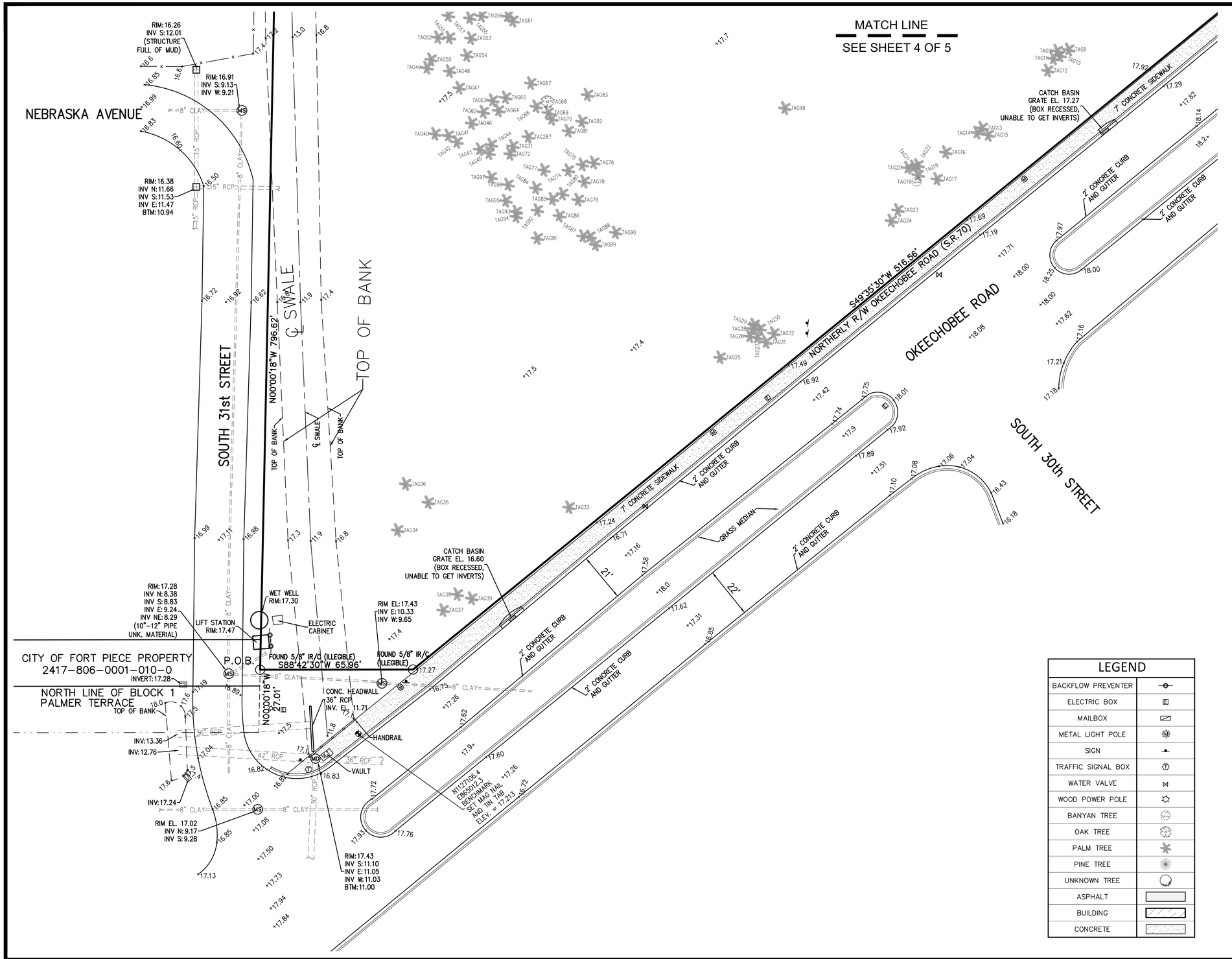

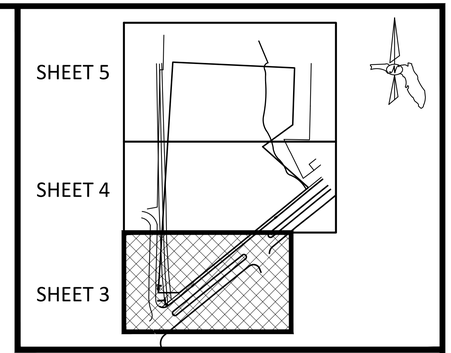

KEY MAP
NOT TO SCALE

N

0 10 20 40

SCALE: 1" = 20'

LEGEND	
BACKFLOW PREVENTER	
ELECTRIC BOX	
MAILBOX	
METAL LIGHT POLE	
SIGN	
TRAFFIC SIGNAL BOX	
WATER VALVE	
WOOD POWER POLE	
BANYAN TREE	
OAK TREE	
PALM TREE	
PINE TREE	
UNKNOWN TREE	
ASPHALT	
BUILDING	
CONCRETE	

ABBREVIATIONS:
P.O.C.- POINT OF COMMENCEMENT
P.O.B. - POINT OF BEGINNING
P.B. - PLAT BOOK
ORB - OFFICIAL RECORD BOOK
D.B. - DEED BOOK
PG. - PAGE
R/W - RIGHT-OF-WAY
R - RADIUS
Δ - CENTRAL ANGLE
A - ARC LENGTH
U.E. - UTILITY EASEMENT
D.E. - DRAINAGE EASEMENT
(P) - PLAT DIMENSION
(D) - DEED DIMENSION
(M) - MEASURED DIMENSION
℄ - CENTERLINE
IR - IRON ROD
IR/C - IRON ROD WITH CAP AS NOTED
C.M. - 4"x4" CONCRETE MONUMENT
PRM - PERMANENT REFERENCE MONUMENT
PCP - PERMANENT CONTROL POINT
N/D - NAIL & DISK
PK - PARKER KALON
NAD - NORTH AMERICAN DATUM
NAVD - NORTH AMERICAN VERTICAL DATUM
LB - LICENSED BUSINESS
WM - WATER MAIN
TOW - TOP OF WALL
INV - INVERT
DIP - DUCTILE IRON PIPE
PVC - POLYVINYL CHLORIDE PIPE
CMP - CORRUGATED METAL PIPE
CONC - CONCRETE
MON - MONUMENT
RCP - REINFORCED CONCRETE PIPE
HDPE - HIGH DENSITY POLYETHYLENE PIPE
EL. - ELEVATION

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF BOUNDARY SURVEY

FORT PIERCE NORTH PROPERTY OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 3 OF 6

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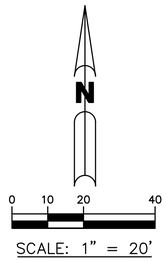

LEGEND			
BACKFLOW PREVENTER		BANYAN TREE	
ELECTRIC BOX		OAK TREE	
MAILBOX		PALM TREE	
METAL LIGHT POLE		PINE TREE	
SIGN		UNKNOWN TREE	
TRAFFIC SIGNAL BOX		ASPHALT	
WATER VALVE		BUILDING	
WOOD POWER POLE		CONCRETE	

ABBREVIATIONS:
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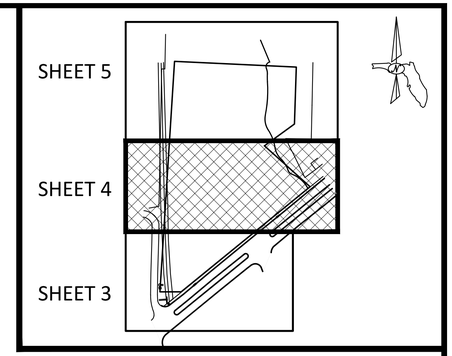
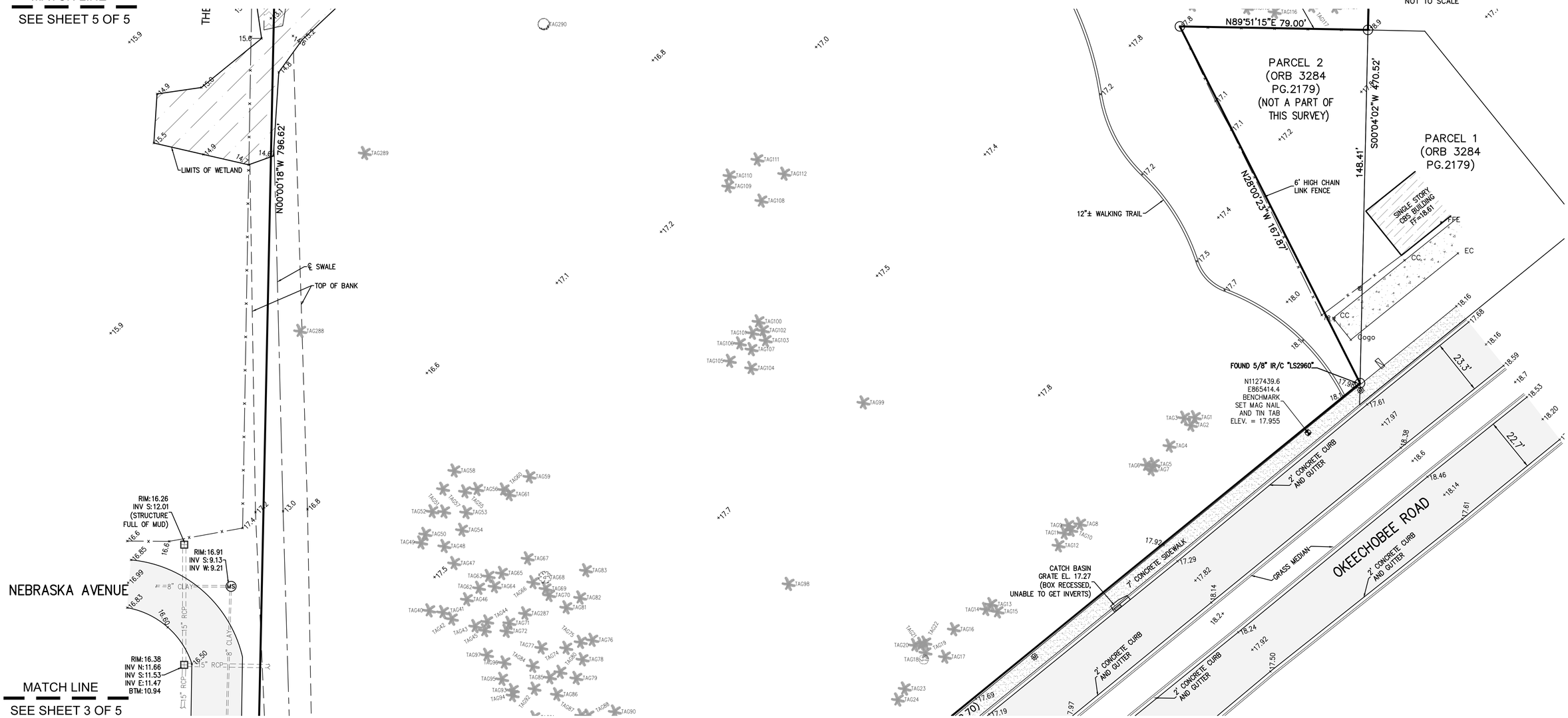


KEY MAP
NOT TO SCALE

MATCH LINE
SEE SHEET 5 OF 5



MATCH LINE
SEE SHEET 3 OF 5

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561–615–3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19–098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 4 OF 6

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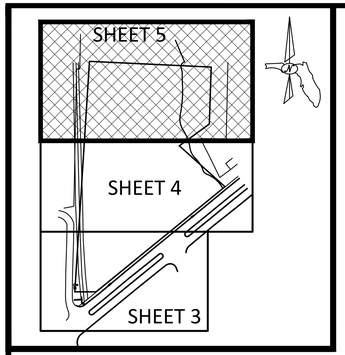

KEY MAP
NOT TO SCALE

LOTS VACANT ON DATE OF SURVEY

LOTS VACANT ON DATE OF SURVEY

℄ WALKING TRAIL

N88°43'25"E 460.00'

N00°00'18"W 796.62'

CHAINLINK FENCE

TOP OF BANK

TOP OF WATER
EL=14.6 ON 11/27/19

TOP OF BANK

EDGE OF WATER

EDGE OF WATER

LIMITS OF WETLAND

CHAINLINK FENCE

WETLAND
AREA=0.186ACRES
(WITHIN PROPOERTY)

TOP OF WATER
EL=13.7 ON 11/27/19

12"± WALKING TRAIL

6' HIGH CHAIN LINK FENCE

S00°04'02"W 322.11'

S00°04'02"W 470.52'

6' HIGH CHAIN LINK FENCE

N89°51'15"E 79.00'

PARCEL 2

MATCH LINE
SEE SHEET 4 OF 5

N

0 10 20 40

SCALE: 1" = 20'

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 – 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 5 OF 6

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TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
1	PALM	20	17'
2	PALM	16	17'
3	PALM	18	15'
4	PALM	14	22'
5	PALM	18	18'
6	PALM	16	14'
7	PALM	18	14'
8	PALM	20	18'
9	PALM	16	15'
10	PALM	24	15'
11	PALM	16	18'
12	PALM	16	19'
13	PALM	22	10'
14	PALM	24	15'
15	PALM	24	13'
16	PALM	16	14'
17	PALM	20	17'
18	BANYAN	48	
19	PALM	16	18'
20	PALM	14	18'
21	PALM	16	15'
22	PALM	16	10'
23	PALM	20	14'
24	PALM	18	15'
25	PALM	18	18'
26	PALM	16	15'
27	PALM	20	15'
28	PALM	16	17'
29	PALM	16	11'
30	PALM	18	14'
31	PALM	24	16'
32	PALM	16	7'
33	PALM	18	19'
34	PALM	16	17'
35	PALM	18	17'
36	PALM	18	18'
37	PALM	18	20'
38	PALM	16	21'
39	PALM	14	17'
40	PALM	20	18'
41	PALM	18	20'
42	PALM	16	19'
43	PALM	16	19'
44	PALM	16	21'
45	PALM	18	19'
46	PALM	20	22'
47	PALM	16	19'
48	PALM	16	18'
49	PALM	18	17'
50	PALM	16	20'
51	PALM	18	19'
52	PALM	10	18'
53	PALM	14	18'
54	PALM	18	18'
55	PALM	20	22'
56	PALM	14	19'
57	PALM	10	18'
58	PALM	14	19'
59	PALM	18	16'
60	PALM	16	16'
61	PALM	18	15'
62	PALM	16	23'
63	PALM	16	21'
64	PALM	20	18'
65	PALM	12	19'
66	PALM	18	21'
67	PALM	18	17'
68	OAKK	5	
69	PALM	20	18'
70	PALM	22	20'
71	PALM	20	20'
72	PALM	16	18'
74	PALM	14	18'
75	PALM	14	9'
76	PALM	24	19'
77	PALM	18	18'
78	PALM	18	17'
79	PALM	14	13'
80	PALM	18	18'
81	PALM	24	19'
82	PALM	18	16'
83	PALM	16	15'
84	PALM	16	19'
85	PALM	16	20'
86	PALM	18	17'
87	PALM	16	20'
88	PALM	16	18'
89	PALM	16	16'
90	PALM	18	22'
91	PALM	18	22'
92	PALM	16	19'
93	PALM	18	21'
94	PALM	14	20'
95	PALM	16	20'
96	PALM	18	20'

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
97	PALM	18	20'
98	PALM	18	19'
99	PALM	16	16'
100	PALM	18	17'
101	PALM	16	17'
102	PALM	18	19'
103	PALM	16	18'
104	PALM	16	18'
105	PALM	16	18'
106	PALM	14	15'
107	PALM	10	8'
108	PALM	18	19'
109	PALM	16	35'
110	PALM	14	20'
111	PALM	16	20'
112	PALM	18	18'
113	OAK	6	
114	PALM	14	13'
115	PALM	22	18'
116	PALM	20	20'
117	PALM	10	7'
118	UNKNOWN	12	
119	OAK	38	
120	PALM	14	18'
121	OAK	18	
122	OAK	12	
123	PALM	18	21'
124	PALM	18	16'
125	PALM	16	26'
126	PALM	18	29'
127	OAK	24	
128	PALM	16	32'
129	UNKNOWN	10	
130	PINE	28	
131	PALM	16	24'
132	UNKNOWN	24	
133	OAK	10	
134	OAK	28	
135	PALM	18	30'
136	OAK	40	
137	PALM	18	18'
138	PINE	10	
139	UNKNOWN	8	
140	OAK	36	
141	PALM	16	20'
142	PALM	14	25'
143	PALM	16	25'
144	OAK	20	
145	PALM	14	26'
146	PALM	16	21'
147	PALM	18	23'
148	OAK	16	
149	UNKNOWN	18	
150	PALM	22	18'
151	PALM	14	7'
152	PALM	22	22'
153	PALM	16	20'
154	PALM	22	18'
155	PALM	18	17'
156	PALM	18	16'
157	PALM	16	13'
158	PALM	12	10'
159	OAK	10	
160	OAK	16	
161	PALM	12	7'
162	PALM	18	24'
163	PALM	16	21'
164	OAK	36	
165	UNKNOWN	14	
166	UNKNOWN	10	
167	UNKNOWN	8	
168	OAKK	12	
169	OAKK	22	
170	OAKK	18	
171	PALM	16	17'
172	PALM	18	13'
173	PALM	12	6'
174	UNKNOWN	16	
175	OAKK	16	
176	UNKNOWN	20	
177	PALM	18	28'
178	PALM	8	8'
179	PALM	20	22'
180	PALM	12	6'
181	PALM	18	18'
182	PALM	18	16'
183	PALM	18	17'
184	OAKK	26	
185	PALM	16	28'
186	PALM	14	23'
187	PALM	16	14'
188	PALM	16	18'
189	PALM	16	20'
190	UNKNOWN	24	
191	PALM	16	14'
192	OAKK	36	
193	UNKNOWN	10	

TAG NUMBER	TREE TYPE	DBH (INCHES)	CLEAR TRUNK HEIGHT
194	OAK	36	
195	PALM	18	26'
196	OAK	18	
197	UNKNOWN	8	
198	UNKNOWN	8	
199	UNKNOWN	8	
200	OAK	10	
201	OAK	6	
202	OAK	6	
203	OAK	4	
204	OAK	6	
205	OAK	8	
206	OAK	8	
207	OAK	8	
208	OAK	6	
209	OAK	6	
210	UNKNOWN	10	
211	PALM	16	18'
212	PALM	18	18'
213	PALM	14	
214	OAK	20	
215	OAK	26	
216	OAK	30	
217	UNKNOWN	10	
218	OAK	14	
219	PALM	20	19'
220	OAK	30	
221	UNKNOWN	8	
222	UNKNOWN	12	
223	UNKNOWN	8	
224	PALM	18	20'
225	UNKNOWN	6	
226	UNKNOWN	6	
227	UNKNOWN	4	
228	UNKNOWN	6	
229	OAK	6	
230	UNKNOWN	12	
231	PALM	22	18'
232	UNKNOWN	30	
233	PALM	22	17'
234	OAK	12	
235	OAK	10	
236	UNKNOWN	8	
237	UNKNOWN	6	
238	UNKNOWN	6	
239	OAK	16	
240	OAK	10	
241	UNKNOWN	14	
242	UNKNOWN	8	
243	UNKNOWN	8	
244	UNKNOWN	10	
245	PINE	10	
246	PINE	10	
247	OAK	10	
248	OAK	10	
249	PALM	18	23'
250	PALM	18	20'
251	PINE	10	
252	PALM	16	22'
253	OAK	26	
254	OAK	16	
255	OAK	14	
256	OAK	12	
257	OAK	14	
258	PALM	22	28'
259	UNKNOWN	8	
260	PALM	12	6'
261	PALM	14	10'
262	UNKNOWN	10	
263	PINE	14	
264	OAK	18	
265	PALM	16	21'
266	PALM	18	20'
267	PALM	20	18'
268	PALM	20	20'
269	OAK	20	
270	OAK	10	
271	PALM	16	13'
272	OAK	36	
273	PALM	16	14'
274	UNKNOWN	6	
275	UNKNOWN	6	
276	PALM	16	25'
277	PALM	12	11'
278	PALM	18	18'
279	OAK	18	
280	OAK	18	
281	PALM	18	22'
282	PALM	18	18'
283	PALM	16	10'
284	PINE	16	
285	PINE	12	
286	PINE	10	
287	PALM	18	19'
288	PALM	16	18'
289	PALM	18	19'
290	UNKNOWN	30	

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUNKNOWNHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAKD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

FORT PINEERCE NORTH
PROPERTY
OKEECHOBEE ROAKD

DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 6 OF 6

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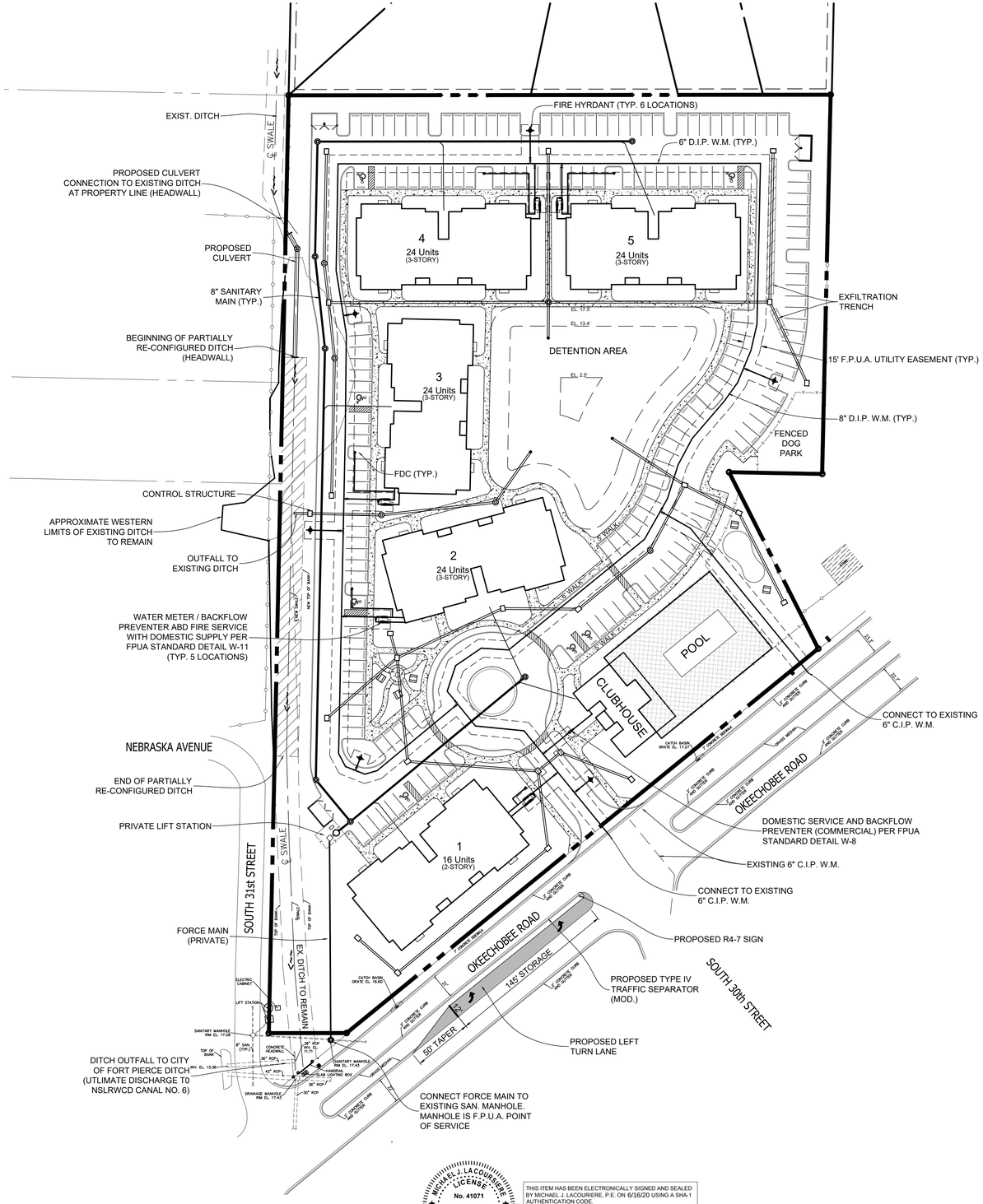


GRAPHIC SCALE

0 25 50 100 150

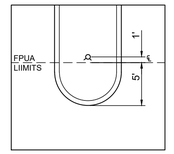
(IN FEET)
1 INCH = 50 FT.

LEGEND

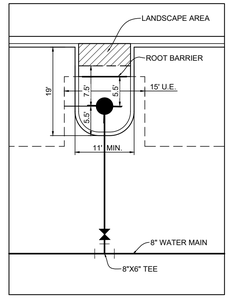
- DRAINAGE PIPE AND INLET (FINAL PIPE SIZES TO BE DETERMINED)
- SANITARY MAIN (8" PVC) AND MANHOLE (SANITARY SYSTEM TO BE PRIVATE)
- WATER MAIN (8" C-900 / D.I.P.)
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT
- RE-CONFIGURED DITCH

NOTES:

1. MINIMUM FINISHED FLOOR ELEVATION TO BE SET AT OR ABOVE 100 - YEAR, 3 - DAY STAGE (ZERO DISCHARGE)
2. MINIMUM PERIMETER ELEVATION TO BE SET AT OR ABOVE 25 - YEAR, 3- DAY STAGE.
3. RESIDENTIAL BUILDINGS TO BE FIRE SPRINKLED. FIRE DEPARTMENT CONNECTIONS TO BE LOCATED 100' MAXIMUM FROM A FIRE HYDRANT.
4. SANITARY SYSTEM TO BE PRIVATE.
5. WATER DISTRIBUTION SYSTEM TO BE PUBLIC, FORT PIERCE UTILITY AUTHORITY.
6. THIS DRAWING UTILIZES BASE SITE PLAN AND SURVEY INFORMATION PREPARED BY LITTERICK LANDSCAPE ARCHITECTURE AND BROWN AND PHILIPS. INC. USED WITH PERMISSION.

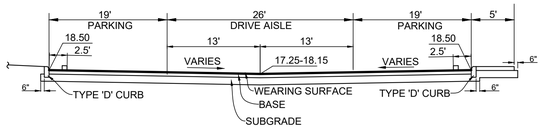


FDC NEAR UTILITY EASEMENT
NOT TO SCALE

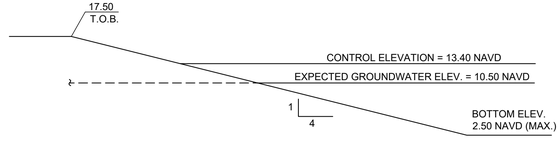


FIRE HYDRANT SHALL HAVE 5' CLEAR ON ALL SIDES
LANDSCAPE MATERIAL SHALL BE LIMITED TO SOD WITHIN 7.5' OF FIRE HYDRANT

HYDRANT LOCATION DETAIL
NOT TO SCALE



TYPICAL PARKING / DRIVE SECTION



DETENTION AREA BANK SECTION

100 YR - 3 D RAINFALL	12.23 INCHES
100 YR - 3 D FLOOD ELEV.	18.58' NAVD
MINIMUM FINISHED FLOOR	19.50' NAVD
25 YR - 3 D RAINFALL	9.5 INCHES
25 YR - 3 D FLOOD ELEV	17.76' NAVD
MINIMUM PERIMETER ELEVATION	17.90' NAVD
10 YR - 1 D RAINFALL	6.0 INCHES
10 YR - 1 D FLOOD ELEV	16.16 NAVD
MINIMUM ROADWAY ELEVATION	17.25' NAVD

CONCEPTUAL SURFACE WATER MANAGEMENT DATA

MICHAEL J. LACOURIERE
LICENSE
No. 41071
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURIERE, P.E. ON 6/16/20 USING A SHA-1 AUTHENTICATION CODE.

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MICHAEL B. SCHORAH & ASSOCIATES, INC.
ENGINEERS ◆ SURVEYORS ◆ DEVELOPMENT CONSULTANTS
TEL. (561) 968.0080 LB# 2438
FAX. (561) 642-9726
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EB# 2438
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FLORIDA 33406

REVISIONS

DRAWN/CHECKED: AMG/MJL
SCALE: 1" = 50'
DATE: MARCH 2020

MICHAEL J. LACOURIERE, P.E. FLORIDA LICENSE NO. 41071 FOR MICHAEL B. SCHORAH AND ASSOCIATES, INC.
DATE:

PROJECT: ARIA APARTMENTS
DESCRIPTION: CONCEPTUAL ENGINEERING PLAN

JOB NO. 1769
SHEET NO. 1
OF 1C

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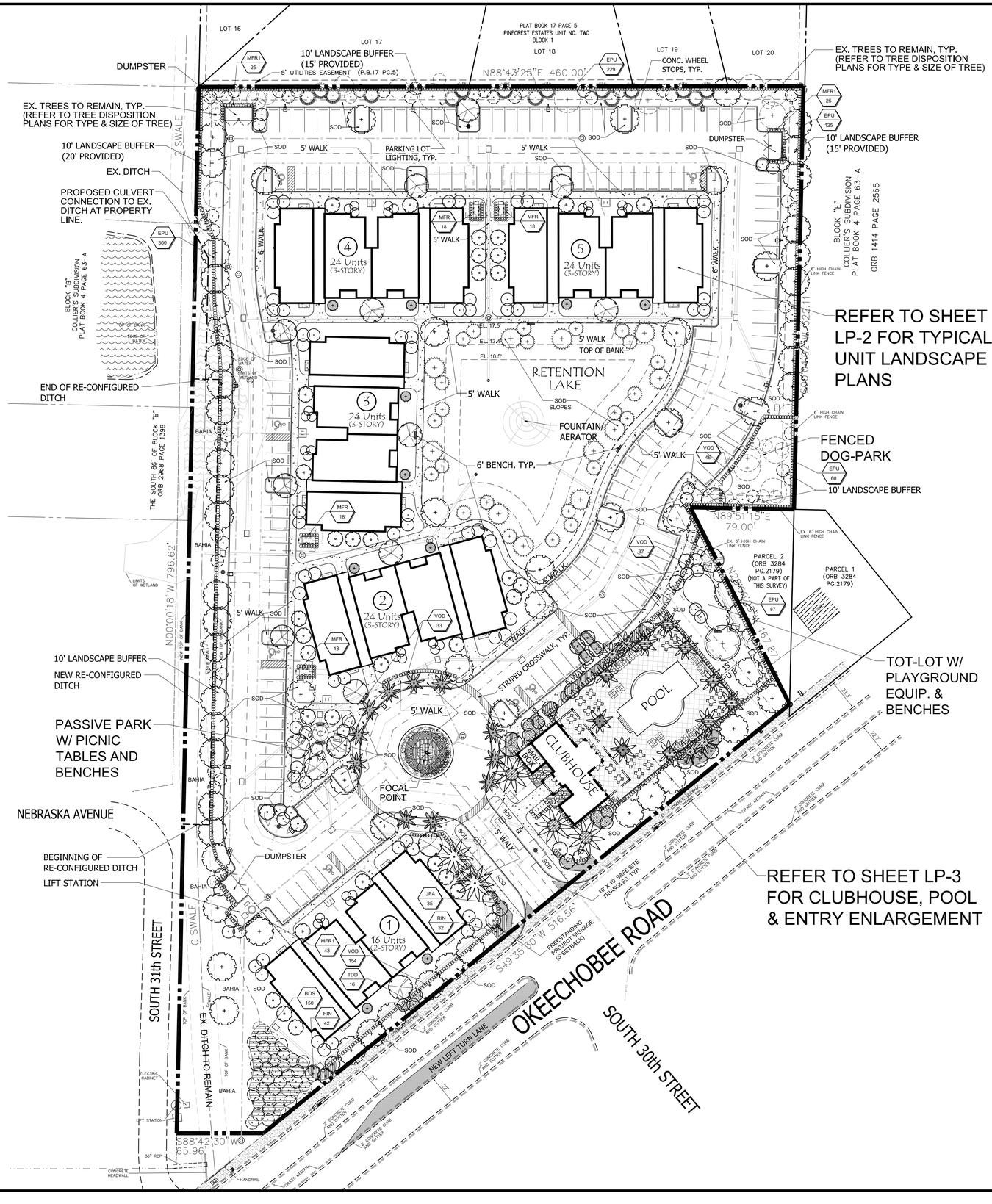
Date\Time : Tue, 16 Jun 2020 - 8:51am



EXISTING TREE LEGEND

	SYMBOL	QUANTITY
EXISTING PALM TO REMAIN	ESP	20
RELOCATED PALM	RSP	155
EXISTING PINE TO REMAIN	EPE	5
EXISTING OAK TO REMAIN	EQL	11

PROPOSED TREE LEGEND

	SYMBOL	QUANTITY
SPECIMEN LIVE OAK, RANCH STYLE *(QUERCUS VIRGINIANA)*	QV1	1
ROYAL POINCIANA *(DELONIX REGIA)*	DR	1
LIVE OAK *(QUERCUS VIRGINIANA)*	QV	67
SYLVESTER PALM *(PHOENIX SYLVESTRIS)*	PS	5
YELLOW TABEBUIA *(TABEBUIA CARAIBA)*	TC	19
CRAPE MYRTLE (MULTI-TRUNK) *(LAGERSTROEMIA INDICA 'MUSKOGEE')*	LM	25
CRAPE MYRTLE (SINGLE TRUNK) *(LAGERSTROEMIA INDICA 'NATCHEZ')*	LI	33
CABBAGE PALM *(SABAL PALMETTO)*	SP	91
WASHINGTON PALM *(WASHINGTONIA ROBUSTA)*	WR	11
COCONUT PALM *(COCOS NUCIFERA)*	CN	14
JAPANESE BLUEBERRY *(ELAEOCARPUS DECIPIENS)*	ED	10
BALD CYPRESS (SMALL) *(TAXODIUM DISTICHUM)*	TD	23
BALD CYPRESS (LARGE) *(TAXODIUM DISTICHUM)*	TD1	11
CHRISTMAS PALM (TRIPLE) *(ADONIDIA MERRILLII)*	AM3	10
S. FLORIDA SLASH PINE *(PINUS ELLIOTTII 'DENSA')*	PE	15

LANDSCAPE DATA

SITE AREA:	296,012.97 S.F. (6.796 ACRES)
VEHICULAR USE AREA:	82,965.43 S.F. (28.0%)
INTERIOR LANDSCAPE AREA REQUIRED:	5,531 S.F. (1 S.F. PER 15 S.F. OF VEH, USE AREA)
INTERIOR LANDSCAPE AREA PROVIDED:	8,284.25 S.F.
INTERIOR TREES REQUIRED:	56 TREES (1 TREE PER 100 S.F. OF REQ'D. INT. LANDSCAPE AREA)
INTERIOR TREES PROVIDED:	166 TREES (110 ADDITIONAL TREES)

PERIMETER LANDSCAPING REQUIREMENTS

BUFFER (SIDE)	LENGTH (L.F.)	REQ'D. WIDTH	PROVIDED WIDTH	REQ'D. AREA (S.F.)	TREES REQ'D.	TREES PROVIDED
NORTH	460'	10'	15'	4,600	*23	33 TREES
SOUTH	582.52'	10'	25'	5,825.2	**20	25 TREES
EAST	568.98'	10'	10-15'	5,689.8	*29	33 TREES
WEST	796.62'	10'	10-20'	7,966.2	*40	46 TREES
				TOTALS:	112	***137 TREES

* REQUIRES 1 TREE PER 200 S.F. OF BUFFER
** REQUIRES 1 TREE PER 300 S.F. OF BUFFER
*** 25 ADDITIONAL TREES

REFER TO SHEET LP-4 FOR PLANT LIST

Landscape Plan

0 20' 40' 80' 120' 160'

Scale: 1" = 40'

NORTH

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LANDSCAPE NOTES

1. ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER AS DEFINED BY THE DIVISION OF PLANT INDUSTRY "GRADES AND STANDARDS" LATEST EDITION.
2. ALL LANDSCAPE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FT. PIERCE CODE.
3. THE LANDSCAPE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS CHANGES WITHOUT THE AUTHORIZATION OF THE CITY OF FT. PIERCE, THE OWNER AND THE LANDSCAPE ARCHITECT.
4. THE LANDSCAPE CONTRACTOR SHALL REVIEW THE PROJECT DRAINAGE AND UTILITY PLANS PRIOR TO CONSTRUCTION AND AVOID ALL CONFLICTS. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS.
6. ALL TREES SHALL BE LOCATED WITHIN A MULCH PLANTING BED WITH A MINIMUM OF TWO (2) FEET OF CLEARANCE TO THE EDGE OF THE BED.
7. ALL SOD SHALL BE STENOTAPHRUM SECONDATUM 'FLORITAM' (ST. AUGUSTINE SOD), UNLESS OTHERWISE NOTED.
8. ALL VEGETATION SHALL BE SELECTED AND POSITIONED SO THAT IT DOES NOT PRESENT OBSTRUCTIONS TO THE LINE OF SIGHT AT INTERSECTIONS PURSUANT TO FLORIDA DEPARTMENT OF TRANSPORTATION SIGHT LINE GUIDELINES.
9. CLEAR VISIBILITY SHALL BE MAINTAINED BETWEEN 30" AND 8' WITHIN SIGHT VISIBILITY TRIANGLES. 10' X 10' SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT THE INTERSECTIONS WITH THE PUBLIC RIGHT OF WAY. IN ADDITION, ALL LANDSCAPING SHALL CONFORM TO THE REQUIREMENTS OF FDOT INDEX 546.
10. ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS, EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN NATIVE SOILS AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.
11. ALL PROPOSED LANDSCAPE AREAS SHALL RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSING DEVICE ACCORDING TO LOCAL AND STATE CODES. IRRIGATION WATER SHALL BE PULLED FROM A WELL SOURCE AND CITY WATER WILL BE USED AROUND BUILDING.
12. ALL ABOVE GROUND UTILITIES SHALL BE SCREENED FROM VIEW ON THREE SIDES WITH AN APPROPRIATE HEDGE MATERIAL. HEIGHT OF PLANT MATERIAL AT TIME OF INSTALLATION SHALL BE AT LEAST AS TALL AS THE UTILITY BEING SCREENED AND SHALL BE SPACED APPROPRIATELY IN ORDER TO PROVIDE COMPLETE SCREENING OF UTILITY WITHIN ONE YEAR OF INSTALLATION.
13. ALL TREES NOT LOCATED WITHIN A LANDSCAPE BED SHALL RECEIVE A 4-5' DIA. MULCH RING.
14. ALL EXOTIC AND NUISANCE VEGETATION SHALL BE REMOVED FROM SUBJECT PROPERTY PRIOR TO ANY CERTIFICATE OF OCCUPANCY.
15. TREES ARE TO BE INSTALLED WITH A 10' SEPARATION FROM FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A 10' SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM. HOWEVER IN NO CASE SHALL A TREE ENCROACH CLOSER THAT 5' WITH A ROOT BARRIER PRESENT. ONLY SOD CAN BE INSTALLED WITHIN 7.5' OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHALL.
16. ALL PLANT MATERIAL SHALL BE INSTALLED AT THE HEIGHT, SPREAD AND DBH SHOWN ON THE PLANT LIST, CONTAINER SIZES ARE GIVEN AS A SUGGESTION ONLY.

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

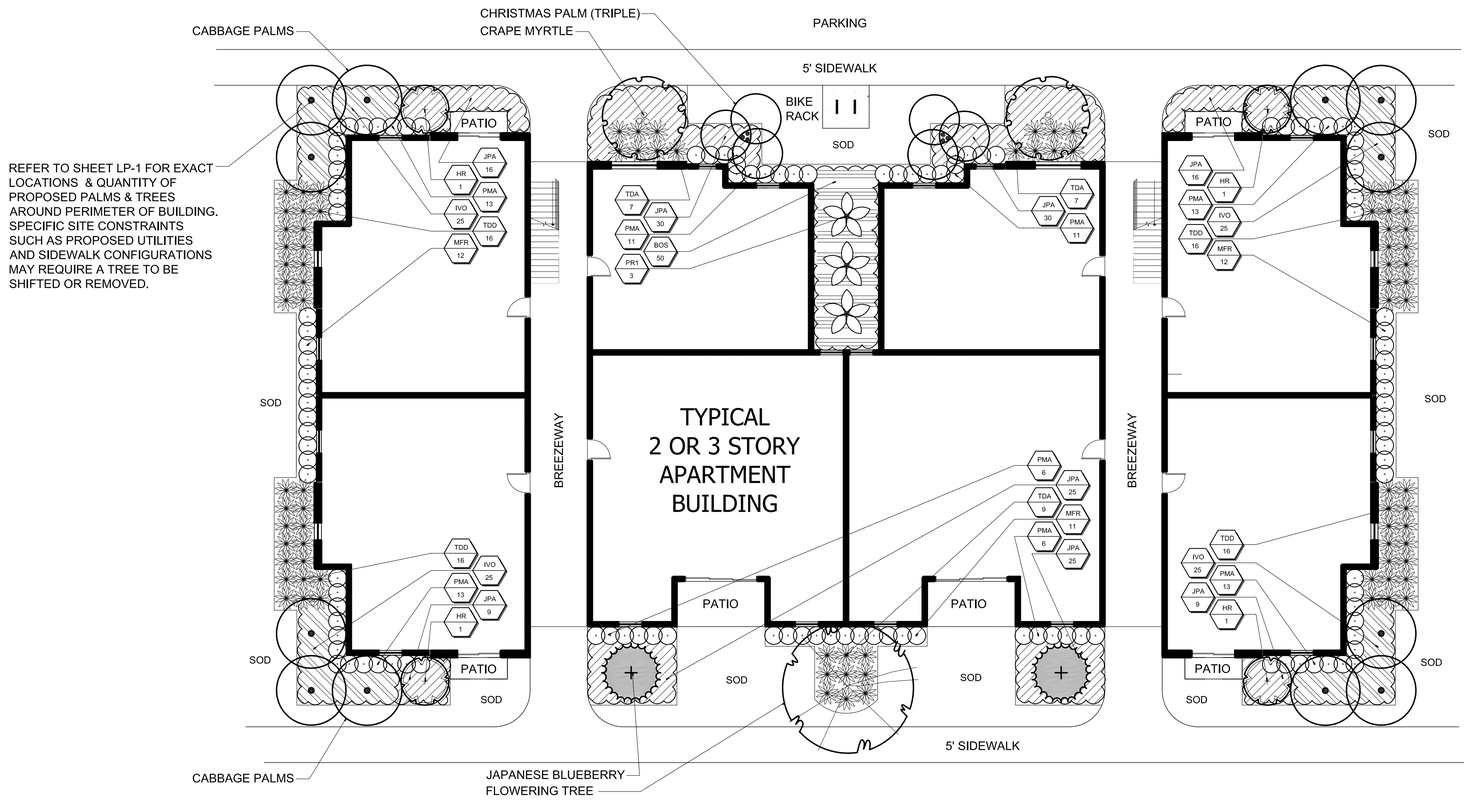
Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

LP-1

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045



TYPICAL UNIT PLANT LIST (5 BUILDINGS)

QUANTITIES ARE FOR EACH BUILDING

TREES

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
M	PR1	3	PHOENIX ROEBELENII	PYGMY DATE PALM (SINGLE)	7' O.A.	7'	FULL & THICK, SINGLE TRUNK SPECIMEN, MATCHED
M	HR	4	HIBISCUS ROSA-SINENSIS	PINK HIBISCUS STD.	6-7' O.A. STD.	3-4'	FULL & THICK, SINGLE TRUNK STD.

SHRUBS & GROUNDCOVERS

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	64	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
* V	TDA	23	TRIPSACUM DACTYLOIDES	FAKAHATCHEE GRASS	#3, 24" O.A.	48" O.C.	FULL & THICK
* V	BOS	50	NEPHROLEPIS EXALTATA	BOSTON FERN	#3, 16" O.A.	24" O.C.	FULL & THICK
M	PMA	86	PODOCARPUS MACROPHYLLUS	PODOCARPUS	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR	35	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	IVO	100	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" O.A.	24" O.C.	FULL & THICK
M	JPA	160	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

SOD: ST. AUGUSTINE 'FLORITAM'
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.

Typical Unit Landscape Plan

0 5' 10' 20' 30' 40'
NORTH
Scale: 1" = 10'

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

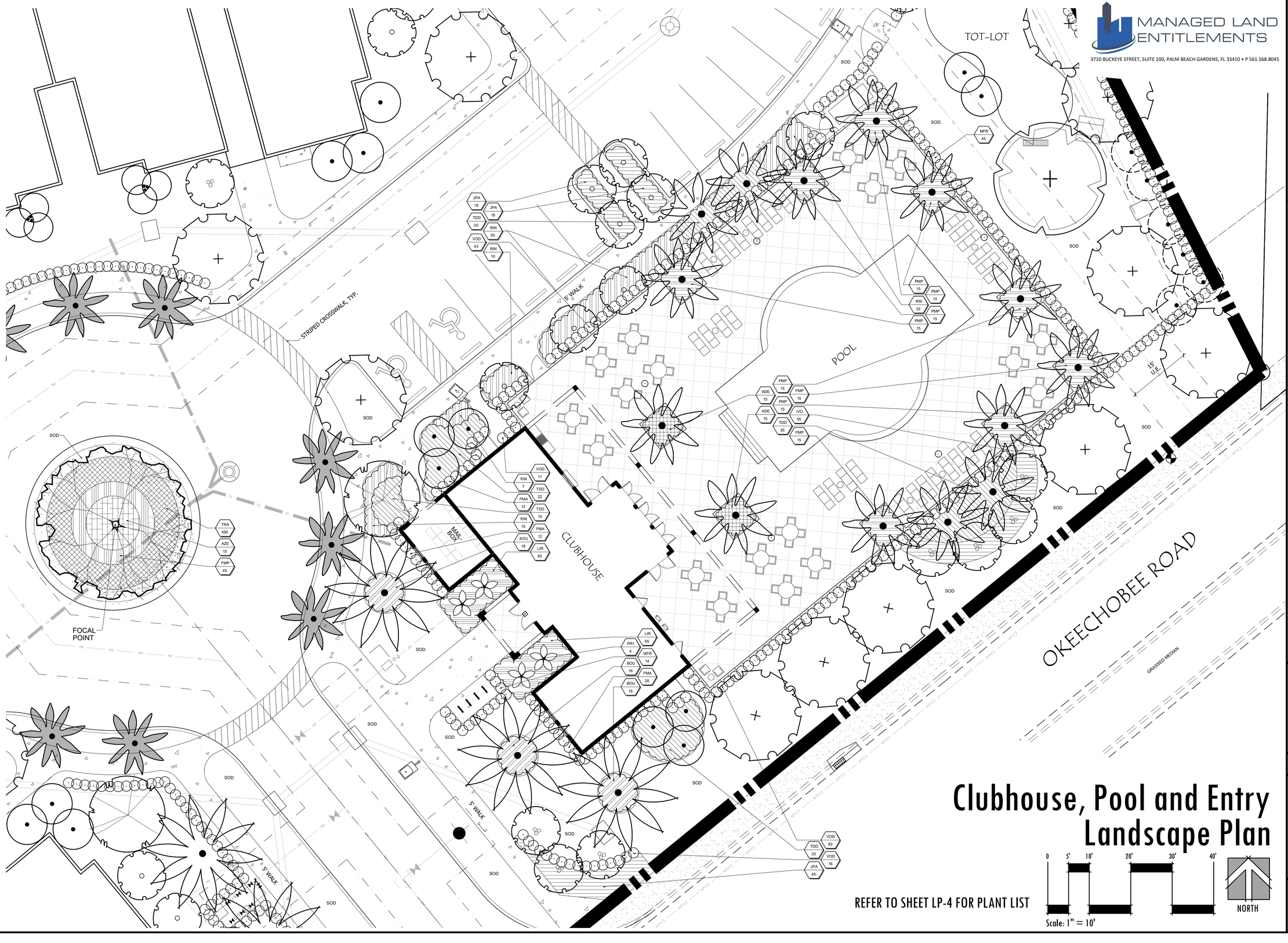
Ft. Pierce, Florida

Landscape Architect of Record
REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA
Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 10'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
LP-2


TOT-LOT
SOD
MFR 45
JPA 18
JPA 18
TDD 20
RIN 50
VOD 43
RIN 10
5' WALK
STRIPED CROSSWALK, TYP.
PMP 15
PMP 15
RIN 22
PMP 15
PMP 15
POOL
15' SET
PMP 15
ADE 15
PMP 15
PMP 15
ADE 15
IVO 55
TDD 35
PMP 15
SOD
SOD
SOD

PLANT LIST (LP-1 & LP-3)

NOTE: DOES NOT INCLUDE PLANTS SPECIFIED ON SHEET LP-2, TYPICAL UNIT LANDSCAPE PLAN

	SYM	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
* V	RSP	155	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		RELOCATED CABBAGE PALM
* V	ESP	20	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		EXISTING CABBAGE PALM TO REMAIN
* V	EPE	5	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	SEE DISPOSITION CHART		EXISTING SLASH PINE TO REMAIN
* V	EQL	11	QUERCUS LAURIFOLIA	LAUREL OAK	SEE DISPOSITION CHART		EXISTING LAUREL OAK TO REMAIN
* V	PE	15	PINUS ELLIOTTII 'DENSA'	S. FLA. SLASH PINE	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
* V	SP	91	SABAL PALMETTO	CABBAGE PALM	12-22' C.T.	N/A	SLICK TRUNK, HURRICANE CUT, STAGGER HEIGHTS
M	DR	1	DELONIX REGIA	ROYAL POINCIANA	14-16' O.A., 3.5" DBH	7'	FULL & THICK, SINGLE TRUNK, 3" CAL.
* V	TD	23	TAXODIUM DISTICHUM	BALD CYPRESS	8' O.A., 1.5" DBH	4'	FULL & THICK, SINGLE TRUNK
* V	TD1	11	TAXODIUM DISTICHUM	BALD CYPRESS	14' O.A., 3" DBH	6'	FULL & THICK, SINGLE TRUNK
M	WR	11	WASHINGTONIA ROBUSTA	WASHINGTON PALM	20' O.A.	N/A	FULL & THICK, MATCHED
* V	QV	67	QUESRCUS VIRGINIANA	LIVE OAK	14' O.A., 3" DBH	6'	FULL & THICK
* V	QV1	1	QUESRCUS VIRGINIANA	RANCH LIVE OAK	20' O.A., 8" DBH	20'	FULL & THICK, RANCH STYLE, MULTI-TRUNK SPECIMEN
V	PS	5	PHOENIX SYLVESTRIS	SYLVESTER PALM	12' WD	-	FULL & THICK, MATCHED SPECIMENS
M	ED	10	ELAEOCARPUS DECIPIENS	JAPANESE BLUEBERRY	14' O.A., 3" DBH	5'	FULL & THICK TO GROUND
M	LM	25	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE (LAVENDER)	14' O.A.	6'	FULL & THICK, MULTI-TRUNK, 5' C.T.
M	LI	33	LAGERSTROEMIA INDICA 'NATCHEZ'	CRAPE MYRTLE (WHITE)	12-14' O.A.	5'	FULL & THICK, SINGLE TRUNK STD., 2.5" DBH
M	TC	19	TABEBUIA CARAIBA	YELLOW TABEBUIA	14' O.A., 3" DBH	5'	FULL & THICK
M	AM3	10	ADONIDIA MERRILLII	CHRISTMAS PALM (TRIPLE)	14' O.A., TRIPLE	-	FULL & THICK, TRIPLE TRUNK
M	CN	14	COCOS NUCIFERA	COCONUT PALM	12' WD.	-	FULL & THICK, MATCHED HEIGHTS
M	PR1	4	PHOENIX ROEBELENII	PYGMY DATE PALM	7' O.A., SINGLE	7'	FULL & THICK, MATCHED HEIGHTS, SINGLE TRUNK

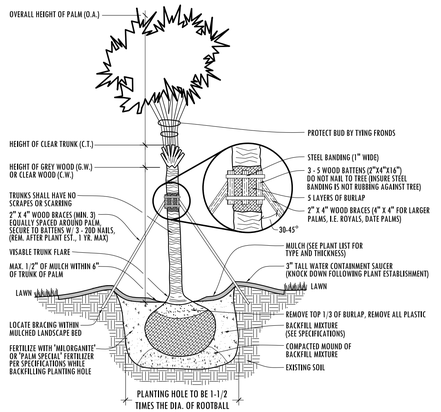
	SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	128	TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
V	PMA	52	PODOCARPUS MACROPHYLLUS	JAPANESE YEW	#7, 30" O.A.	24" O.C.	FULL & THICK
M	PMP	165	PODOCARPUS MACROPHYLLUS 'PRINGLES'	DWF. PODOCARPUS	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	IVO	55	ILEX VOMITORIA	DWF. YAUPON HOLLY	#3, 14" X 14"	24" O.C.	FULL & THICK
* V	MFR	131	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#3, 24" O.A.	24" O.C.	FULL & THICK
* V	MFR1	93	MYRCIANTHES FRAGRANS	SIMPSON STOPPER	#7, 36" O.A.	24" O.C.	FULL & THICK
M	VOD	423	VIBURNUM ODORITISSIMUM	SWEET VIBURNUM	#3, 24" O.A.	24" O.C.	FULL & THICK
M	LIR	130	LIRIOPE MUSCARI	GREEN LIRIOPE	#3, 14" X 14"	18" O.C.	FULL & THICK
M	EPU	801	ELEAGNUS PUNGENS	SILVERTHORN	#3, 24" O.A.	24" O.C.	FULL & THICK
M	RIN	178	RAPHIOLEPIS INDICA	INDIAN HAWTHORN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	ADE	30	ASPARAGUS DENSIFLORUS 'MYERII'	FOXTAIL FERN	#3, 16" X 16"	24" O.C.	FULL & THICK
M	JPA	116	JUNIPERUS CHINENSIS 'PARSONII'	PARSON'S JUNIPER	#3, 16" SPD.	24" O.C.	FULL & THICK
* V	BOS	150	NEPHROLEPIS BISSERATA	BOSTON FERN	#3, 16" O.A.	36-48" O.C.	FULL & THICK
V	BOU	54	BOUGAINVILLEA 'HELEN JOHNSON'	DWF. BUGAINVILLEA	#3, 16" X 16"	24" O.C.	FULL & THICK
M	AZE	15	ALPINIA ZERUMBET	VAR. SHELL GINGER	#3, 20" O.A.	36" O.C.	FULL & THICK
M	TRA	490	TRACHELOSPERMUM ASIATICUM 'MINIMA'	DWF. JASMINE	#1, 12" SPD.	12" O.C.	FULL & THICK

* ASTERISK DENOTES NATIVE PLANT MATERIAL
V INDICATES VERY DROUGHT TOLERANT PLANT MATERIAL
M INDICATES MODERATELY DROUGHT TOLERANT PLANT MATERIAL

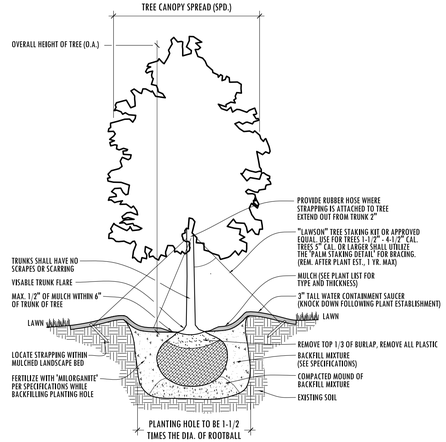
SOD: ST. AUGUSTINE 'FLORITAM' (BAHIA WHERE NOTED)
MULCH: 3" SHREDDED MELALEUCA MULCH (OR APPROVED RECYCLED MULCH) TO BE APPLIED TO ALL PLANTING BEDS.

IRRIGATION NOTE:
ALL NEW LANDSCAPE AREAS SHALL BE RECEIVE 100% OVERLAP COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR.
IRRIGATION WATER SOURCE: WELL & PUMP

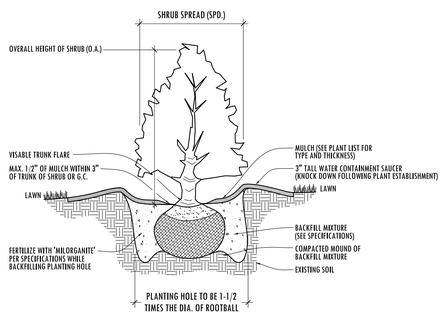
PLANTING DETAILS



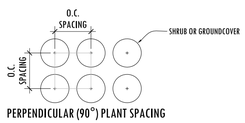
PALM PLANTING DETAIL



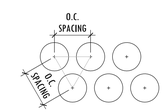
TREE PLANTING DETAIL



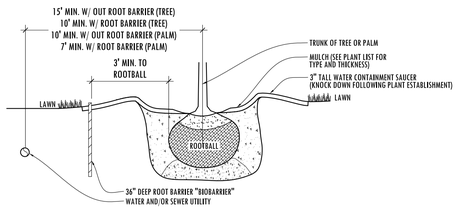
SHRUB & GROUNDCOVER PLANTING DETAIL



PERPENDICULAR (90°) PLANT SPACING



TRIANGULAR PLANT SPACING (RECOMMENDED)



ROOT BARRIER DETAIL

PLANTING SPECIFICATIONS

1. SCOPE OF WORK

LANDSCAPE CONTRACT WORK INCLUDES, BUT IS NOT LIMITED TO, SOIL PREPARATION, FINE OR FINISH GRADING, FURNISHING AND INSTALLING PLANT MATERIAL, WATERING, STAKING, GUYING AND MULCHING.

ALL LABOR AND MATERIAL FOR SOIL AMENDMENTS AND FERTILIZER THAT IS REQUIRED TO INSURE THE SUCCESSFUL ESTABLISHMENT AND SURVIVAL OF THE PROPOSED VEGETATION, AS WELL AS ALL THE COST FOR THE REMOVAL OF UNSUITABLE OR EXCESS BACKFILL MATERIAL, SHALL BE INCLUDED IN THE CONTRACTOR'S BID TO PERFORM THE WORK REPRESENTED IN THIS PLAN SET.

2. QUALITY ASSURANCE

LANDSCAPE CONTRACTOR MUST BE REGULARLY ENGAGED IN THE INSTALLATION OF LIVING PLANT MATERIAL. LABOR CREWS SHALL BE CONTROLLED AND DIRECTED BY A LANDSCAPE FOREMAN WELL VERSED IN LANDSCAPE INSTALLATION, PLANT MATERIALS, READING PLANS AND COORDINATION BETWEEN THE JOB AND NURSERY.

THE LANDSCAPE CONTRACTOR AND IRRIGATION CONTRACTOR SHALL REVIEW LAYOUT AND SCHEDULING PRIOR TO INSTALLATION OF MATERIAL. MINOR ADJUSTMENT TO IRRIGATION DESIGN MAY BE MADE IN RESPONSE TO THE NEEDS OF SPECIFIC PLANT MATERIAL. THE LANDSCAPE ARCHITECT MUST BE NOTIFIED OF SUCH CHANGES.

3. MATERIALS

PLANT SIZE AND QUALITY
PLANT SPECIES AND SIZES SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS, NOMENCLATURE SHALL CONFORM TO STANDARD PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS PARTS I & II, LATEST EDITION PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE FLORIDA GRADE NUMBER 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. TIGHTLY KNIT PLANT, SO TRAINED OR FAVORED IN ITS DEVELOPMENT THAT FIRST APPEARANCE IS UNQUESTIONABLE AND IT IS OUTSTANDINGLY SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND FREE OF DISEASE AND INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES AND PALMS FOR PLANTING ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY AND FLORIDA NUMBER 1. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANTS SHALL BE FREE OF WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS OF GOOD QUALITY AND BE IN A HEALTHY GROWING CONDITION.

CONTAINER GROWN PLANTS SHALL HAVE A DEVELOPED ROOT STRUCTURE SO THAT THE ROOT MASS STAYS IN TACT WHEN REMOVED FROM CONTAINER. IN NO CASE SHALL THE PLANT CONTAIN CIRCLING ROOTS NOR BE ROOT-BOUND.

QUANTITIES
ALL QUANTITIES INDICATED ON THE PLANT LIST ARE INTENDED AS A GUIDE FOR THE BIDDERS AND DOES NOT RELIEVE THE BIDDER OF HIS RESPONSIBILITY TO DO A COMPREHENSIVE PLANT TAKE OFF. SHALL A DISCREPANCY OCCUR BETWEEN THE BIDDER'S TAKE OFF AN THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT IS TO BE NOTIFIED FOR CLARIFICATION PRIOR TO THE SUBMISSION OF THE BID.

MULCH
MULCH SHALL BE A SHREDDED VARIETY AS SPECIFIED IN THE PLANT LIST. ALL MULCH IS TO BE APPLIED TO A DEPTH OF 3" EXCEPT FOR THOSE SPECIFIC SITUATIONS SHOWN BELOW IN SECTION 4 AND IN PLANTING DETAILS.

FERTILIZER
FERTILIZER IN BACKFILL MIXTURE FOR ALL PLANTS SHALL CONSIST OF 'MILORGANITE' ACTIVATED SLUDGE MIXED WITH THE BACKFILL AT A RATE OF NOT LESS THAN 50 LBS. PER CUBIC YARD.

FERTILIZER FOR TREES AND SHRUBS MAY BE TABLET FORM OR GRANULAR. GRANULAR FERTILIZER SHALL BE UNIFORM IN COMPOSITION, DRY AND FREE-FLOWING. THIS FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED BAGS, EACH BEARING THE MANUFACTURER'S STATEMENT OF ANALYSIS. FERTILIZE ALL NEW PLANTINGS PER RATES SHOWN BELOW:

TREES:
FERTILIZE NEW TREES WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 8' AND SMALLER: 2-4 LBS.
- 8'-12' TALL: 4-6 LBS.
- 12' AND TALER: 6-8 LBS.

(3 CUPS = 1 LB.)

SHRUBS:
FERTILIZE NEW SHRUBS AND ACCENTS WITH 'MILORGANITE' AT THE FOLLOWING RATES:
- 4-6" POTS: ⅛ CUP
- 1 GAL.: ¼ CUP
- 3 GAL.: 1 CUP
- 7-10 GAL.: 2 CUPS
- 15 GAL. AND GREATER: 3 CUPS

PALM TREES:
FERTILIZE NEW PALM TREES WITH A "PALM SPECIAL" FERTILIZER IN SLOW RELEASE FORM. FERTILIZER SHALL CONTAIN AN ADDITIONAL MAGNESIUM AND MICRO-NUTRIENT AMENDMENT

SOIL
PLANTING SOIL SHALL BE SANDY LOAM AND SHALL CONTAIN A 25% MINIMUM AMOUNT OF DECOMPOSED ORGANIC MATTER. PLANTING SOIL SHALL BE FREE OF CLAY, STONES, PLANTS, ROOTS AND OTHER FOREIGN MATERIALS WHICH MIGHT BE A HINDRANCE TO PLANTING OPERATIONS OR BE DETRIMENTAL TO GOOD PLANT GROWTH. SOIL SHALL BE DELIVERED IN A LOOSE FRIABLE CONDITION AND APPLIED IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

WATER
WATER FOR PLANTING WILL BE AVAILABLE AT THE SITE AND WILL BE PROVIDED BY THE OWNER. LANDSCAPE CONTRACTOR SHALL NOT ASSUME THAT THE IRRIGATION SYSTEM WILL BE OPERATIONAL AT THE TIME OF PLANTING. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO PROVIDE ALL THE REQUIRED WATER NECESSARY TO MAINTAIN THE PLANT MATERIAL IN A HEALTHY GROWING CONDITION. THE WATERING MAY INCLUDE DEEP WATERING OF TREES ANT THE WATERING OF SHRUB AND GROUND COVER AREAS. ANY PLANT MATERIALS THAT DIE OR THAT ARE NOT IN A HEALTHY GROWING CONDITION DUE TO LACK OF WATER SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. EXECUTION

FIELD GROWN TREES AND PALMS PREVIOUSLY ROOT PRUNED SHALL OBTAIN A ROOT BALL WITH SUFFICIENT ROOTS FOR CONTINUED GROWTH WITHOUT RESULTING SHOCK.

CONTRACTOR SHALL NOT MARK OR SCAR TRUNK IN ANY FASHION.

PLANTS SHALL BE WATERED AS NECESSARY OR WITHIN 24 HOURS AFTER NOTIFICATION BY THE LANDSCAPE ARCHITECT.

THE LOCATIONS OF PLANTS, AS SHOWN IN THESE PLANS, ARE APPROXIMATE. THE FINAL LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS. MAJOR ADJUSTMENTS TO THE LAYOUT ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT.

ALL PLASTIC FABRIC SHALL BE REMOVED FROM PLANT MATERIAL AT TIME OF INSTALLATION.

ALL TREES MUST BE STAKED AS SHOWN ON THE PLANTING DETAILS WITHIN 24 HOURS OF PLANTING. STAKES TO REMAIN FOR A MINIMUM OF 9 MONTHS, BUT NO LONGER THAN 18 MONTHS. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF THE STAKES.

ALL TREES MUST BE PRUNED AS PER LANDSCAPE ARCHITECT'S DIRECTION. SABAL PALMS MAY BE HURRICANE CUT.

ALL SHRUBS, TREES AND GROUND COVER WILL HAVE IMPROVED SOIL AS PER PLANTING SOIL NOTES. THE SOILS SHALL BE PLACED IN THE HOLE DURING PLANTING. TOP DRESSING ONLY IS NOT ACCEPTABLE.

DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING. ALL TREES SHALL BE SPIKED IN UTILIZING WATER AND A TREE BAR.

AFTER FINAL SETTLING OF BALLED AND BURLAPED PLANTS, LOOSEN BURLAP WRAPPING EXPOSING THE TOP OF THE ROOTBALL, LEAVING THE BALL UNBROKEN. REMOVE EXCESS AMOUNTS OF BURLAP TO ELIMINATE VOIDS WHICH MAY BE CAUSED UPON DECOMPOSITION.

CONTAINER GROWN PLANTS SHALL, WHEN DELIVERED, SHALL HAVE SUFFICEINCY GROWTH TO HOLD EARTH INTACT WHEN REMOVED FROM CONTAINER AND SHALL NOT BE ROOT BOUND. PLANT PITS FOR CONTAINER MATERIALS SHALL BE FORMED FLAT ON THE BOTTOM TO AVOID AIR POCKETS AT THE BOTTOM OF ROOT BALLS AND CONTAINERS SHALL BE REMOVED CAREFULLY TO PREVENT DAMAGE TO THE PLANT OR ROOT SYSTEMS.

TEST TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE.PERCOLATION IS AVAILABLE. PITS WHICH ARE FOUND NOT TO BE ADEQUATELY DRAINING SHALL BE EXCAVATED TO A A DEPTH SUFFICIENT FOR DRAINAGE AND BACKFILLING WITH GRAVEL OR CRUSHED ROCK. NO ALLOWANCES WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE.

PLANTING BED PREPARATION
ALL PLANTING BEDS SHALL BE PROPERLY PREPARED PRIOR TO THE COMMENCEMENT OF ANY PLANTING. PLANTING AREAS, INCLUDING LAWNS SHALL BE FREE OF ALL WEEDS AND NUISANCE VEGETATION. IF TORPEDO GRASS (PANICUM REPENS) IS PRESENT OR ENCOUNTERED DURING PLANTING, THE LANDSCAPE CONTRACTOR SHALL STOP ALL PLANTING UNTIL IT CAN BE DEMONSTRATED THAT IT HAS BEEN COMPLETELY REMOVED OR ERADICATED. THERE SHALL BE NO EXCEPTIONS TO THIS PROVISION.

ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS AND WILL BE EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN, NATIVE SOIL AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.

PLANTING TREES

EXCAVATE PIT AS PER PLANTING DETAILS. COMPACT LAYER OF TOPSOIL IN PIT WITH A SLIGHTLY DISHED GRADE TO CENTER.

BACKFILL AROUND BALL WITH TOPSOIL AND SLIGHTLY COMPACT, WATER THOROUGHLY AS LAYERS ARE PLACED TO ELIMINATE VOIDS AND AIR POCKETS. BUILD A 6" HIGH BERM OF TOPSOIL BEYOND EDGE OF EXCAVATION. APPLY 3" (AFTER SETTLEMENT) OF MULCH.

PRUNE TREE TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES. DO NOT PRUNE BACK TERMINAL LEADER.

GUY AND STAKE TREE IN ACCORDANCE WIT THE STAKING DETAILS IMMEDIATELY AFTER PLANTING.

PLANTING SHRUBS

LAYOUT SHRUBS TO CREATE A CONTINUOUS SMOOTH FRONT LINE AND FILL IN BEHIND.

EXCAVATE PIT OR TRENCH TO 1-1/2 TIMES THE DIAMETER OF THE BALLS OR CONTAINERS OR 1'-0" WIDER THAN THE SPREAD OF ROOTS AND 3" DEEPER THAN REQUIRED FOR POSITIONING AT PROPER HEIGHT. COMPACT A LAYER OF TOPSOIL IN BOTTOM BEFORE PLACING PLANTS. BACKFILL AROUND PLANTS WITH PLANTING MIXTURE, COMPACTED TO ELIMINATE VOIDS AND AIR POCKETS. FORM GRADE SLIGHTLY DISHED AND BERMED AT EDGES OF EXCAVATION. APPLY 3" OF MULCH.

PRUNE SHRUBS TO REMOVE DAMAGED BRANCHES, IMPROVE NATURAL SHAPE AND THIN OUT STRUCTURE. DO NOT REMOVE MORE THAN 15% OF BRANCHES.

PLANTING GROUND COVER

LOOSEN SUBGRADE TO DEPTH OF 4" IN AREAS WHERE TOPSOIL HAS BEEN STRIPPED AND SPREAD SMOOTH.

SPACE PLANTS AS OTHERWISE INDICATED. DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS. COMPACT BACKFILL TO ELIMINATE VOIDS AND LEAVE GRADE SLIGHTLY DISHED AT EACH PLANT. WATER THOROUGHLY. APPLY 3" OF MULCH OVER ENTIRE PLANTING BED, LIFTING PLANT FOLIAGE ABOVE MULCH. PURPLE QUEEN GROUNDCOVER, IF SPECIFIED, SHALL ONLY RECEIVE 1" OF MULCH.

DURING PERIODS OF HOT SUN AND/OR WIND AT TIME OF PLANTING, PROVIDE PROTECTIVE COVER FOR SEVERAL DAYS OR AS NEEDED.

PLANTING SOD

SODDING: SOD TYPE SPECIFIED ON PLANT LIST SHALL BE MACHINE STRIPPED NOT MORE THAN 24 HOURS PRIOR TO LAYING. SOD SHALL BE FIRM, TOUGH TEXTURE, HAVING A COMPACT GROWTH OF GRASS WITH GOOD ROOT DEVELOPMENT, AND SHALL CONTAIN NO BERMUDA GRASS, WEEDS OR ANY OTHER OBJECTIONABLE VEGETATION.

LOOSEN SUBGRADE TO DEPTH OF 4" AND GRADE WITH TOPSOIL EITHER PROVIDED ON SITE OR IMPORTED TO FINISH DESIGN ELEVATIONS. IF SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO FINISH GRADE ALL LANDSCAPE AREAS, ELIMINATING ALL BUMPS, DEPRESSIONS, STICKS, STONES AND OTHER DEBRIS. ROLL PREPARED LAWN SURFACE. WATER THOROUGHLY, BUT DO NOT CREATE MUDDY SOIL CONDITION.

FERTILIZE SOIL AT THE RATE OF APPROXIMATELY 10 LBS. PER 1,000 S.F. SPREAD FERTILIZER OVER THE AREA TO RECEIVE GRASS BY USING AN APPROVED DISTRIBUTION DEVICE CALIBRATED TO DISTRIBUTE THE APPROPRIATE QUANTITY. DO NOT FERTILIZE WHEN WIND VELOCITY EXCEEDS 15 M.P.H. THOROUGHLY MIX FERTILIZER INTO THE TOP 2" OF TOPSOIL.

LAY SOD STRIPS WITH TIGHT JOINTS, DO NOT OVERLAP, STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. WORK SIFTED SOIL MIX INTO MINOR CRACKS BETWEEN PIECES OF SOD AND REMOVE EXCESS SOIL DEPOSITS FROM SODDED AREAS. SOD ON SLOPES GREATER THAN 3:1 SHALL BE STAKED IN PLACE. ROLL OR STAMP LIGHTLY AND WATER THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING.

5. MISCELLANEOUS LANDSCAPE WORK

LANDSCAPE MAINTENANCE
MAINTAIN LANDSCAPE WORK IMMEDIATELY AFTER PLANTING AND UNTIL FINAL ACCEPTANCE IS ISSUED BY THE OWNER'S REPRESENTATIVE. INCLUDE WATERING, WEEDING, CULTIVATING, RESTORATION OF GRADE, MOWING AND TRIMMING GRASS, PRUNING TREES AND SHRUBS, PROTECTION FROM INSECTS AND DISEASES, FERTILIZING AND SIMILAR OPERATIONS AS NEEDED TO INSURE NORMAL GROWTH AND GOOD HEALTH FOR LIVE PLANT MATERIAL. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE, PLANTING SAUCERS RESTORED, AND DEFECTIVE WORK CORRECTED.

IN THE EVENT OF SERIOUS DAMAGE FROM INSECTS OR DISEASE PRIOR TO FINAL ACCEPTANCE, THE PLANTS SHALL BE TREATED BY PREVENTATIVE OR REMEDIAL MEASURES APPROVED FOR GOOD HORTICULTURAL PRACTICE AT NO ADDITIONAL COST TO THE OWNER.

CLEAN UP
THE LANDSCAPE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR DEBRIS CAUSED BY HIS CREWS DURING THE PERFORMANCE OF THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROMPTLY REMOVE ALL WASTE MATERIALS, DEBRIS, UNUSED PLANT MATERIAL, EMPTY PLANT CONTAINERS AND ALL EQUIPMENT FROM THE PROJECT SITE.

ANY SOIL, PEAT OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO ANY PAVED AREAS SHALL BE REMOVED PROMPTLY KEEPING THESE AREAS CLEAN AS THE WORK PROGRESSES. UPON COMPLETION OF THE PLANTING, ALL EXCESS SOIL, STONES AND DEBRIS WHICH HAS NOT BEEN PREVIOUSLY CLEANED UP SHALL BE REMOVED FROM THE SITE.

INSPECTION & ACCEPTANCE
THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT UPON COMPLETION OF THE WORK TO REQUEST A FINAL INSPECTION OF THE INSTALLATION AND PLANT MATERIALS. THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE WILL NOTIFY THE LANDSCAPE CONTRACTOR OF ANY DEFICIENCIES VIA A "PUNCH LIST" WHICH SHALL BE PROMPTLY CORRECTED BY THE LANDSCAPE CONTRACTOR. CONDITIONAL LANDSCAPE ACCEPTANCE OF ALL PLANT MATERIAL AND WORKMANSHIP WILL BE GIVEN IN WRITING BY THE LANDSCAPE ARCHITECT AFTER ALL "PUNCH LIST" ITEMS HAVE BEEN CORRECTED AND ANY PLANT REPLACEMENTS MADE. THIS ACCEPTANCE WILL BEGIN THE WARRANTEE PERIOD. DEFICIENCIES NOTED AFTER THE CONDITIONAL LANDSCAPE ACCEPTANCE SHALL BE RECTIFIED DURING THE WARRANTEE PERIOD AND PRIOR TO FINAL LANDSCAPE ACCEPTANCE.

GUARANTEE AND REPLACEMENT
ALL PLANT MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR FOR A PERIOD OF SIX (6) MONTHS FROM THE DATE OF CONDITIONAL LANDSCAPE ACCEPTANCE BY THE LANDSCAPE ARCHITECT. ANY PLANT MATERIAL OR WORKMANSHIP THAT IS DEFICIENT OR HAS DIED SHALL BE REPLACED AT THE SAME SPECIFICATION NOTED IN THE APPROVED LANDSCAPE PLANS. REPLACEMENTS SHALL BE MADE BY THE LANDSCAPE CONTRACTOR WITHIN TWO (2) WEEKS OF NOTIFECTION BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER. WARRANTEES OF REPLACEMENT MATERIAL SHALL BE SIX (6) MONTHS FROM THE DATE OF REPLACEMENT INSTALLATION. DEATH OR DAMAGE RESULTING FROM LIGHTNING, VANDALISM OR AUTOMOBILES OR BY NEGLIGENCE BY THE OWNER SHALL NOT BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. UNLESS OTHERWISE ARRANGED WITH THE OWNER, THE CONTRACTOR IS RESPONSIBLE FOR GENERAL PLANT MAINTENANCE INCLUDING WATERING AND MOWING UP UNTIL THE DATE OF CONDITIONAL ACCEPTANCE.

PLANT MATERIAL SUBSTITUTION

THERE WILL BE NO SUBSTITUTION OF PLANT MATERIAL UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND/OR OWNER. THIS INCLUDES SPECIES AND SIZE OF PLANT MATERIAL.

Landscape Specifications & Planting Details

ARROW FORT PIERCE NORTH

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
SA	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T3-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SB	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SC	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W-HSS-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SD	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T4-FINISH-S / ARPA2	UNV	LED	N/A	99W	13' POLE	NOTE 1, 3
SE	LED DECORATIVE LUMINAIRE	INVUE	LXS-B3-LED-D1-T5-FINISH-S / ARPA2	UNV	LED	N/A	86W	13' POLE	NOTE 1, 3
SF	LED BOLLARD	ILP	BLDT-15WLED-UNIV-4000K	UNV	LED	N/A	16.5W	IN-GROUND	
SW	LED WALL PACK	McGRAW-EDISON	GWC-AF-01-LED-E1-T4FT-FINISH-600	UNV	LED	N/A	34W	WALL	NOTE 1

FIXTURE SCHEDULE NOTES

NOTE 1: ADVISE FINISH

NOTE 2: FIXTURE MOUNTED ON 20' CONCRETE POLE #: USI28TI+4-9666

NOTE 3: FIXTURE MOUNTED ON 13' DIRECT BURIAL ALUMINUM POLE #: 1208-30504TE TO ACHIEVE 15FT AFG

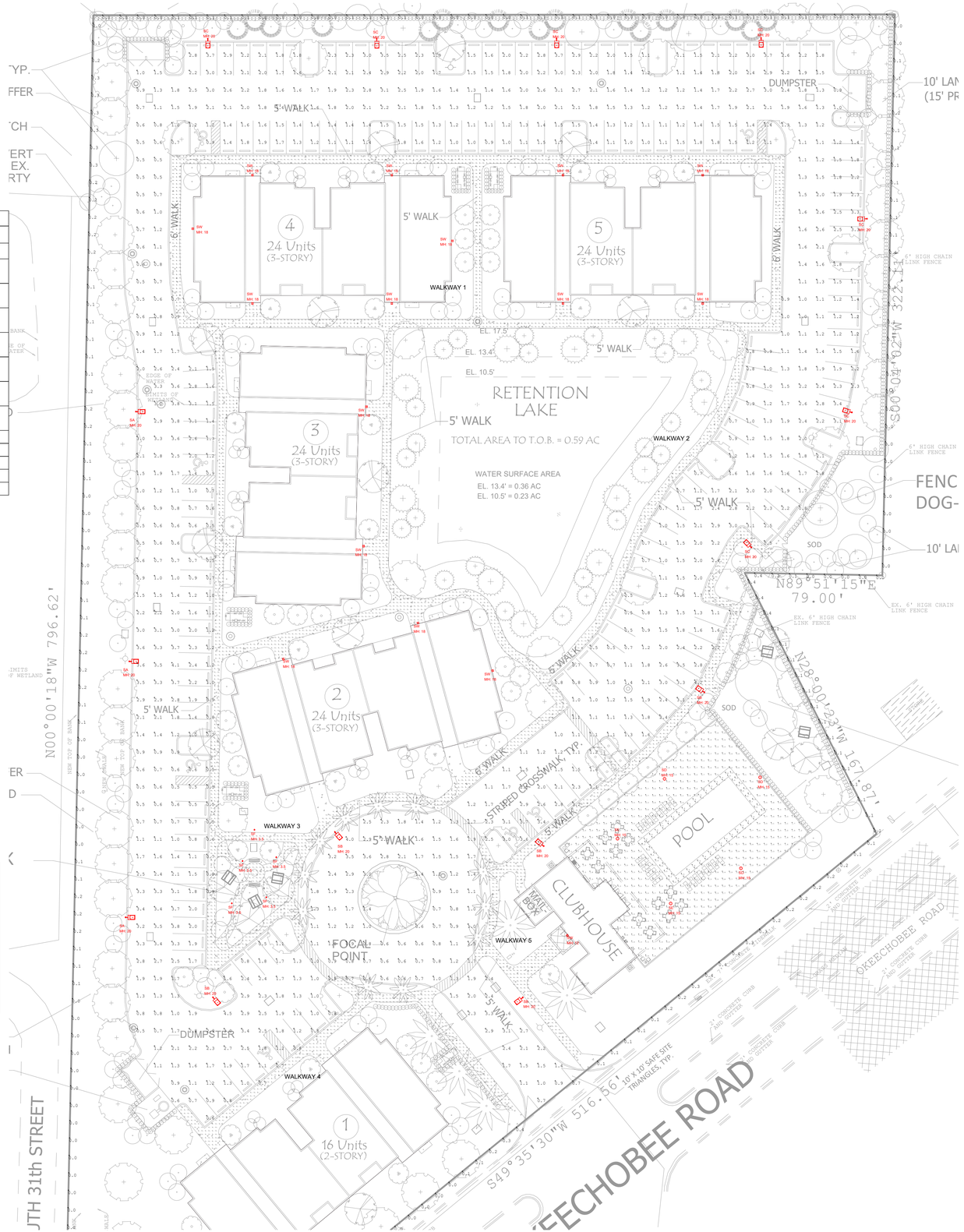
FOR QUESTIONS PERTAINING TO THIS FIXTURE SCHEDULE PLEASE CONTACT RYAN HUFF @ LIGHTING DYNAMICS- 772-285-7169

Photometrics Calculation Software Generated Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
	3	SA	SINGLE	15749	15749	0.900	112	112
	5	SB	SINGLE	15560	15560	0.900	112	112
	7	SC	SINGLE	11268	11268	0.900	112	112
	3	SD	SINGLE	8200	8200	0.900	99	99
	2	SE	SINGLE	9131	9131	0.900	86	86
	5	SF	SINGLE	1209	1209	0.900	16.5	16.5
	16	SW	SINGLE	4311	4311	0.900	34	34

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING & ROADWAY	Illuminance	Fc	1.65	4.5	0.5	3.30	9.00
POOL AREA	Illuminance	Fc	2.79	5.2	0.7	3.99	7.43
PROPERTY LINE	Illuminance	Fc	0.08	0.4	0.0	N.A.	N.A.
WALKWAY 1	Illuminance	Fc	1.10	2.0	0.4	2.75	5.00
WALKWAY 2	Illuminance	Fc	0.95	2.0	0.3	3.17	6.67
WALKWAY 3	Illuminance	Fc	1.29	15.1	0.4	3.23	37.75
WALKWAY 4	Illuminance	Fc	0.67	1.3	0.3	2.23	4.33
WALKWAY 5	Illuminance	Fc	2.11	4.4	0.3	7.03	14.67
WET DECK	Illuminance	Fc	3.65	5.3	3.0	1.22	1.77



LIGHTING DYNAMICS INCORPORATED

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine applicability of the layout to existing or future field conditions. This lighting pattern represents illumination levels calculated from laboratory data taken under controlled conditions utilizing current industry standard lamp ratings in accordance with Illuminating Engineering Society approved methods. Actual performance of any manufacturer's luminaire may vary due to variation in electrical voltage, tolerance in lamps and other variable field conditions.

NOTES:

No.	Revision/Issue	Date
3	UPDATE LFS	06/22/20
2	PHOTOMETRIC STUDY	06/19/20
1	PHOTOMETRIC STUDY	06/17/20

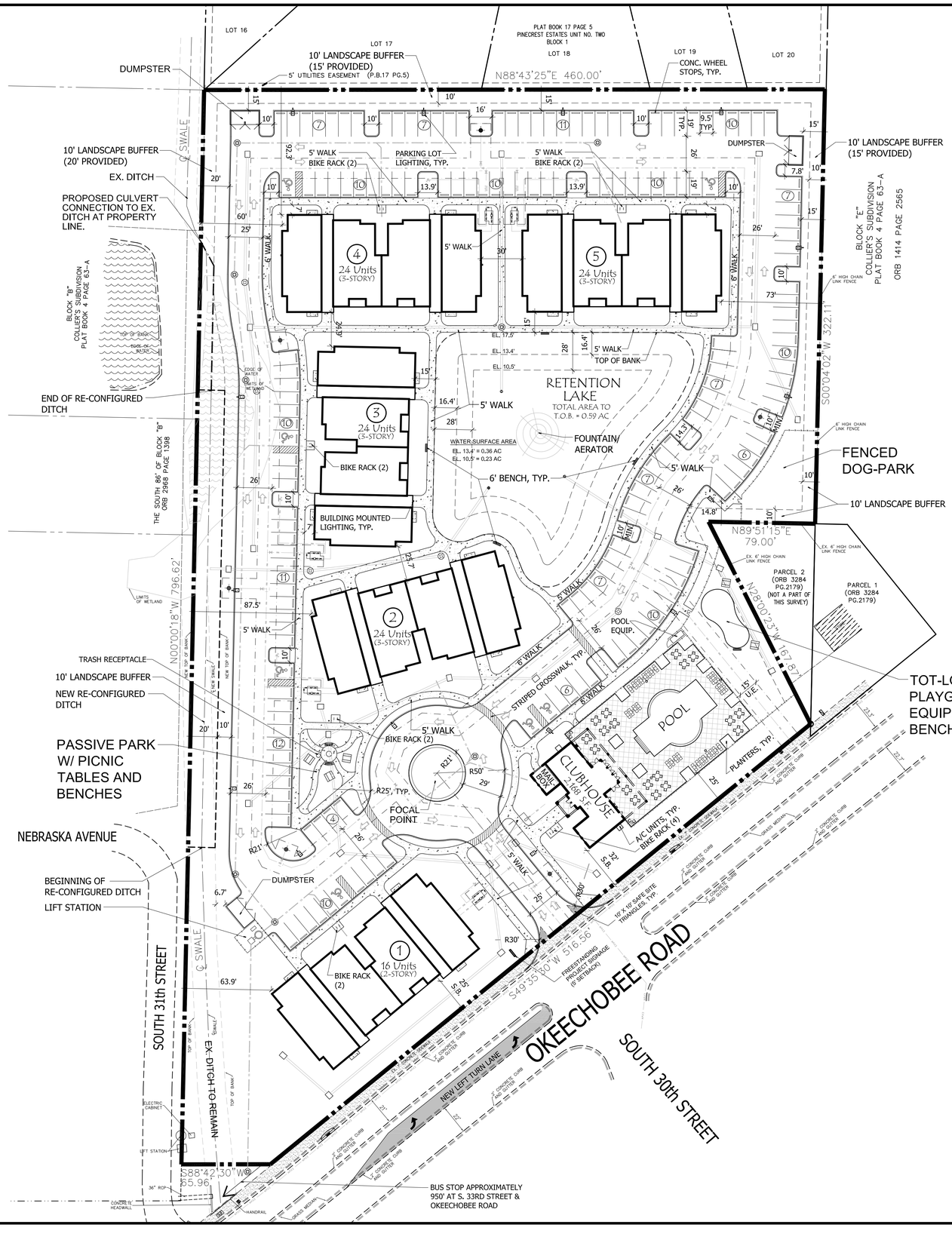
LIGHTING DYNAMICS, INC.
7835 West Commercial Blvd.
Tamarac, FL 33351
(954) 944-0286
www.lightingdynamics.com

Project Name and Address

ARROW FORT PIERCE
Site lighting layout
Fort Pierce, FL

FILE P:\PROJECTS\2020\MARCH
CLIENT Managed Land Entitlements

Project	Arrow Fort Pierce North
Date	06/22/2020
Scale	1/32" = 1'-0"
Sheet	L0
DRAWN BY	E.MONTERO



APPLICATION DATA:

NAME OF APPLICATION:	ARIA AAPARTMENTS
PARCEL ID:	2417-504-0020-001-6
SITE ADDRESS:	TBD
EXISTING FUTURE LAND USE:	GENERAL COMMERCIAL (GC)
PROPOSED FUTURE LAND USE:	MEDIUM DENSITY RESIDENTIAL (RM)
EXISTING ZONING DESIGNATION:	GENERAL COMMERCIAL (C3)
PROPOSED ZONING DESIGNATION:	MEDIUM DENSITY RESIDENTIAL (R-4)
EXISTING USE:	VACANT
PROPOSED USE:	MULTI-FAMILY RESIDENTIAL (112 UNITS)
PROPOSED DENSITY:	*16.48 D.U.'S PER ACRE

*PROJECT UTILIZES DENSITY BONUS FOR PROXIMITY TO TRANSIT STOP (+5 D.U.'S/ACRE) AND FOR INNOVATIVE DESIGN (+2 D.U.'S/ACRE)

SITE DATA:

GROSS SITE AREA:	296,012.97 S.F. (6.796 ACRES)
OPEN SPACE REQUIRED:	118,405.19 S.F. (40%)
PERVIOUS AREA PROVIDED:	102,259.94 S.F. (34.5%)
RETENTION AREA PROVIDED:	25,674.63 S.F. (8.7%)
TOTAL OPEN SPACE AREA:	127,934.57 S.F. (43.2%)
MAX. BUILDING COVERAGE:	50% (148,006.5 S.F.)
BUILDING COVERAGE PROVIDED:	18.0% (53,184 S.F.)

SETBACKS

SETBACK	REQUIRED:	PROVIDED:
FRONT	25'	25'
SIDE:	10'	60'
REAR:	20'	92.3'

BUILDING HEIGHT

REQUIRED:	45' (MAX)
PROVIDED:	39'-0"

PARKING DATA:

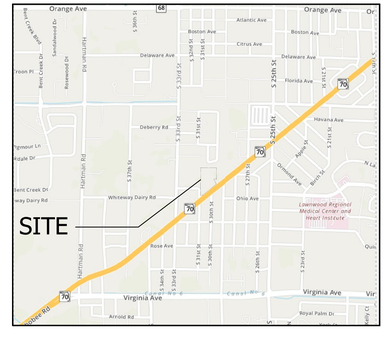
PROPOSED USES (FLEX SPACE)

USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.5/UNIT	168 SPACES
	TOTAL PARKING REQUIRED:		168 SPACES
	TOTAL PARKING PROVIDED:		172 SPACES
	HANDICAP SPACES REQ'D.:		6 SPACES
	HANDICAP SPACES PROV.:		7 SPACES

BICYCLE PARKING REQUIRED: 12 SPACES (1 PER 10 UNITS)
BICYCLE PARKING PROVIDED: 14 SPACES

REFER TO SHEET SP-2 FOR SITE PLAN DETAILS

LOCATION MAP



Site Plan

0 20' 40' 80' 120' 160'

NORTH

Scale: 1" = 40'

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

PROJECT TEAM

OWNER
Arrow Investment Group, LLC
4512 North Flagler Drive, Suite 2056
West Palm Beach, Florida 33407

ARCHITECT
Architectural Studios, Inc.
300 Avenue of the Champios, Suite 260
Palm Beach Gardens, Florida 33418
Contact: Scott Disher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
Michael B. Schorah & Associates, Inc.
1850 Forest Hill Blvd., Suite 206
West Palm Beach, Florida 33406
Contact: Michael LaCoursiere (561-968-0080)

DEVELOPMENT MANAGER/AGENT
Managed Land Entitlements, LLC
3710 Buckeye Street, Suite 100
Palm Beach Gardens, Florida 33410
Contact: Michael Sanchez (561-568-8045)

LANDSCAPE ARCHITECT
Litterick Landscape Architecture
2740 SW Martin Downs Blvd., #199
Palm City, Florida 34990
Contact: Jason LItterick (561-719-3876)

SURVEYOR
Brown & Phillips, Inc.
1860 Old Okeechobee Road, Suite 509
West Palm Beach, Florida 33409
Contact: John Phillips (561-615-3988)

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" = 40'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-1

STANDARD LIGHTING POLE DETAIL

(1) LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 170 MPH WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.

(2) INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. SEE NOTE 3.

(3) LIGHT FIXTURE CONNECTIONS. REFER TO LIGHT MANUFACTURER FOR REQUIREMENTS, INCLUDING TEMPERATURE REQUIREMENTS (COMMONLY 150C). CONDUCTORS TO BE UL LISTED "FIXTURE" CONDUCTORS. (UL "RECOGNIZED" APPLIANCE WIRES NOT PERMITTED.) OBTAIN BUILDING DEPARTMENT APPROVAL FOR CONDUCTORS, CONNECTORS, AND ACCESSIBILITY.

(4) CONDUITS. CONDUITS BELOW HAND HOLE IN POLE TO BE UL LISTED WITH "BRANCH CIRCUIT" THWN CONDUCTORS.

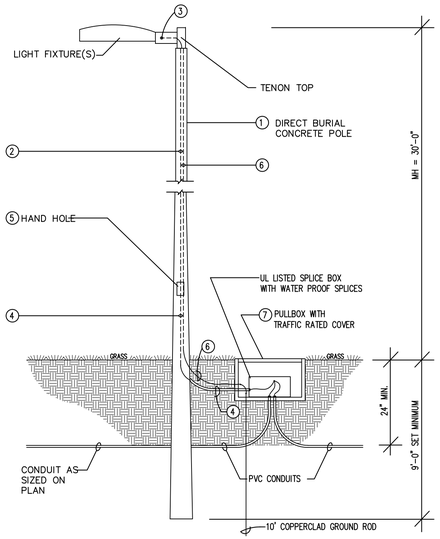
(5) HAND HOLE. HAND HOLE WITH UL LISTED BOX CAST IN POLE WITH WATERPROOF SPLICES.

(6) GROUND WIRE IN POLE. CONNECT BOTTOM TO #4 BARE GROUND CONDUCTOR. CONNECT TOP TO GROUND LUG IN FIXTURES.

(7) TRAFFIC RATED PULL BOX. HIGH STRENGTH COMPOSITE CONSTRUCTION RATED FOR DESIGN LOAD OF 5,000 LBS OVER A 10" SQUARE. COVER LETTERING = "LIGHTING". DO NOT PLACE IN PAVED AREA, KEEP IN GRASSED AREAS. QUAZITE COMPOSOLITE PX STYLE. 1-800-346-3067

(8) MUCK. IF SOFT SOILS ARE FOUND ON THE PROPERTY, THIS POLE DESIGN WILL BE MODIFIED TO ACCOMMODATE. NOTIFY ENGINEER IMMEDIATELY.

(9) SITE CONDITIONS. IF SITE CONDITIONS ARE DISCOVERED WHICH REQUIRE ANY POLE (S) TO BE MOVED OVER 4 FEET, NOTIFY THE ENGINEER IMMEDIATELY.



CONCRETE LIGHT POLE DETAIL

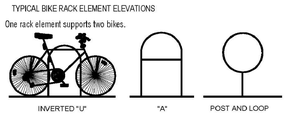
TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



"LANDSCAPEFORMS - CHASE PARK LITTER"

TRASH RECEPTACLE DETAIL

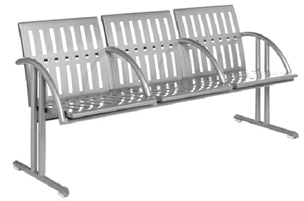
N.T.S.



- ELEMENT STYLE CONSISTENT WITH THE ABOVE TYPICAL ELEVATION TO BE SELECTED BY OWNER AT TIME OF BUILDING PERMIT, SUBJECT TO APPROVAL BY ZONING STAFF.
- A RACK IS ONE OR MORE ELEMENTS JOINED ON A COMMON BASE
- BIKE RACK AND RACK AREA DIMENSIONAL CRITERIA BASED ON RECOMMENDATIONS FROM THE ASSOCIATION OF PEDESTRIAN AND BICYCLE PROFESSIONALS (APBP)

BIKE RACK DETAIL

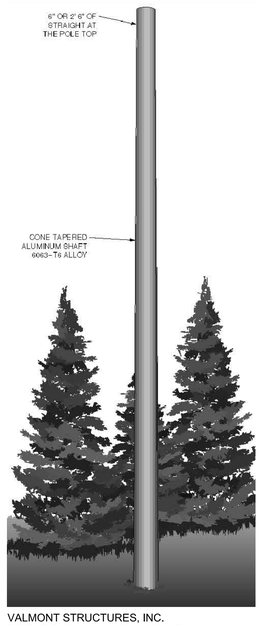
N.T.S.

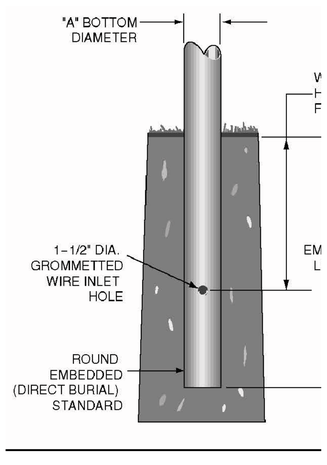


LANDSCAPE FORMS - CHASE PARK BENCH
CAST ALUM. W/ STEEL FRAMES & DIVIDER ARMS

BENCH DETAIL

N.T.S.

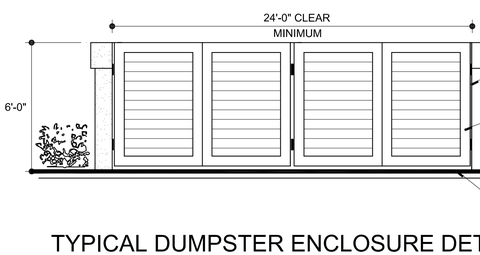




VALMONT STRUCTURES, INC.
DIRECT BURIAL ALUMINUM POLE

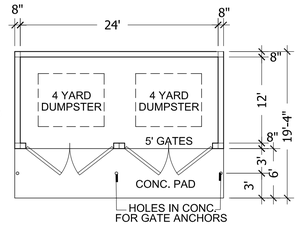
ALUMINUM LIGHT POLE DETAIL

TO BE USED ON ALL POOL LIGHTING (13' MOUNTING HEIGHT) N.T.S.

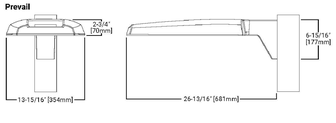


TYPICAL DUMPSTER ENCLOSURE DETAIL

N.T.S.







VALMONT STRUCTURES, INC.
DIRECT BURIAL CONCRETE POLE

PARKING LOT LIGHTING FIXTURE

TO BE USED ON ALL PARKING LOT LIGHTING (20' MOUNTING HEIGHT) N.T.S.



LXS LUXESCAPE COLLECTION

DECORATIVE LUMINAIRE

INVUE LED LIGHT FIXTURE
ON DIRECT BURIAL ALUMINUM POLE

POOL AREA LIGHTING FIXTURE

TO BE USED ON ALL POOL AREA POLE LIGHTING (13' MOUNTING HEIGHT) N.T.S.



ILP 15W LED BOLLARD

BOLLARD LIGHTS

N.T.S.



GWC GALLEON WALL

1-2 Light Squares
Solid State LED

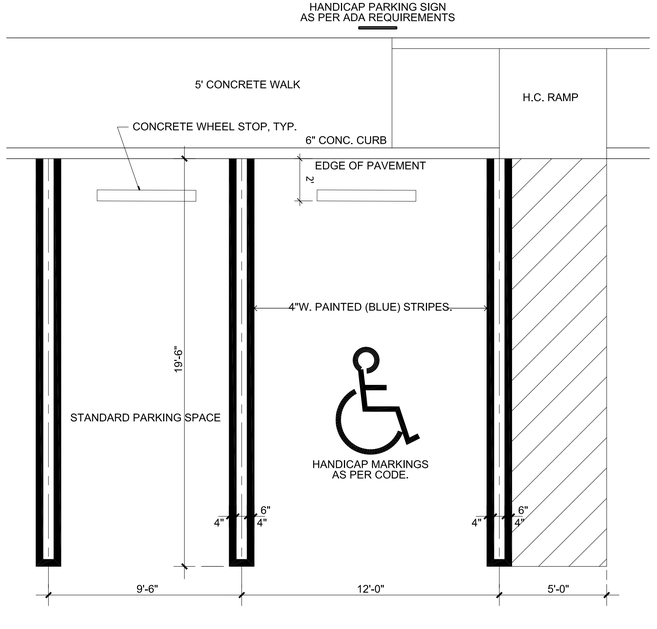
WALL MOUNT LUMINAIRE

WaveLinx

MCGRAW - EDISON WALL MOUNT LED LUMIERE

BUILDING MOUNTED LIGHTING

N.T.S.



STANDARD & HANDICAP PARKING LAYOUT

N.T.S.

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

Site Plan Details

Litterick Landscape Architecture
LC26000482
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Aria Apartments

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

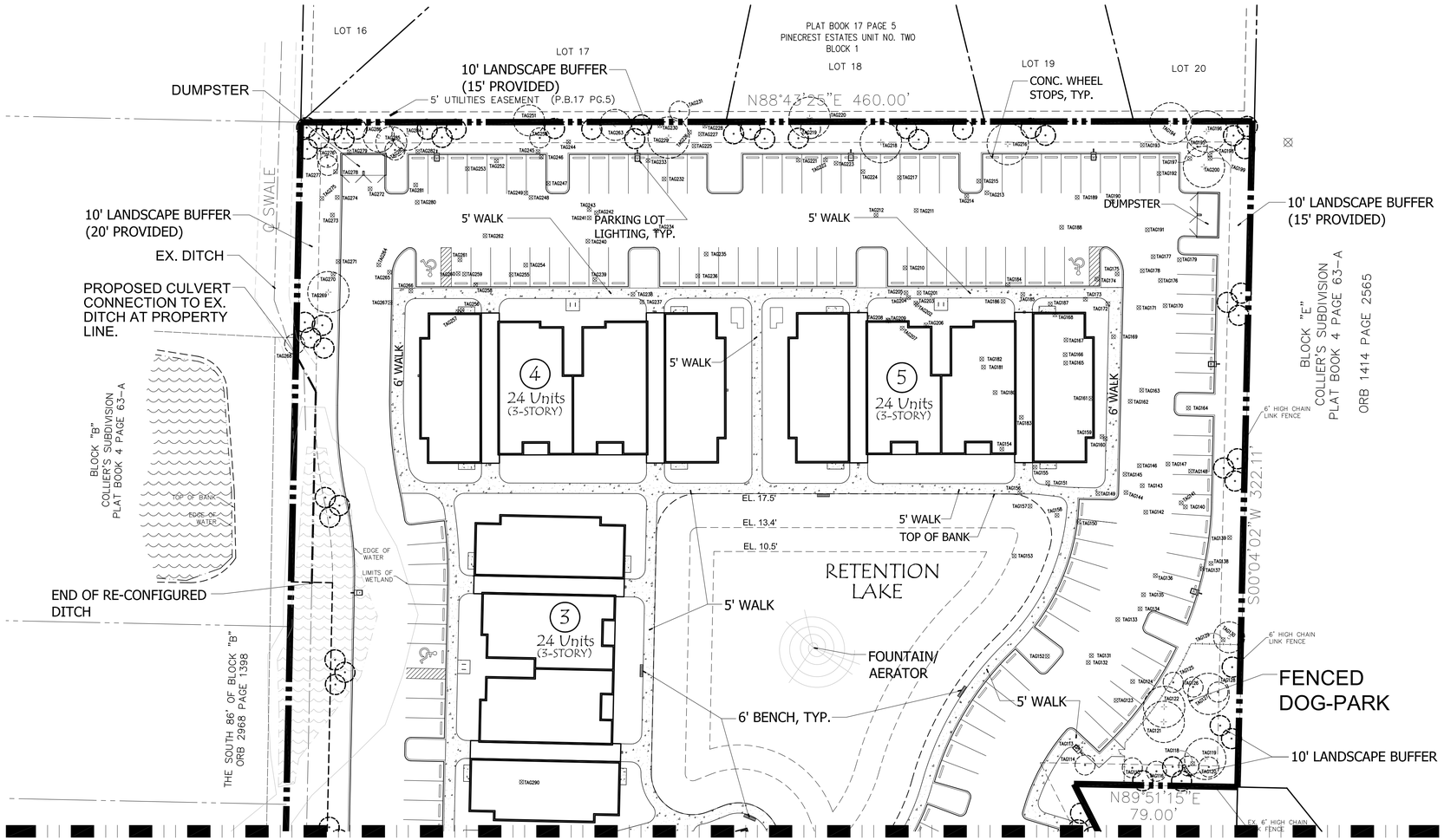
Jason M. Litterick, RLA
(LA0001677)

Scale: As Noted

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

SP-2



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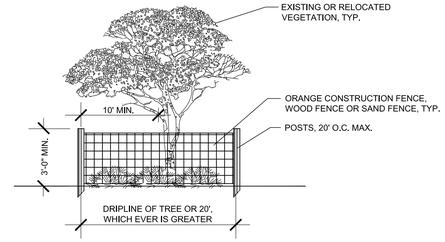


FENCING OF UNDISTURBED AREAS AND/OR EXISTING TREES:

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE ENTIRE UNDISTURBED AREA, OR TREE, WITHIN A FENCE OR SIMILAR BARRIER AS SHOWN. THE PLACEMENT OF SUCH BARRIER OR FENCE SHALL BE LOCATED NO CLOSER THAN THE DRIP LINE OF THE PRESERVED OR RELOCATED TREE OR A MIN. OF 10' FROM TRUNK, WHICHEVER IS GREATER. WOODEN (OR EQUIVALENT) POSTS AT LEAST 2 x 2 INCHES SHALL BE IMPLANTED IN THE GROUND DEEP ENOUGH TO BE STABLE AND WITH AT LEAST 3 FEET VISIBLE ABOVE THE GROUND. THE PROTECTIVE POSTS SHALL BE PLACED NOT MORE THAN 20 FEET APART, AND SHALL BE LINKED TOGETHER BY ORANGE NET FENCE FABRIC, OR OTHER. NO HEAVY EQUIPMENT, VEHICLES, STORAGE OF MATERIALS, ETC., SHALL OCCUR WITHIN THE VEG. PROTECTION ZONE. EXTREME CARE SHALL BE TAKEN WHEN WORKING NEAR THE BASE OF TREES. NO FINISH GRADE FILL SHALL BE PLACED WITHIN A ZONE OF 2/3 THE DIAMETER OF THE TREE CANOPY.

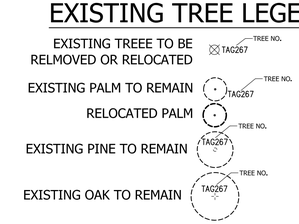
CONSTRUCTION WITHIN CANOPY & TREE BARRICADE SHALL BE BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL.

UTILITY WORK (TRENCHING) WITHIN THE CANOPY & TREE BARRICADE SHALL BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL. THE TREE BARRICADE WILL BE MODIFIED TEMPORARILY TO ALLOW ONLY THE MINIMUM WORK ZONE TRESPASS INTO THE CANOPY AREA, CONTINUING TO PROTECT THE REST OF THE CANOPY AREA WITH BARRICADE. NO FILL, EVEN TEMPORARY, SHALL BE PLACED IN ANY PROTECTED ZONE. AT THE CONCLUSION OF SAID ACTIVITY, THE WORKZONE SHALL BE CLEANED UP & TREE BARRICADES REPLACED TO THEIR ORIGINAL CONFIGURATION.

TREE PROTECTION DETAIL

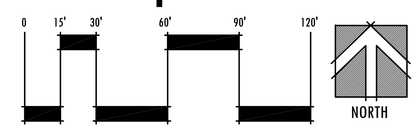
N.T.S.

EXISTING TREE LEGEND



REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

Tree Dispostion Plan



Scale: 1" = 30'

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

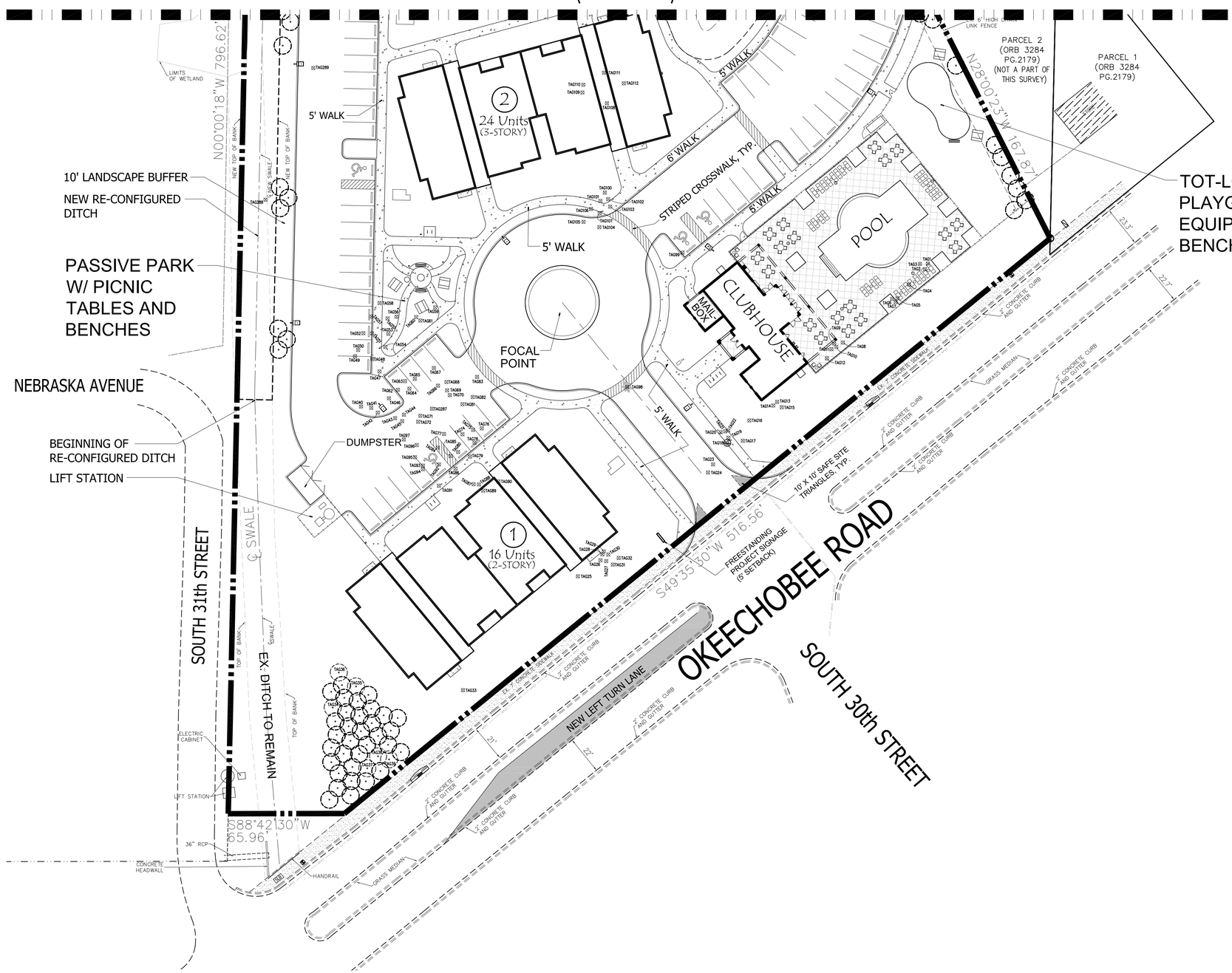
Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.

TR-1

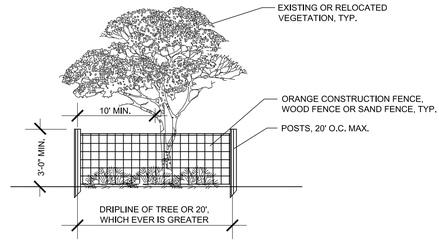
MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

MATCHLINE (SEE SHEET TR-1)



EXISTING TREE LEGEND

EXISTING TREEE TO BE RELMOVED OR RELOCATED — TREE NO. TAG267
EXISTING PALM TO REMAIN — TREE NO. TAG267
RELOCATED PALM — TREE NO. TAG267
EXISTING PINE TO REMAIN — TREE NO. TAG267
EXISTING OAK TO REMAIN — TREE NO. TAG267



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TREE PROTECTION DETAIL

N.T.S.

Tree Dispostion Plan

REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

0 15' 30' 60' 90' 120'
Scale: 1" = 30'

NORTH

Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: 1" =30'-0"

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-2

TREE DISPOSITION CHART

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
1	PALM	YES	20	17'	RELOCATE	
2	PALM	YES	16	17'	RELOCATE	
3	PALM	YES	18	15'	RELOCATE	
4	PALM	YES	14	22'	RELOCATE	
5	PALM	YES	18	18'	RELOCATE	
6	PALM	YES	16	14'	RELOCATE	
7	PALM	YES	18	14'	RELOCATE	
8	PALM	YES	20	18'	RELOCATE	
9	PALM	YES	16	15'	RELOCATE	
10	PALM	YES	24	15'	RELOCATE	
11	PALM	YES	16	18'	RELOCATE	
12	PALM	YES	16	19'	RELOCATE	
13	PALM	YES	22	10'	RELOCATE	
14	PALM	YES	24	15'	RELOCATE	
15	PALM	YES	24	13'	RELOCATE	
16	PALM	YES	16	14'	RELOCATE	
17	PALM	YES	20	17'	RELOCATE	
18	BANYAN	NO	48		REMOVE	
19	PALM	YES	16	18'	RELOCATE	
20	PALM	YES	14	18'	RELOCATE	
21	PALM	YES	16	15'	RELOCATE	
22	PALM	YES	16	10'	RELOCATE	
23	PALM	YES	20	14'	RELOCATE	
24	PALM	YES	18	15'	RELOCATE	
25	PALM	YES	18	18'	RELOCATE	
26	PALM	YES	16	15'	RELOCATE	
27	PALM	YES	20	15'	RELOCATE	
28	PALM	YES	16	17'	RELOCATE	
29	PALM	YES	16	11'	RELOCATE	
30	PALM	YES	18	14'	RELOCATE	
31	PALM	YES	24	16'	RELOCATE	
32	PALM	YES	16	7'	REMOVE	NONE
33	PALM	YES	18	19'	RELOCATE	
34	PALM	YES	16	17'	REMAIN	
35	PALM	YES	18	17'	REMAIN	
36	PALM	YES	18	18'	REMAIN	
37	PALM	YES	18	20'	REMAIN	
38	PALM	YES	16	21'	REMAIN	
39	PALM	YES	14	17'	REMAIN	
40	PALM	YES	20	18'	RELOCATE	
41	PALM	YES	18	20'	RELOCATE	
42	PALM	YES	16	19'	RELOCATE	
43	PALM	YES	16	19'	RELOCATE	
44	PALM	YES	16	21'	RELOCATE	
45	PALM	YES	18	19'	RELOCATE	
46	PALM	YES	20	22'	RELOCATE	
47	PALM	YES	16	19'	RELOCATE	
48	PALM	YES	16	18'	RELOCATE	
49	PALM	YES	18	17'	RELOCATE	
50	PALM	YES	16	20'	RELOCATE	
51	PALM	YES	18	19'	RELOCATE	
52	PALM	YES	10	18'	RELOCATE	
53	PALM	YES	14	18'	RELOCATE	
54	PALM	YES	18	18'	RELOCATE	
55	PALM	YES	20	22'	RELOCATE	
56	PALM	YES	14	19'	RELOCATE	
57	PALM	YES	10	18'	RELOCATE	
58	PALM	YES	14	19'	RELOCATE	
59	PALM	YES	18	16'	RELOCATE	
60	PALM	YES	16	16'	RELOCATE	
61	PALM	YES	18	15'	RELOCATE	
62	PALM	YES	16	23'	RELOCATE	
63	PALM	YES	16	21'	RELOCATE	
64	PALM	YES	20	18'	RELOCATE	
65	PALM	YES	12	19'	RELOCATE	
66	PALM	YES	18	21'	RELOCATE	
67	PALM	YES	18	17'	RELOCATE	
68	OAK	YES	5		REMOVE	NONE
69	PALM	YES	20	18'	RELOCATE	
70	PALM	YES	22	20'	RELOCATE	
71	PALM	YES	20	20'	RELOCATE	
72	PALM	YES	16	18'	RELOCATE	
74	PALM	YES	14	18'	RELOCATE	
75	PALM	YES	14	9'	REMOVE	NONE
76	PALM	YES	24	19'	RELOCATE	
77	PALM	YES	18	18'	RELOCATE	
78	PALM	YES	18	17'	RELOCATE	
79	PALM	YES	14	13'	RELOCATE	
80	PALM	YES	18	18'	RELOCATE	
81	PALM	YES	24	19'	RELOCATE	
82	PALM	YES	18	16'	RELOCATE	
83	PALM	YES	16	15'	RELOCATE	
84	PALM	YES	16	19'	RELOCATE	
85	PALM	YES	16	20'	RELOCATE	
86	PALM	YES	18	17'	RELOCATE	
87	PALM	YES	16	20'	RELOCATE	
88	PALM	YES	16	18'	RELOCATE	
89	PALM	YES	16	16'	RELOCATE	
90	PALM	YES	18	22'	RELOCATE	
91	PALM	YES	18	22'	RELOCATE	
92	PALM	YES	16	19'	RELOCATE	
93	PALM	YES	18	21'	RELOCATE	
94	PALM	YES	14	20'	RELOCATE	
95	PALM	YES	16	20'	RELOCATE	
96	PALM	YES	18	20'	RELOCATE	

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	0"
TOTAL PRESERVED TREES (IN)	0"
TOTAL RELOCATED PALMS	86 PALMS

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
97	PALM	YES	18	20'	RELOCATE	
98	PALM	YES	18	19'	RELOCATE	
99	PALM	YES	16	16'	RELOCATE	
100	PALM	YES	18	17'	RELOCATE	
101	PALM	YES	16	17'	RELOCATE	
102	PALM	YES	18	19'	RELOCATE	
103	PALM	YES	16	18'	RELOCATE	
104	PALM	YES	16	18'	RELOCATE	
105	PALM	YES	16	18'	RELOCATE	
106	PALM	YES	14	15'	RELOCATE	
107	PALM	YES	10	8'	REMOVE	NONE
108	PALM	YES	18	19'	RELOCATE	
109	PALM	YES	16	35'	RELOCATE	
110	PALM	YES	14	20'	RELOCATE	
111	PALM	YES	16	20'	RELOCATE	
112	PALM	YES	18	18'	RELOCATE	
113	OAK	YES	6		REMOVE	NONE
114	PALM	YES	14	13'	REMAIN	
115	PALM	YES	22	18'	REMAIN	
116	PALM	YES	20	20'	REMAIN	
117	PALM	YES	10	7'	REMAIN	
118	UNKNOWN	NO	12		REMOVE	NONE
119	OAK	YES	38		REMAIN	
120	PALM	YES	14	18'	REMAIN	
121	OAK	YES	18		REMAIN	
122	OAK	YES	12		REMAIN	
123	PALM	YES	18	21'	RELOCATE	
124	PALM	YES	18	16'	RELOCATE	
125	PALM	YES	16	26'	REMAIN	
126	PALM	YES	18	29'	REMAIN	
127	OAK	YES	24		REMAIN	
128	PALM	YES	16	32'	REMAIN	
129	UNKNOWN	NO	10		REMOVE	NONE
130	PINE	YES	28		REMAIN	
131	PALM	YES	16	24'	RELOCATE	
132	UNKNOWN	NO	24		REMOVE	NONE
133	OAK	YES	10		REMOVE	NONE
134	OAK	YES	28		REMOVE	28"
135	PALM	YES	18	30'	RELOCATE	
136	OAK	YES	40		REMOVE	40"
137	PALM	YES	18	18'	RELOCATE	
138	PINE	YES	10		REMOVE	NONE
139	UNKNOWN	NO	8		REMOVE	NONE
140	OAK	YES	36		REMOVE	36"
141	PALM	YES	16	20'	RELOCATE	
142	PALM	YES	14	25'	RELOCATE	
143	PALM	YES	16	25'	RELOCATE	
144	OAK	YES	20		REMOVE	20"
145	PALM	YES	14	26'	RELOCATE	
146	PALM	YES	16	21'	RELOCATE	
147	PALM	YES	18	23'	RELOCATE	
148	OAK	YES	16		REMOVE	16"
149	UNKNOWN	NO	18		REMOVE	NONE
150	PALM	YES	22	18'	RELOCATE	
151	PALM	YES	14	7'	REMOVE	NONE
152	PALM	YES	22	22'	RELOCATE	
153	PALM	YES	16	20'	RELOCATE	
154	PALM	YES	22	18'	RELOCATE	
155	PALM	YES	18	17'	RELOCATE	
156	PALM	YES	18	16'	RELOCATE	
157	PALM	YES	16	13'	RELOCATE	
158	PALM	YES	12	10'	RELOCATE	
159	OAK	YES	10		REMOVE	NONE
160	OAK	YES	16		REMOVE	16"
161	PALM	YES	12	7'	REMOVE	
162	PALM	YES	18	24'	RELOCATE	
163	PALM	YES	16	21'	RELOCATE	
164	OAK	YES	36		REMOVE	36"
165	OAK	YES	14		REMOVE	14"
166	OAK	YES	10		REMOVE	NONE
167	POINCIANA	NO	8		REMOVE	NONE
168	OAK	YES	12		REMOVE	NONE
169	OAK	YES	22		REMOVE	22"
170	OAK	YES	18		REMOVE	18"
171	PALM	YES	16	17'	RELOCATE	
172	PALM	YES	18	13'	RELOCATE	
173	PALM	YES	12	6'	REMOVE	
174	UNKNOWN	NO	16		REMOVE	NONE
175	OAK	YES	16		REMOVE	16"
176	UNKNOWN	NO	20		REMOVE	NONE
177	PALM	YES	18	28'	RELOCATE	
178	PALM	YES	8	8'	REMOVE	NONE
179	PALM	YES	20	22'	RELOCATE	
180	PALM	YES	12	6'	REMOVE	
181	PALM	YES	18	18'	RELOCATE	
182	PALM	YES	18	16'	RELOCATE	
183	PALM	YES	18	17'	RELOCATE	
184	OAK	YES	26		REMOVE	26"
185	PALM	YES	16	28'	RELOCATE	
186	PALM	YES	14	23'	RELOCATE	
187	PALM	YES	16	14'	RELOCATE	
188	PALM	YES	16	18'	RELOCATE	
189	PALM	YES	16	20'	RELOCATE	
190	UNKNOWN	NO	24		REMOVE	NONE
191	PALM	YES	16	14'	RELOCATE	
192	OAK	YES	36		REMOVE	36"
193	UNKNOWN	NO	10		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	324"
TOTAL PRESERVED TREES (IN)	120"
TOTAL RELOCATED PALMS	49

TAG NUMBER	TREE TYPE	NATIVE	DBH (INCHES)	CLEAR TRUNK HEIGHT	DISPOSITION	MITIGATION REQ'D.
194	OAK	YES	36		REMAIN	
195	PALM	YES	18	26'	REMAIN	
196	OAK	YES	18		REMAIN	
197	UNKNOWN	NO	8		REMOVE	
198	UNKNOWN	NO	8		REMOVE	
199	UNKNOWN	NO	8		REMOVE	
200	OAK	YES	10		REMAIN	
201	OAK	YES	6		REMOVE	NONE
202	OAK	YES	6		REMOVE	NONE
203	OAK	YES	4		REMOVE	NONE
204	OAK	YES	6		REMOVE	NONE
205	OAK	YES	8		REMOVE	NONE
206	OAK	YES	8		REMOVE	NONE
207	OAK	YES	8		REMOVE	NONE
208	OAK	YES	6		REMOVE	NONE
209	OAK	YES	6		REMOVE	NONE
210	UNKNOWN	NO	10		REMOVE	NONE
211	PALM	YES	16	18'	RELOCATE	
212	PALM	YES	18	18'	RELOCATE	
213	PALM	YES	14		RELOCATE	
214	OAK	YES	20		REMOVE	26"
215	OAK	YES	26		REMOVE	26"
216	OAK	YES	30		REMAIN	
217	SILK OAK	NO	10		REMOVE	NONE
218	OAK	YES	14		REMAIN	
219	PALM	YES	20	19'	REMAIN	
220	OAK	YES	30		REMAIN	OFF-SITE
221	UNKNOWN	NO	8		REMOVE	NONE
222	UNKNOWN	NO	12		REMOVE	NONE
223	UNKNOWN	NO	8		REMOVE	NONE
224	PALM	YES	18	20'	RELOCATE	
225	UNKNOWN	NO	6		REMOVE	NONE
226	UNKNOWN	NO	6		REMOVE	NONE
227	UNKNOWN	NO	4		REMOVE	NONE
228	UNKNOWN	NO	6		REMOVE	NONE
229	OAK	YES	6		REMAIN	
230	UNKNOWN	NO	12		REMOVE	NONE
231	PALM	YES	22	18'	REMAIN	OFF-SITE
232	UNKNOWN	NO	30		REMOVE	NONE
233	PALM	YES	22	17'	RELOCATE	
234	OAK	YES	12		REMOVE	NONE
235	OAK	YES	10		REMOVE	NONE
236	UNKNOWN	NO	8		REMOVE	NONE
237	UNKNOWN	NO	6		REMOVE	NONE
238	UNKNOWN	NO	6		REMOVE	NONE
239	OAK	YES	16		REMOVE	16"
240	OAK	YES	10		REMOVE	NONE
241	UNKNOWN	NO	14		REMOVE	NONE
242	UNKNOWN	NO	8		REMOVE	NONE
243	UNKNOWN	NO	8		REMOVE	NONE
244	UNKNOWN	NO	10		REMOVE	NONE
245	PINE	YES	10		REMOVE	NONE
246	PINE	YES	10		REMOVE	NONE
247	OAK	YES	10		REMOVE	NONE
248	OAK	YES	10		REMOVE	NONE
249	PALM	YES	18	23'	RELOCATE	
250	PALM	YES	18	20'	REMAIN	
251	PINE	YES	10		REMAIN	OFF-SITE
252	PALM	YES	16	22'	RELOCATE	
253	OAK	YES	26		REMOVE	26"
254	OAK	YES	16		REMOVE	16"
255	OAK	YES	14		REMOVE	14"
256	OAK	YES	12		REMOVE	NONE
257	OAK	YES	14		REMOVE	14"
258	PALM	YES	22	28'	RELOCATE	
259	UNKNOWN	NO	8		REMOVE	NONE
260	PALM	YES	12	6'	REMOVE	NONE
261	PALM	YES	14	10'	RELOCATE	
262	UNKNOWN	NO	10		REMOVE	NONE
263	PINE	YES	14		REMAIN	
264	OAK	YES	18		REMOVE	18"
265	PALM	YES	16	21'	RELOCATE	
266	PALM	YES	18	20'	RELOCATE	
267	PALM	YES	20	18'	RELOCATE	
268	PALM	YES	20	20'	REMAIN	OFF-SITE
269	OAK	YES	20		REMAIN	
270	OAK	YES	10		REMOVE	NONE
271	PALM	YES	16	13'	RELOCATE	
272	OAK	YES	36		REMOVE	36"
273	PALM	YES	16	14'	RELOCATE	
274	UNKNOWN	NO	6		REMOVE	NONE
275	UNKNOWN	NO	6		REMOVE	NONE
276	PALM	YES	16	25'	REMAIN	
277	PALM	YES	12	11'	REMAIN	
278	PALM	YES	18	18'	RELOCATE	
279	OAK	YES	18		REMOVE	18"
280	OAK	YES	18		REMOVE	18"
281	PALM	YES	18	22'	RELOCATE	
282	PALM	YES	18	18'	RELOCATE	
283	PALM	YES	16	10'	REMAIN	
284	PINE	YES	16		REMAIN	
285	PINE	YES	12		REMAIN	
286	PINE	YES	10		REMAIN	
287	PALM	YES	18	19'	RELOCATE	
288	PALM	YES	16	18'	RELOCATE	
289	PALM	YES	18	19'	RELOCATE	
290	UNKNOWN	NO	30		REMOVE	NONE

OAK – LAUREL OAK (QUERCUS LAURIFOLIA)
PINE – SLASH PINE (PINUS ELLIOTTII)
PALM – CABBAGE PALM (SABAL PALMETTO)
UNKNOWN – NON-NATIVE EXOTIC

TOTAL MITIGATION (COLUMN)	228"
TOTAL PRESERVED TREES (IN)	196"
TOTAL RELOCATED PALMS	20

TOTAL RELOCATED PALMS: 155 PALMS
TOTAL MITIGATION REQUIRED (IN.): 552"
TOTAL PRESERVED TREES (IN.): 316"
TOTAL MITIGATION: 236"

ADDITIONAL TREES PROVIDED ON LANDSCAPE PLANS: 135 TREES OR 337.5" @ 2.5" PER TREE

SINCE THE ADDITIONAL TREES PROVIDED AMOUNT TO MORE DBH INCHES THAN IS REQUIRED TO BE MITIGATED, NO ADDITIONAL MITIGATION IS NEEDED.

Tree Dispostion Plan

MANAGED LAND ENTITLEMENTS
3710 BUCKEYE STREET, SUITE 100, PALM BEACH GARDENS, FL 33410 • P 561.568.8045

LC26000482
Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, Fl 34990
561-719-3876
JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential
Ft. Pierce, Florida

Landscape Architect of Record

REGISTERED LANDSCAPE ARCHITECT JASON M. LITTERICK LA 0001677 STATE OF FLORIDA

Jason M. Litterick, RLA
(LA0001677)

Scale: Not to Scale

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

Sheet No.
TR-3

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

July 16, 2020

Michael Sanchez/Managed Land Entitlements
3710 Buckeye Street, Suite 100
Palm Beach Gardens, FL 33410

Subject: 3000 Okeechobee Road – TRC Comments for July 16th, 2020 conference call

City of Fort Pierce Planning Department

1. Install a landscaped area around the proposed monument sign base which extends a minimum distance of three (3) feet in all directions. Such landscaped area shall be completely covered by ground cover and shrubs, hedges or similar vegetative materials. Vegetation in the area surrounding said sign shall be maintained at a height of less than twelve (12) inches.

2. Provide a separate gated entrance to the refuse collection areas for resident and employee access.

3. Pursuant to City Code Section 22-62(b)(4) Sidewalks. In order to provide continual access for pedestrians, sidewalks and sidewalk linkages shall be required to be provided by the property owner or permit applicant, when plans are submitted for condition use applications or pay a payment into the city sidewalk fund pursuant to City Code Section 22-62(g).

   Please submit payment in-lieu for sidewalks that would be otherwise required along S. 31st Street and the Southwest corner of the subject property to the City of Fort Pierce within ninety (90) days of Conditional Use Approval.

4. Please note that the City of Fort Pierce will have a new Code of Ordinances effective July 20, 2020. This new code represents a renumbering and reshuffling of code sections from what the current code reflects. The new Planning sections will start with Chapter 111, which is Historic Preservation through Chapter 125, which is Zoning. Should you have any questions; the new proposed code can be found on the City Website, under Agenda & Minutes, City Commission 7/6/2020, Item 12(i).

Fort Pierce Engineering Department

Recommends approval.

Advisory Comment: 1. The drainage plan was reviewed as a conceptual plan and will be further reviewed at time of Building Permit submittal.

Fort Pierce Utility Authority

FPUA W/WW Engineering: Water and sewer services are available to serve this location. Please Submit 3 complete sets of utility construction plan along with a completed commercial service application to Water and Wastewater Engineering for review at 1701 S 37th Street Fort Pierce Florida. For more information, please contact John Biggs at 772 466 1600 ext. 3474 or click on the following link below: https://www.fpua.com/Business/StartStopNewServices/DevelopmentServicesResponsibilitiesWWW.asp

FPUA Electric & Gas Engineering: Approved - Electric service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide electric load information for the AutoCAD drawing. Customer will be responsible for all transformer pads, conduits and secondary conductors. For more information and project coordination, please contact Sal Scimeca. Engineering Technician II Electric and Gas Engineering 1701 S. 37th Street, Fort Pierce, FL 34947 sscimeca@fpua.com Office: (772)466-1600 Ext. 6957

Gas service is available to the site (from S. 33rd Street and Nebraska Avenue). Please provide a copy of the gas riser diagram with the anticipated load (if developer is interested in natural gas service to the propose complex). For more information and incentive available, please contact Billy Dupre. Business Development Representative Gas Operations 1701 S. 37th Street, Fort Pierce, FL 34947 Bdupre@fpua.com Office: (772)-466-1600 Ext.4705

Utility easement will be required for all propose FPUA electric and gas facilities within the site. If the developer should have any questions, please have them contact individuals listed above. Attached are copies of the FPUA GIS Maps (Electric and Gas).

Please see attached utility maps of the area.

Fort Pierce Building Department

The Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

Fort Pierce Police Department

Overall, a very nice project and site plan that would, once finished, bring "substantial enhancement to the area" as stated in the project narrative.
I do, however, have one concern. It is to do with the "indented, mini-courtyard like" area in the center of each of the apartment structures. That indented area is part of the building's design and is shown on the "front elevation" and floor plans. Specifically, it is the open courtyard like space that is between the two "one bedroom" apartment units. Even though there are a total of four (or six in the 3 story building) windows (located in "bedroom 3" of the

3 bedroom apartment units) which allow residents to see into that courtyard like area, it is still an area that may have potential use for nefarious activity as it offers a fair amount of concealment. The "indent" creates an area that may offer cover for abnormal users and unwanted activities.
One suggestion to mitigate this concern is to place an additional window in each of the one bedroom apartment's bedroom on the wall that currently does not feature a window. This will allow for greater levels of natural surveillance by residents into that courtyard area which would aide in the deterrence of unwanted activities. Additionally, consider some form of pedestrian scale illumination to ensure that courtyard area receives adequate illumination to deter (or identify) unwanted activities (but with consideration to light trespass into the bedrooms)

Officer Damian Spotts
Crime Prevention Practitioner
Fort Pierce Police Department.

City of Fort Pierce Arborist

Please contact Paul Bertram for further review. He will need to send the Planning Department his comments as well.

Paul Bertram
Office: 772-467-3821
Email: PBertram@cityoffortpierce.com

St. Lucie County Planning Department

No Comments

St. Lucie County PW/Engineering

1. A County Roadway Improvement Agreement, Right-of-Way permit, and bond will be required for turn lane construction to Okeechobee Road. Plans and cost estimates should be provided to Grant Chambers, P.E. at chambersg@stlucieco.org .
2. The County asks to be copied on the correspondence regarding the City's review of the traffic impact analysis.

City Clerk Office

No Comments

St Lucie County Fire District

This entity had issues opening your file packet, please contact Lieutenant Wayne Boyer:

Lieutenant Wayne Boyer, M.S., FO, C.F.E.I.
Water Supply Officer
Community Risk Reduction Bureau
St. Lucie County Fire District
Office: 772-621-3322 Mobile: 772-631-8877
Email: WBoyer@slcfd.org

Lieutenant Boyd will need to send the Planning Department his comments as well.

Code Enforcement

No Comments

Florida Department of Transportation

No Comments



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
  - Pad Mount
- Valves
  - Gas
  - Water
  - Raw Water
  - Waste Water
- Fire Hydrant
- Well
- Lift Station

Disclaimer:

The data contained herein is offered "as is", with no claim or warranty as to its accuracy or completeness. The data is for reference only and should not be considered to be of survey precision. Due to formatting restrictions, the information provided in the map may not be represented in the legend.

811 Know what's below. Call before you dig.

Date: 7/6/2020

FPUA COMMUNITY PROUD

N

1 inch = 181 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
  - Pad Mount
- Valves
  - Gas
  - Water
  - Raw Water
  - Waste Water
- Fire Hydrant
- Well
- Lift Station

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811 Know what's below. Call before you dig.

Date: 7/6/2020

FPUA COMMUNITY PROUD

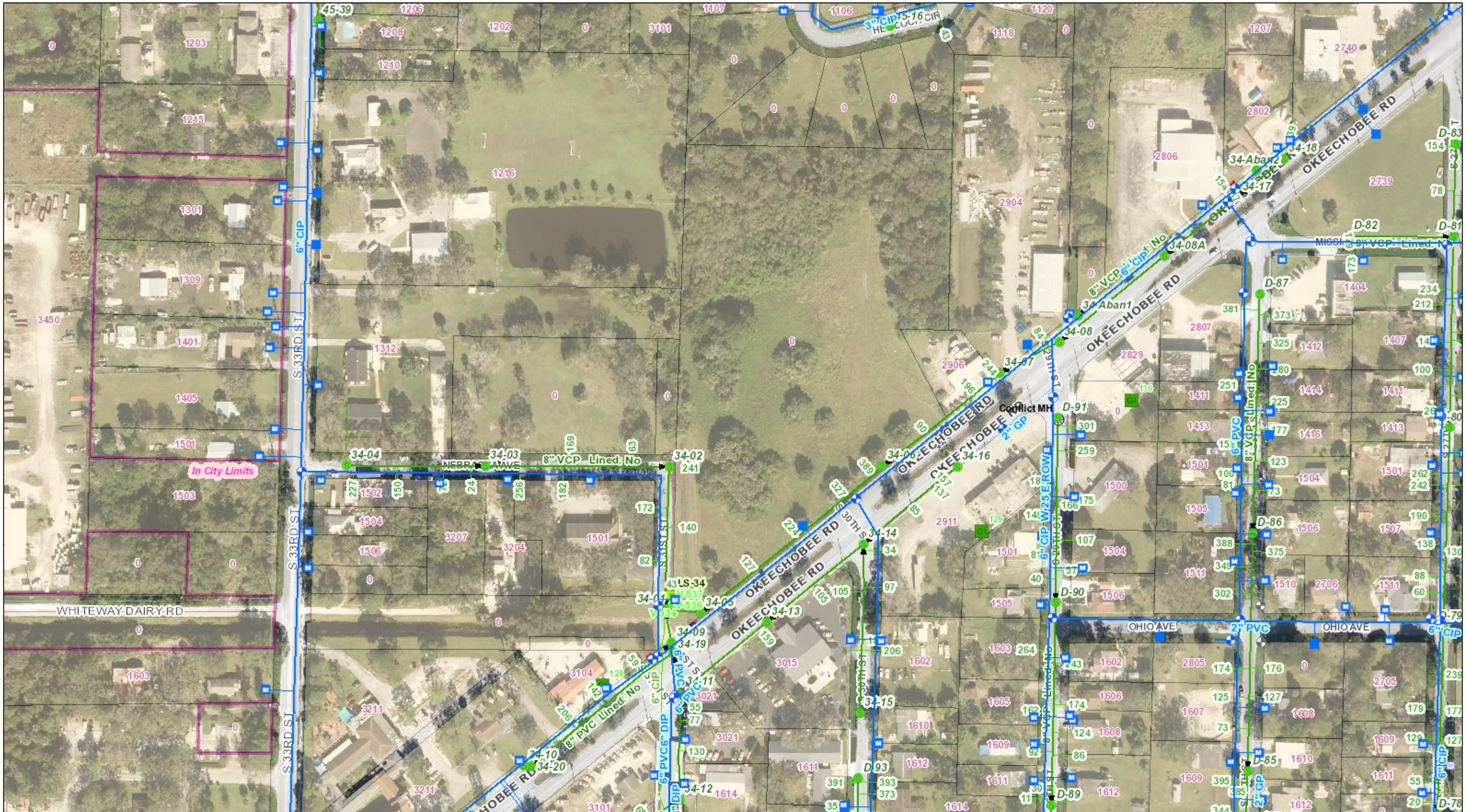
N

1 inch = 181 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main

- Pole
- Fuse

Transformers

- Overhead
- Pad Mount

Valves

- Gas
- Water
- Raw Water
- Waste Water

- Fire Hydrant
- Well
- PS Lift Station

Disclaimer:

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811 Know what's below. Call before you dig.

Date: 7/7/2020

FPUA COMMUNITY PROUD

N

1 inch = 170 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938

Planning Board - 2 PM **7. e.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Site Plan - Blue Sky Landing - 2419-211-0004-000-8

LOCATION

Parcel ID: 2419-211-0004-000-8

RESPONSIBLE STAFF

Brandon C. Creagan, LEED Green Associate, Planner

RECOMMENDATION

Approval

Attachments

Staff Report
Application & Supporting Documents
Aerial Map
Future Land Use Map
Zoning Map
TRC Comments
Applicant Responce to TRC Comments

Form Review

Form Started By: Brandon Creagan Started On: 08/04/2020 11:02 AM

Final Approval Date: 08/04/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director JH
FROM:	Brandon Creagan, LEED Green Associate, Planner BCC
RE:	**Application for Development Review and Design Review** **Blue Sky Landing – Parcel ID 2419-211-0004-000-8** **File # 20-07000004**
BOARD DATE:	August 11, 2020

STAFF REPORT

Property Owner	St. Lucie County 2300 Virginia Avenue Fort Pierce, Florida 34982
Representative:	Blue Sky Communities 5300 W Cypress Street, Suite 200 Tampa, Florida 33607
Requested Action:	Approval of a two-phase multi-family 164-unit development
Site Location:	West side of McNeil Road
Parcel IDs:	2419-211-0004-000-8
Existing Use:	Vacant
Parcel Size:	9.16 acres
Current Future Land Use:	High Density Residential (RH)
Current Zoning:	High Density Residential (R-5)

	North	East	South	West
Surrounding FLU:	GC	GC	GC	GC/RH
Surrounding Zoning:	C-3	C-3	C-3	C-3/R-5

Staff Analysis

Request

In accordance with Sections 125-313 and 125-314 of the City Code, the applicant is requesting approval for Development Review (Major Site Plan) and Design Review for a multi-family 164-unit development. The subject development will be constructed in two (2) phases with each phase containing 82 units each. The subject site was previously part of the Portofino Landings multi-family development, but the property was acquired by St. Lucie County after taxes were not paid on the property. In 2019, the County requested the City process a Future Land Use Map Amendment and Rezoning for the subject site from General Commercial (GC) to High Density Residential (RH), and General Commercial (C-3) to High Density Residential (R-5), respectively. Following the land use and zoning amendments and through a public bid process, the County awarded the property to the Blue Sky Communities to construct a multi-family residential development. Ownership has not yet been transferred.

Site Plan

The proposed project will consist of four (4) buildings with 41 units in each building for a multi-family development for a total of 164 units. The maximum building height will be 50 feet from existing grade. The proposed Blue Sky Landings will offer a 2,500 square foot clubhouse with a swimming pool. Pursuant to City Code 125-315 (d)(1)(b), the parking ratio for a multi-family development is 1.5 spaces per unit. The development is required to have 246 parking spaces and 246 spaces are provided with eight (8) of those parking spaces designated as handicap accessible. The development is also providing a total of 17 bicycle parking spaces, which meets the minimum code requirement of City Code 125-315 (f)(1)(a).

The subject development will be constructed in two (2) phases. Each phase will consist of two (2) residential buildings consisting of 84 units per phase. All onsite amenities, including the clubhouse and pool, tot lot, two lakes, a walking trail around the lake at the front of the development and a gazebo will be constructed during the first phase of the project. The parking and bicycle racks will also be phased with 123 parking spaces and nine (9) bicycle racks being provided during the first phase, and 123 parking spaces with eight (8) bicycle racks being provided during the second phase. There is one (1) vehicle access point to the site from McNeil Road and one (1) pedestrian only access point to the south of the property connecting to the Walmart property.

The Landscape Plan as presented is consistent with City Code 123-37, General Landscaping requirements. The applicant is providing a landscape plan that goes above and beyond code minimums, as demonstrated below:

- The interior landscaping area requires 46 trees and the applicant is providing a total of 70 trees.
- The interior landscaping area requires 138 shrubs and the applicant is providing 2,806 shrubs.
- The code minimum for tree caliper at planting is 2.5 and the applicant is providing a minimum tree caliper of 3.5 at planting for 23 Southern Magnolia and 48 Live Oak.

No tree mitigation is required as the mitigation plan demonstrates that all trees that would be required for mitigation are either being preserved or relocated on site. The Tree Mitigation Plan has been reviewed and approved by the City Urban Forester. Additionally, the lighting plan is consistent with City Code 125-315 (j)(1)(b).

To make the project viable, the applicant is taking advantage of the Density Bonus that is outlined in City Code 125-326 (b)(2) that states a "maximum of five (5) dwelling units per acre density bonus is permitted for development located within one-fourth (¼) mile radius of a rail station, multimodal transit center or transit stop." The Density Bonus section of the Code further restricts the Density Bonus to a maximum of three (3) additional units per acre pursuant to City Code 125-326 (c)(2) as the project is outside of the boundary of the Community Redevelopment Agency (CRA). The applicant has provided a map that demonstrates that the project is ¼ mile from a transit stop (Walmart Parking Lot) and is therefore eligible for the density bonus of up to three (3) units an acre under the above criteria.

Design Review

The City's Design Review guidelines provide approaches to design situations that will contribute to the existing and developing character of the City. The intent of the City's design review process is not to stifle innovative architecture, but rather to assure respect for and reduce incompatible and adverse impacts on the visual experience throughout the City. This may be accomplished through respectful interpretation of vernacular building typologies and styles in proposed development. Proposed designs should take cues from traditional proportioning systems and be synonymous with a chosen style.

It is staff's professional opinion the proposed design blends with the surrounding build environment. The proposed building elevations are articulated with varying roof heights and accents. The buildings themselves are four (4) stories and will offer varying color schemes that will complement one another. The building heights are similar in height to nearby structures. The architectural features are modern in nature and will compliment the other residential communities in the area.

Technical Review Committee

All affected City and County Departments have reviewed the proposed Development Review and Design Review applications and have provided conditional approval based on compliance with requirements of the City Code and the Comprehensive Plan. The comments generated from the technical review and any responses by the applicant have been provided.

Staff Recommendation

The requested applications for Development Review and Design Review meets the criteria specified in Sections 125-313 and 125-314 of the City Code, the Comprehensive Plan, and does not adversely affect the public health, safety, convenience and general welfare; Therefore staff recommends **APPROVAL** with the following two (2) conditions:

1. A Landscape Bond will need to be provided at the time of Certificate of Occupancy for each building pursuant to City Code 123-6. The Landscape Bond for the common areas, clubhouse, lakes, & parking areas shall be submitted before the Certificate of Occupancy is issued for the first building in each phase.
2. At the time of Building Permit submit a signed and sealed boundary and topographic survey to the City Engineering Department in accordance with City Code 119-2 (a)(7).

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

DEVELOPMENT REVIEW

Property address or Location McNeil Road

Parcel ID #(s) 2419-211-0004-000-8

Project description Blue Sky Landing Apartments: New construction of 164 affordable housing units

St. Lucie County	Blue Sky Communities
Property Owner(s)	**Applicant/Representative, Title, Company**
2300 Virginia Avenue	5300 W Cypress Street, Suite 200
Street Address	Street Address
Fort Pierce FL 34982	Tampa FL 33607
City State Zip	City State Zip
	(813) 708-5518
Phone Number	Phone Number
	fcornier@blueskycommunities.com
Email Address	Email Address

Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

Shawn Wilson

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 18th day of May, 20 20, by Shawn Wilson who is personally known to me or has produced _____ as identification.

Mary Jean Kopakin

Signature of Notary (seal)

MARY JEAN KOPAKIN
MY COMMISSION # GG 278273
EXPIRES: March 19, 2023
Bonded Thru Notary Public Underwriters

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date_____ Fees_____ Control #_____ B. Permit #_____

Intake Planner_____

Planner Assigned_____

Approved By_____Date _____

Comments_____

_____

_____

_____

Intake Date Stamp

❑ DEVELOPMENT REVIEW

General Information

☑ Incomplete application packets cannot be accepted.

☑ Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type		
■ Site Plan	❑ Conditional Use with New Const.	❑ Major Amendment
❑ Conceptual Development Plan		❑ Minor Amendment

Site Information:

Non-Residential: Proposed Sq. Ft.: 0 Residential: Proposed Units: 164

Surrounding Uses: *(i.e. single family home, retail, industrial, etc.)*

North	South	East	West
ROW	Department Store	Public School	Multifamily

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

☑ Complete notarized application

☑ Warranty Deed

☑ SLC Property Record Card

☑ Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.

☑ General location map (see Section 22-58.d.2)

☑ Survey (see Section 22-58.d.3)

☑ Site Plan (see Section 22-58.d.4)

☑ Landscaping Plan (see Section 22-187)

☑ Storm Drainage Plan (see Section 22-58.d.6)

☑ Environmental Impact Report

❑ Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)

☑ Lighting Plan (see Section 22-58.d.8)

☑ Design Review submittals (see Design Review application)

☑ Traffic Impact Report

☑ Concurrency Review submittals (see Concurrency Review application)

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

Design Review

Property address or Location McNeil Road
Parcel ID #(s) 2419-211-0004-000-8
Project Description Blue Sky Landing Apartments: New construction of 164 affordable housing units

St. Lucie County	Blue Sky Communities
Property Owner(s)	Applicant/Representative, Title, Company
2300 Virginia Avenue	5300 W Cypress Street, Suite 200
Street Address	Street Address
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Property Owner(s) Acknowledgements: *- This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Application (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein.*

Shawn Wilson
Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY
The foregoing instrument was acknowledged before me this 18th day of May, 20 20, by

Shawn Wilson who is personally known to me or has produced

_____ as identification.

MARY JEAN KOPAKIN
MY COMMISSION # GG 278273
EXPIRES: March 19, 2023
Bonded Thru Notary Public Underwriters

Mary Jean Kopakin
Signature of Notary

(seal)

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic Districts	Historic Designation

Pre-Application Meeting Date _____ Fees _____ Control # _____ B. Permit _____
Intake Planner _____
Planner Assigned _____
Approved _____ Date _____
Comments _____

Intake Date Stamp

Design Review Application Checklist
(City Code of Ordinances 22-59)

Submittal for Administrative Approval

a. A survey (1" = 30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of section 22-194, location of bordering streets and, if applicable, wetlands and beaches.
b. A site analysis study to include a discussion of specimen trees and other natural vegetation, access, significant topography, wetlands, buffers, setbacks, views, orientation, the surrounding built environment and other site features that may influence design elements.
c. A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis study results.
d. Context photographs of neighboring uses and architectural styles.
e. Photographs and/or drawings of architectural buildings or objects that serve as a precedent for the proposed building design. Models should be taken from local exemplary buildings, either existing or demolished. Documentation of such buildings is available in the city's planning department.
f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.
g. Conceptual site plan (to scale) showing proposed location of all buildings, structures, parking areas, signs and landscaping.
h. Landscape plan, at the same scale as the site plan. The planning director or designee may request enlarged plans of detailed planting areas. Planting schedule with sizes of proposed plantings must be included.
i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.
j. Exterior elevations showing architectural character, external architectural features and streetscape of the proposed development, including materials, colors, shadow lines and landscaping. The street elevation shall encompass the entire proposed project and generally identify the major elements of the adjacent two (2) properties on either side of the site. If the adjacent properties are vacant or underutilized, a diagram shall be provided that identifies the mass and form that is allowable under current zoning. If the street elevation must be drawn at such a scale as to render architectural details of the building unreadable, drawings of individual buildings at a larger scale should be provided as well.
k. Design review concurrent with conceptual development plan procedure according to subsection 22-58(e) is also available.

Submittal for Board Approval

a. A written narrative describing how the project conforms to administrative approval and design review guidelines of this section.
b. A final site plan meeting the requirements of section 22-58
c. A final site lighting plan that meets the requirements of subsection 22-58(d)(8).
d. A final landscape plan that meets the requirements of Article XII, Landscaping and Trees.
e. Final floor plans and elevation drawings (1/8" = 1'-0" minimum scale), as detailed under administrative approval, showing exterior building materials and colors with architectural sections and details to adequately describe the project.
f. A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation.

Jerrod Purser
Project Manager
WGI, Inc.
2035 Vista Parkway
West Palm Beach, FL 33411

Design Review Board
100 N U.S. Highway 1
Fort Pierce, FL 34950

May 29, 2020

RE: Project Conformance Narrative

Design Review Board,

On behalf of the Applicant, WGI is requesting development and design approval for a project known as "Blue Sky Landing" that is to be located on a 9.186-acre vacant parcel (Parcel ID #2419-211-0004-000-8) west of McNeil Road. The Applicant is proposing construction of a 164-unit multifamily, affordable housing development with associated infrastructure at the subject site.

This letter serves as the Project Conformance Narrative required as part of the Design Review Process. The manner in which the development proposal complies with administrative approval and design review guidelines of Section 22-59 of the Fort Pierce Code of Ordinances is summarized in pertinent terms as follows:

(g) ***Design review guidelines***

(1) ***Roofs.***

a. Principal pitched roofs of wood vernacular styles shall be a symmetrical hip with a slope of 6:12 to 10:12. Pitched roofs of designs reflecting Mediterranean, Mission, Spanish Eclectic, Craftsman and Prairie styles may have slopes of 3:12 to 6:12. A broken pitch roof (a roof which becomes shallower in slope at one-third (1/3) of the distance from the eave to the peak) is encouraged. Also allowed are gabled hips, flared hips and, where appropriate to mark an architectural feature or civic gesture, gable ends.

Our design proposal is for the phased construction of (4) four story contemporary styled, affordable multi-family housing structure(s) among other similarly articulated lower scaled complimentary elements. The intended design inspiration and imagery is to present clean, ordered and defined linear elements, with positive and negative fields with striking color flashes intended to highlight specific points of interest or activity. Our proposal is incorporating predominantly flat roof(s) with parapets that although primarily aligned, are visually separated by a dramatic saw-toothed color scheme. Extensions at hierarchy elements with more pronounced roof features break up the massing. The design is rooted in the birth of Modernism's stalwarts Loos, Gropius, the Bauhaus school, Le Corbusier and the need to respond to the

underrepresented workforce housing crisis of the Industrial Revolution efficiently and elegantly while avoiding extraneous ad-hoc features of what Robert Venturi described as the "decorated shed". Its beauty lies in its simplicity, scale and proportions.

b. Rooflines may be punctuated with dormers, windows or ventilation louvers that add detail and interest to the facade. Dormers shall light habitable spaces and have shed roofs with a minimum slope of 3:12 or pitched roofs with a slope to match the principal structure. Eyebrow dormers are also encouraged.

Our proposal does not envision the use of single-family dwelling elements more appropriate for lower volume habitation or streetscapes. Its intended to be more in line with large scale urban structures utilizing the elements noted above.

c. The use of deep (32"—40") overhangs and, where appropriate, detailed eave brackets, are strongly encouraged. Variation in roof heights or articulation of a flat roof overhang along the facade is encouraged to add visual interest to a streetscape and delineation of activity within a structure.

Our main residential structures are designed for maximum efficiency in use of footprint and spatial planning. There are no porches. There are other site elements for social gathering at the pedestrian level that will be have shade elements adding to the streetscape between the voids created by the four-story entities.

d. Ancillary roofs (attached to walls or roofs) may be sheds sloped no less than 3:12. Roofs on towers shall be flat or have a slope which matches the primary structure.

We have incorporated the guideline above for our "tower elements".

e. The finished roofing material for visible pitched roofs shall be one of the following:

1. **Cedar shingles with factory treated class B finish;**
2. **steel, copper, or factory painted aluminum standing seam, batten seam, or Bermuda roofing;**
3. **Galvanized steel "5-V crimp" roofing panels or pre-finished steel;**
4. **Galvanized metal or copper shingles of Victorian or diamond shape or pattern;**
5. **Asphalt dimensional shingles for residential buildings only;**
6. **Built-up or membrane roof behind parapets;**
7. **Flat concrete tile;**
8. **Clay or cement barrel, s-shaped or mission tiles.**

We plan to utilize item 6.

f. The fascia's around the eaves shall have limited simple detail that complements the fenestration, porch overhangs or entrances.

We plan to utilize minimalistic features throughout.

g. Exposed rafters with simple detailed ends may be substituted for fascia type arrangements.

Not applicable

(2) *Entrances.*

a. Buildings shall have architectural features such as porches or roof overhangs that delineate or emphasize entrances. Covered entrances shall be proportioned to human scale and follow logic of design relative to the building. This entrance shall face the public right-of-way, be well-defined architecturally and readily visible to pedestrian and vehicular traffic.

The hierarchy points of interest, tower elements and points of color are our entry features. We are incorporating suspended awnings for the entry doors. The orientation & delineation of the hierarchy points are reflected in their site to interior street relationships.

b. To provide for consistent spatial order of streets, and to accommodate a human scale and pedestrian activity, the inside line of the front yard (setback) shall be considered a frontage line. Exceptions to this requirement may be granted for development in the following zoning districts: OS-1 (Open Space Recreation), OS-2 (Open Space Conservation), I-1 (Light Industrial), CP-1 (Commercial Parkway), C-6 (Marine Commercial), and C-3 (General Commercial) on properties backing onto a highway and fronting an internal access road.

Our entire community is "off street" in terms of the public ROW's. Well within all required setbacks, behind interior looping double loaded parking drives.

c. Doors shall have detail appropriate to the architectural character of the proposed building and may be defined with sidelights, transoms or wooden or metal shutters.

Our entry doors are of storefront type with accompanying sidelights in keeping the intended style.

d. Porches shall have a minimum depth of six (6) feet and may encroach up to six (6) feet into the front yard (setback), or into a side yard that abuts a public right-of-way or public space.

Not applicable

(3) *Windows.*

a. Windows shall have well-defined frames, transoms or sills, and should be accentuated with shutters or Bahamas awnings where appropriate. Material of frames, shutters and awnings shall be painted or stained wood, aluminum or vinyl-clad wood, steel or aluminum.

Our intended fenestration for the units is primarily Vinyl, Energy Star rated, emergency egress sized and appropriate for wind borne debris for the area. There are intentional differences in mullion/muntin inclusions specific to differentiate living areas from bedrooms within the saw-tooth coloring that groups those room types on the facades. Currently no extraneous trim work is scheduled.

b. Reflective or mirrored glass is not permitted, however on side and rear elevations, translucent glass may be used. Minimal tinting to meet energy code requirements may be permitted. Glass block may be used where appropriate to the architectural style.

We will most likely utilize the minimal appropriately colored tinting for energy benefit and congruity with color scheme.

c. Storefront glass shall be clear and unobstructed from signs and the backs of counters, display racks and merchandise.

We have storefronts in the elevator lobbies & entrances. No retail themed elements are scheduled.

d. Windows must be placed on elevations that face the public right-of-way and must be in scale and compatible with the architectural style of the building. The bottom of the window (knee wall) shall not be lower than twenty-four (24) inches in residential or office buildings, or higher than forty-eight (48) inches from grade or sidewalk in retail buildings.

Our windows, primarily for the residential units shall all have a sill of 36" above finished floor for fall protection compliance and a header of 7'-4" a.f.f. and meet emergency egress sizing.

e. Large expanses of wall without windows or detail that face the public right-of-way are prohibited. Retail buildings shall have fenestration that reveals interior activity and encourages interest in the products or services provided.

The only elements without fenestration are the stair & elevator towers and are intended to be utilized as large scaled but minimalistic signage backdrops when fronting streets.

(4) *Elevations.*

a. Building designs shall reflect traditional proportions and architectural vocabularies demonstrated in local precedents or regional building types and styles. Wood vernacular styles include Cracker, Classical Revival and Victorian. Masonry vernacular buildings demonstrate details of Mediterranean styles including Mission and Spanish Eclectic. Streamlined Art Deco and Mid-Century Modern buildings in masonry systems are also imbedded in local and regional vernacular. Elements borrowed and interpreted from Colonial, Prairie and Craftsman styles can be found in wood and masonry systems, or a combination of the two.

Acknowledged. We would fall primarily in the stated Mid-Century Modern category.

b. Elevations adjacent to a public right-of-way shall be considered as a building front and treated as such with appropriate entrances, fenestration or detailing.

Acknowledged.

c. Articulation in the facade should give visual relief and be of sufficient depth to provide shade and shadow on adjacent building surfaces. Colors of wall surfaces shall be chosen to complement this facade articulation and colors shall be in keeping with the chosen architectural style and character.

Acknowledged. Our saw-tooth scheme corresponds with 16" of "pop-out" from the main massing.

d. Materials for facades shall be of stucco, wood clapboard, wood shingles, cement siding in clapboard style boards, modular unit masonry, coral or keystone. Brick coursework should use traditional methods that enhance elevations and frame fenestration and door openings. Metal or vinyl siding, and simulated stonework on expanses of building walls shall not be permitted. Two-dimensional stucco details that mimic three-dimensional articulation or structure shall not be permitted.

Acknowledged. We are predominantly a stucco façade with elements of storefront & stone veneer incorporated.

e. Proportion and composition of fenestration on new construction shall be compatible with architectural style. Vertical proportions are generally encouraged in all wall openings, especially for traditional architectural vocabulary. Stylistically modern buildings may utilize horizontally proportioned openings where appropriate.

Acknowledged.

f. Storefronts and their entrances are to follow logic of design and be contained within structural bays of the building.

Acknowledged.

g. Infill storefront design shall be compatible with the existing architecture of the building and block. Details and architectural features should relate to the entire building and block.

Acknowledged.

h. Roll down gates, security shutters and bars that are visible from any public right-of-way should be avoided.

Not applicable

i. Storm shutters shall be deployed only upon the issuance of a storm warning from the governing agency authorized to issue such warning.

Not applicable

j. Exterior building components and all proposed elements of the streetscape shall be painted with a color compatible with the architectural character and style of the proposed development as well as the surrounding buildings.

Acknowledged.

k. Blank walls are discouraged. Walls shall be punctuated with windows, doors or architectural elements. New construction that includes long dimensions of continuous wall shall employ the use of site breaks to punctuate the streetscape.

Acknowledged. As a multifamily structure we have a high percentage of fenestration visible.

l. To assure compatible site design and elevations as seen from the water, development adjacent to or visible from waterways may be expected to meet specific requests from the design review board beyond what is outlined in this section.

Acknowledged.

(5) *Streetscape improvement guidelines.* Streetscape improvements include those architectural or functional facilities or structures which occur on site but are not part of the building and which contribute to the overall appearance of the development and encourage and facilitate human interaction with the environment. Examples include, but are not limited to decorative light fixtures, fountains, sculpture and other civic art, benches and tables, planters, retaining walls, pedestrian and bicycle paths, bicycle parking structures, trash receptacles and enclosures, vendor areas, bollards and fences. These improvements shall be designed to be consistent with all guidelines of this section, and shall be reviewed for aesthetic functionality and compatibility with the city's design expectations.

Streetscape improvements that are part of the development proposal will be compliant with the guidelines of this section and will comply, to the greatest degree practicable, with the city's design expectations.

(6) *Lighting.*

a. Decorative, low-level intensity, non-concealed source lighting which defines vehicular and/or pedestrian ways may be acceptable if not used as general lighting for a development.

Acknowledged.

b. Exterior architectural, display and decorative lighting visible from all public rights-of-way shall be generated from concealed light source, low-level light fixtures. Color lamps shall not be used.

Our Intent currently is minimal building signage lighting, most likely by gooseneck styled spot lighting. There will most likely be security lighting (wall packs) to highlight area around building perimeter beyond parking area lamp post lighting.

c. Site lighting shall conform to the provisions of subsection 22-58(d)(8).

Acknowledged.

(7) *Landscaping.*

a. All landscape designs and drawings shall conform to chapter 22, article XII of this Code.

Acknowledged.

b. Landscaping for the proposed development shall provide visually harmonious and compatible settings for structures on the same lot as well as adjoining or nearby lots and shall blend with the surrounding landscape. The scale of the proposed landscaping shall be in proportion to the building and to the human scale of the streetscape.

Landscape material for the proposed development includes native material compatible with surrounding landscape and canopy trees and palms that are in proportion with the proposed improvements and human scale of the street scape and pedestrian walkways.

c. Screening shall be provided by appropriately designed walls and mature plant materials rather than the construction of berms.

Existing walls and fencing to be maintained are included within the landscape buffers on the southern and eastern perimeters of the subject site.

(8) *Walls and fences.*

a. Walls and fences shall be considered as an integral part of the design proposal and shall generally be constructed of the same material as the first floor of the primary building.

The existing entry monuments and perimeter fencing are to be modified as needed to reflect the architecture of the proposed improvements.

b. Concrete walls shall be faced with stuccoed or stone or shall incorporate some perforated pattern cohesive with the design intent. Gates and fences shall be wood, an appropriate composition of iron, metal or aluminum, or masonry piers with wood pickets.

Our building bases are intermittent stone veneer among the stucco finish everywhere else.

(9) *Signs.*

a. Signs will be reviewed for compliance with the guidelines of this section, section 15-6, and for compatibility with the city's developing character.

Acknowledged.

b. Signage shall be considered as an external architectural feature consistent with and in proportion to the overall design scheme for new construction and renovation.

The existing entry signs are to be modified to reflect the architectural style, color and materials of the proposed improvements and in proportion to the overall design scheme.

(10) *Awnings.*

a. Awnings shall only be used where architecturally compatible with the building. The shape of the awning and related hardware should be consistent with the architecture of the building as well as proportionate with the scale of the facade and its surroundings regarding design, color, scale and fabric.

Our lone awnings are located at the primary entrances to the residential buildings only.

b. Where a single building has several storefronts and tenants, or within a single center, they should all have a consistent design, scale, color scheme, and fabric throughout.

Acknowledged.

c. Awning fabric shall be made of non-glossy material, such as treated cotton for durability, and ribbing (seams) should run vertically.

Not applicable

d. Awnings shall not be used as an attention-getting device and should contain only minimal signage on the awning fabric. Awnings should not be backlit; simple down-lighting to illuminate the window, door or sidewalk should be used.

Entry awnings are intended to be of metal, in the suspended canopy style.

A

(11) *Renovations, alterations and/or additions.*

a. RenovatAions, alterations and/or additions to existing structures shall be reviewed as minor applications.

No renovations, alterations, or additions to existing structures are proposed as part of this development, however the existing wall/fence and monument signs will be repaired and will remain on the subject property.

b. Such alterations shall be compatible with the city's existing and developing character regarding scale, massing, materials and architectural design referenced in the above sections. Primary elevations of the facade shall be reconstructed, as appropriate, according to the design review guidelines for new development.

No renovations, alterations, or additions to existing structures are proposed as part of this development.

c. Renovation projects shall encompass, where appropriate, the entire site.

No renovations, alterations, or additions to existing structures are proposed as part of this development.

Regards,



Jerrod Purser, PLA
Project ManagerA
WGI, Inc.

PROJECT NARRATIVE & COVER LETTER
BLUE SKY LANDING
Development Review | Design Review
Initial Submittal: May 29, 2020

REQUEST

On behalf of the Applicant, WGI is requesting development and design approval for a project known as "Blue Sky Landing" that is to be located on a 9.186-acre vacant parcel (Parcel ID #2419-211-0004-000-8) west of McNeil Road. The Applicant is proposing construction of a 164-unit multifamily, affordable housing development with associated infrastructure at the subject site, to be constructed in two phases of 82 units each. There have been two pre-application meetings held between the development team and the City of Fort Pierce to discuss the development proposal prior to submittal of this request.

SITE CHARACTERISTICS

The site known as "Blue Sky Landing" is located to the west of McNeil Road and consists of 9.186 acres. The Applicant is requesting approval of a 164-unit multifamily residential development, including associated infrastructure and amenities.

At present, the subject property is a vacant heavily vegetated undeveloped lot. The property has a Future Land Use designation of High Density Residential (RH) which allows for a residential density ranging from 12-18 du/ac. The Zoning designation of the subject property is High Density Residential (R-5) which allows for a density of 15 du/ac by right. In conjunction with the density bonus specified in Section 22-72 (2) of the Fort Pierce code of ordinances, an additional density bonus of up to 5 du/ac is permitted for development on the subject site as it is located within ¼ mile of Stop C of the Treasure Coast Connector, Route 3. The proposed density for the subject site is 17.83 du/ac.

The service provider for water and wastewater services for this location is Fort Pierce Utility Authority (FPUA).

The current use of the property to the north of the proposed Blue Sky Landing development is Right-of-Way owned by the Portofino Landings CDD. Farther north there is multifamily residential housing (Sabal Chase). The use to the south is a department store (Wal-Mart), the use to the east is multifamily residential (Portofino Landings). The uses to the west are drainage and a K-8 Public School (Samuel Gaines Academy).

SITE PLAN

The site plan aims to provide visually appealing, well-provisioned, affordable housing to residents of the City of Fort Pierce. Developed according to market analysis and staff feedback during pre-application meetings, the current site plan features contemporary architecture oriented in such a way as to reduce monotony and enhance curb appeal. Proposed amenities include a large recreation area with clubhouse, pool, open space, and substantial lakes with connecting pathways throughout the development. In addition to providing stormwater retention and floodplain compensating storage requirements, the lakes provide aesthetically pleasing views for the residents.

The clubhouse and attached pool deck are centered on the site and abut McNeil Road. This structure will be easily accessible to residents by way of pedestrian walkways throughout the site. As evidenced by the presence of pathways between the lakes and the multifamily structures,

pedestrian connections took precedence in the site design to promote mobility and ease of travel throughout the site and to the abutting Wal-Mart to the south. To allow for more direct access to the goods and services offered by the southern commercial uses, a resident access gate is proposed for the existing wall at the southern perimeter of the property.

The proposed development, to the greatest degree practicable, complies with minimum site design standards for the R-5 zoning district and RH Future Land Use. This includes minimum standards for parking, loading, height, lot coverage, and buffering, in addition to other applicable requirements.

SITE ANALYSIS STUDY
BLUE SKY LANDING
Development Review | Design Review
Initial Submittal: May 29, 2020

The following document serves as the required Site Analysis Study for the project known as "Blue Sky Landing" that is to be located on a 9.186-acre vacant parcel (Parcel ID #2419-211-0004-000-8) west of McNeil Road. This document will discuss specimen trees and other natural vegetation, access, significant topography, wetlands, buffers, setbacks, views, orientation, the surrounding built environment and other site features that may influence design elements.

Trees and Vegetation

The only native trees on the property are a line of live oaks around the south and east perimeter of the subject parcel. The trees appear to have been planted as part of a landscape buffer during the original development of the land. In addition, there are two clusters of cabbage palms located on either side of the entry signage. The interior of the property was previously cleared and allowed to go fallow. As a result, there is a dense thicket of opportunistic vegetation including Brazilian pepper, Australian pine, cogon grass, saltbush, black nightshade, partridge pea, napier grass, pokeweed, candlesticks, hedgeflower, betony, and beggarweed.

Wetlands

There are no wetlands on the property. The SFWMD permit from 2006 states this and a meeting on May 20th, 2020 with SFWMD staff re-affirmed this stance. The lowest elevation on the site is 13.0' while the neighboring stormwater retention ponds have a design elevation of 10' and the canal to the north of the property is approximately 5' in elevation.

Access

According to the Traffic Impact Report, the project traffic has an insignificant impact on the roadway links and intersections surrounding the site. Access is provided along McNeil Road via the existing driveway on the subject property. In addition to an extensive pedestrian network, a resident access gate is provided to the south of the property at an existing wall, by way of Access Easement ORB 1709 PG 889, to the adjacent Walmart property and commercial properties along Okeechobee Road.

Setbacks

Setbacks for the proposed multifamily buildings part of the development proposal are listed below:

- 67’ front setback
- 87’ side setback
- 87’ rear setback

In addition to the foregoing setbacks, a minimum of 30’ separation is provided between the buildings.

Buffers

Landscape buffers provided on the subject site are listed below:

- West- 10’ landscape buffer
- East -10’ landscape buffer, existing wall to be maintained
- North- 10’ landscape buffer
- South- 10’ landscape buffer, existing wall to be maintained
- Lakes - 20’ lake maintenance easement

It should be noted that the proposed landscape buffer benefits from the existing native live oaks planted along McNeil Road and along the property line to the south proximal to the existing concrete wall. The existing trees planted are in conformance with minimum requirements stipulated in the Fort Pierce code of ordinances.

Views

Views from each structure are described in detail in the section below:

Building A (4 stories, 41 units)- Southern view is toward landscaped open space, pool deck and clubhouse area, northern view is to vacant St. Lucie Co. parcel and vacant Portofino Landings CDD parcel, eastern view is to landscaped open space and McNeil Rd., western is toward landscaped open space, parking and lake.

Building B (4 stories, 41 units)- Southern view is to landscaped open space and tot lot, northern view is to landscaped open space and vacant Portofino Landings CDD parcel, eastern view is to landscaped open space, pool and clubhouse, western view is toward landscaped open space, lakes, and parking area.

Building C (4 stories, 41 units)- southern view is to landscaped open space, northern view is toward tot lot and landscaped open space, eastern view is toward the on-site lake and McNeil Rd., western view is toward the abutting retention area and parking.

Building D (4 stories, 41 units)- southern view is to the landscaped open space, parking area and landscape buffer, northern view is to the on-site lake, pool and clubhouse, eastern view is toward McNeil Rd., and western view is toward landscaped open space.

Orientation

Buildings are oriented in such a way as to reduce monotony and enhance curb appeal. To this end, buildings are placed at angles to one another and face site amenities such as the lakes, landscaped open space, and the clubhouse area.

Surrounding Built Environment

The area surrounding the subject property is largely developed with the exception of the vacant parcel (Parcel ID: 241834300010000) to the north of the subject property. To the north of the subject property there is generally Multifamily Residential with future land use of High Density Residential and Medium Density Residential, and Zoning of Medium Density Residential (R4), to the south of the subject property there is a department store (Wal-Mart), which holds a Future Land Use Designation of General Commercial (GC) and Zoning of General Commercial (C3). To the east of the subject property there is a multifamily residential development (Portofino Landings) which holds a future land use of GC and a zoning of C3. To the west of the subject property there is a retention area associated with the Wal-Mart parcel, and a Public School (Samuel S. Gaines Academy K-8).

Conclusion

The development proposal meets the need for affordable housing in the community while minimizing adverse impacts on the natural and built environment unique to the City of Fort Pierce. Development of the site will not impact existing native trees and will result in the removal of unwanted vegetation. Furthermore, the development proposal fulfills the intended use of the subject property in a manner that will enhance the quality of life of prospective residents through thoughtful site design and architecture. To elaborate, building orientation and views are such that minimizes monotony for pedestrians and for residents of each building while enhancing curb appeal from McNeil Road. Finally, The proposed development, to the greatest degree practicable, complies with minimum site design standards for the R-5 zoning district and RH Future Land Use. This includes minimum standards for parking, loading, height, lot coverage, and buffering, in addition to other applicable requirements.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CONCURRENCY
CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North			
South			
East			
West			

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current					
****Proposed**					N/A

II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) 164*2.6=426.4(persons) *100= 42660 Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

B. Wastewater:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

C. Parks and Recreation (Residential Classifications Only):
(Du x 2.6 = persons + 44,227 = population /LOS)

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people			
Urban District	5 acres per 1,000 people			
Community	2.5 acres per 1,000 people			
Neighborhood	1.36 acres per 1,000 people			

D. Public Schools (Residential Classifications Only):
Single Family: (du x 0.405 = students/70% K-8/30% High)
Multi-family: (du x 0.207 = students/70% K-8/30% High)

	K-8	High
School Name		
City		
Distance		
Current Zoning/FLU Enrollment Demand		
****Proposed Zoning/FLU Enrollment Demand**		
****Change in Demand**		

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units) 164 units - 21.87 yards	
Demand Analysis	Maximum
Current Zoning/FLU	
****Proposed Zoning/FLU**	
***Change in Demand**	

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	

III. Transportation Analysis: *Complete ITE Trip Generation Form (Attached)*

G. Transportation Analysis: Complete ITE Trip Generation Data Form Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	**AM/PM Peak Hour Trips**
Demand Analysis	Maximum	Maximum
Current Zoning/FLU		
****Proposed Zoning/FLU**		
***Change in Demand**	Trips	Trips
Impact to Capacity		

IV. Project Description

PHASING
Is this project (phase) part of a larger project? [ ] Yes [ ] No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: Single Family: Multifamily:
Non-residential (square footage):
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total)

RESIDENTIAL DATA					
Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached					
Single-family, attached					
Multi-family					
Other (specify)					

NON-RESIDENTIAL DATA					
Type(s) specify	**Phase**	**Square footage**	**Acres**	**Expecting beginning date**	**Expected completion date**

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. [ ] Yes [ ] No

Note: Existing perimeter fence/wall and entrance signs to be remain

B. 1. Does this application involve demolition or re-use of any structure(s)? [ ] Yes [ ] No
If yes, what is the size of the structure(s) to be demolished or re-used? _____

2. What is the current use of the structure to be demolished or re-used? _____

3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? [ ] Yes [ ] No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4515406 OR BOOK 4217 PAGE 2629, Recorded 12/28/2018 02:52:38 PM

Tax Deed File No. 13-648

Property Identification No. 2419-211-0004-000/8

CORRECTIVE ESCHEATMENT TAX DEED

State of Florida

ST. LUCIE COUNTY

This Tax Deed is issued pursuant to Section 197.502(8), Florida Statues, wherein three years have passed from the day the subject land was offered for public sale and placed on the list of "lands available for taxes" in accordance with Section 197.502(7), Florida Statutes, without having been purchased. As provided in Section 197.502(8), Florida Statutes, the property has escheated to the County free and clear of any and all tax certificates, tax liens or any other liens of record, including governmental liens, which liens are deemed canceled pursuant to said statutes.

Now, on this **27TH DAY OF OCTOBER, 2017**, the undersigned clerk conveys to **SAINT LUCIE** County through its Board of County Commissioners, whose address is **2300 VIRGINIA AVE, FORT PIERCE, FL 34982** together with all hereditaments, buildings, fixtures and improvements of any kind and description, the following legally described land situation in **SAINT LUCIE** County, Florida.

PLEASE SEE ATTACHED FOR LEGAL DESCRIPTION

The Tax Deed recorded in OR BK 4058, Page 1727-1728 File #4365236 is hereby corrected and reinstated via this Tax Deed.

Witness:

ANA PORTILLA

BRITTANY JONES

CLERK OF COURT OR COUNTY COMPTROLLER

CLERK OF THE CIRCUIT COURT * ST. LUCIE COUNTY *

State of Florida

County of ST. LUCIE

On the **27TH DAY OF OCTOBER, 2017**, before me personally appeared **MARGARET RAHAL**, Clerk of the Circuit Court or County Comptroller in and for the State and this County, who is known to me to be the person described in, and who executed the foregoing instrument, and acknowledged the execution of this instrument to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and office seal date aforesaid

ANGELA RIGGINS, Notary Public

ANGELA RIGGINS
MY COMMISSION # FF 926553
EXPIRES: October 12, 2019
Bonded Thru Notary Public Underwriters

Legal Description

19 35 40 FROM NE COR OF SEC RUN N 01 20 45 E ALG E LI OF SEC 357.81 FT TO N RD R/W LI OF OKEE RD,TH S 52 29 55 W ALG NLY R/W LI 2102.04 FT,TH S 55 45 47 W 210.34 FT,TH S 52 29 33 W 71.28 FT,TH S 52 29 55 W 230.26 FT,TH S 29 51 40 W 31.18 FT,TH S 52 29 55 W 675.96 FT TO ELY R/W LI OF MCNEIL RD EXTENSION,TH N 37 30 05 W 350 FT,TH S 52 29 55 W 10 FT,TH N 37 30 05 W 230 FT TO CURVE CONC E,R OF 595 FT,TH NLY ALG ARC 441.86 FT,TH N 84 57 07 W 60 FT TO POB AND CURVE CONC E,R OF 655 FT,TH SLY ALG ARC 135.10 FT,TH S 89 21 58 W 391.21 FT,TH N 82 29 17 W 53.44 FT,TH N 05 25 09 E 509.05 FT,TH S 89 01 36 W 313.99 FT,TH N 45 38 03 W 28.13 FT,TH N 00 38 03 W 202.81 FT,TH N 89 01 38 E 671.63 FT TO CURVE CONC NE,R OF 250 FT,TH SELY ALG ARC 129.58 FT,TH S 70 24 24 E 66.44 FT TO CURVE CONC E,R OF 2,103.43 FT,TH SLY ALG ARC 521.35 FT TO POB (9.16 AC) (OR 2483-1661; 3254-1039)

ST. LUCIE COUNTY FLORIDA

HOWARD N. TIPTON
County Administrator

ST. LUCIE COUNTY
BOARD OF COUNTY
COMMISSIONERS

CATHY TOWNSEND
CHAIR
DISTRICT 5

CHRIS DZADOVSKY
VICE-CHAIR
DISTRICT 1

SEAN MITCHELL
DISTRICT 2

LINDA BARTZ
DISTRICT 3

FRANNIE HUTCHINSON
DISTRICT 4

DAN MCINTYRE
COUNTY ATTORNEY

MAILING ADDRESS
2300 VIRGINIA AVENUE
FORT PIERCE, FL 34982

PHONE
(772) 462-1156

TDD
(772) 462-1428

FAX
(772) 462-2131

E-MAIL
PHELANK@STLUCIECO.ORG

WEBSITE
WWW.STLUCIECO.GOV

March 4, 2020

Jennifer Hofmeister, AICP, LCAM
Planning Director
City of Fort Pierce Planning Department
100 North U.S. Highway One
Fort Pierce, FL 34950

Dear Ms. Hofmeister:

Re: Blue McNeil One, LLC – Development Application Authorization

On August 19, 2019, St. Lucie County entered into a Ground Lease Agreement with Blue McNeil One, LLC for the development of a housing project on approximately 4 +/- acres within a larger tract owned by the County (Parcel ID: 2419-211-0004-000-8). The property is located within the City of Fort Pierce. The lease provides for Blue McNeil One, LLC to pursue development approvals from the City for the project. In order to facilitate submission of planning and related documents, this letter shall serve as authorization for Blue McNeil One, LLC to sign applications and related documents required for the City's development review process. In conjunction with the City's project review, please copy the County's Community Service Director with any correspondence related to the project at the following address:

Diana Wesloski
St. Lucie County Community Services Director
2300 Virginia Avenue
Fort Pierce, FL 34982

If you require anything further regard to this matter, please do not hesitate to contact me or Ms. Wesloski.

Sincerely,

Howard N. Tipton

HNT/kp

Copies to: County Attorney
Community Services Director
Planning and Development Services Director
Frank Cornier, Blue Sky Communities

Jerrod Purser
Project Manager
WGI, Inc.
2035 Vista Parkway
West Palm Beach, FL 33411

Jennifer Hofmeister
Planning Director
100 N U.S. Highway 1
Fort Pierce, FL 34950

May 29, 2020

RE: Statement describing in detail: character and intended use

Dear Ms. Hofmeister,

On behalf of the Applicant, WGI is requesting development and design approval for a project known as "Blue Sky Landing" that is to be located on a 9.186-acre vacant parcel (Parcel ID #2419-211-0004-000-8) west of McNeil Road. The Applicant is proposing construction of a 164-unit multifamily, affordable housing development with associated infrastructure at the subject site.

At present, the subject property is a vacant, heavily vegetated undeveloped lot with a Future Land Use designation of High Density Residential (RH) and a zoning designation of High Density Residential (R-5). The site is located proximal to Stop C of the Treasure Coast Connector, Route 3 allowing for a density bonus to support the development proposal.

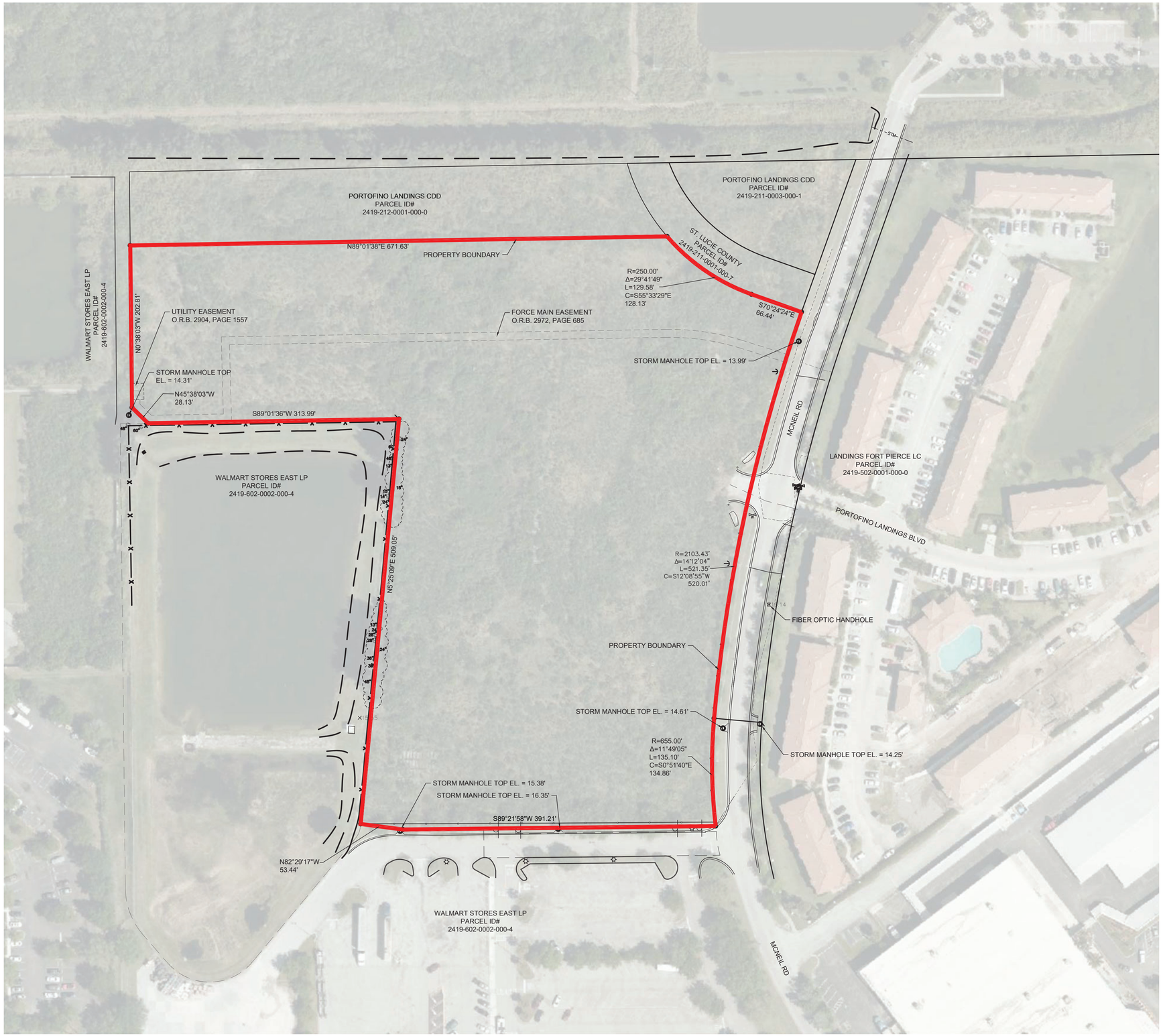
The site plan aims to provide visually appealing, well-provisioned, affordable housing to residents of the City of Fort Pierce. Developed according to market analysis and staff feedback during pre-application meetings, the current site plan features contemporary architecture oriented in such a way as to reduce monotony and enhance curb appeal. Proposed amenities include a large recreation area with clubhouse, pool, open space, and substantial lakes with connecting pathways throughout the development. In addition to providing stormwater retention and floodplain compensating storage requirements, the lakes provide aesthetically pleasing views for the residents.

The clubhouse and attached pool deck are centered on the site and abut McNeil Road. This structure will be easily accessible to residents by way of pedestrian walkways throughout the site. As evidenced by the presence of pathways between the lakes and the multifamily structures, pedestrian connections took precedence in the site design to promote mobility and ease of travel throughout the site and to the abutting Wal-Mart to the south. To allow for more direct access to the goods and services offered by the southern commercial uses, a resident access gate is proposed for the existing wall at the southern perimeter of the property.

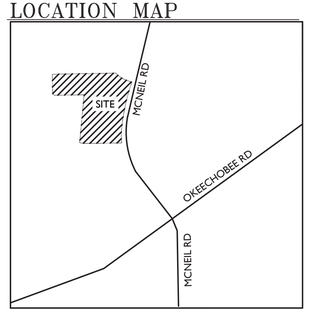
The proposed development, to the greatest degree practicable, complies with minimum site design standards for the R-5 zoning district and RH Future Land Use. This includes minimum standards for parking, loading, height, lot coverage, and buffering, in addition to other applicable requirements.

Regards,

Jerrod Purser, PLA
Project Manager
WGI, Inc.



LOCATION MAP



LEGAL DESCRIPTION

A parcel of land lying in Section 19, Township 35 South, Range 40 East, St. Lucie County, Florida, being more particularly described as follows:

Commence at the Northeast corner of said Section 19, thence N01°20'45"E along the East line of Section 18, Township 35 South Range 40 East, a distance of 357.81 feet to the point of intersection with the Northerly right-of-way line of Okeechobee Road (AKA S.R. 70); thence S52°29'55"W along said northerly right-of-way line a distance of 2102.04 feet; thence S55°45'47"W a distance of 210.34 feet; thence S52°29'33"W a distance of 71.28 feet; thence South 52°29'55" West, a distance of 230.26 feet; thence South 29°51'40" West, a distance of 31.18 feet; thence South 52°29'55" West, a distance of 675.96 feet to the Easterly right-of-way line of McNeil Road Extension; thence along the Easterly right-of-way of McNeil Road Extension the following 4 courses and distances; thence North 37°30'05" West, a distance of 350.00 feet; thence South 52°29'55" West, a distance of 10.00 feet; thence North 37°30'05" West, a distance of 230.00 feet to a point of curve to the right having a radius of 595.00 feet and a central angle of 42°32'58"; thence Northwesterly along the arc a distance of 441.86 feet; thence North 84°57'07" West, a distance of 60.00 feet to the POINT OF BEGINNING of the following described parcel;

To an intersection with a non tangent curve concave to the East, having a radius of 655.00 feet, the chord of which bears South 00°51'40" East, 134.86 feet; thence Southerly along the arc of said curve, a distance of 135.10 feet through a central angle of 11°49'05"; thence South 89°21'58" West, a distance of 391.21 feet; thence North 82°29'17" West, a distance of 53.44 feet; thence North 05°25'09" East, a distance of 509.05 feet; thence South 89°01'36" West, a distance of 313.99 feet; thence North 45°38'03" West, a distance of 28.13 feet; thence North 00°38'03" West, a distance of 202.81 feet; thence North 89°01'38" East, a distance of 671.63 feet to the intersection with a non tangent curve concave to the Northeast, having a radius of 250.00 feet, the chord of which bears South 55°33'29" East, 128.13 feet; thence Easterly along the arc of said curve, a distance of 129.58 feet through a central angle of 29°41'49"; thence South 70°24'24" East, a distance of 66.44 feet to the intersection with a non tangent curve concave to the East, having a radius of 2,103.43 feet, the chord of which bears South 12°08'55" West, 520.01 feet; thence Southerly along the arc of said curve, a distance of 521.35 feet through a central angle of 14°12'04" to the POINT OF BEGINNING.

Containing 9.186 acres, more or less.

LEGEND

℄	DENOTES CENTERLINE
(P)	DENOTES PLAT DATA
(C)	DENOTES CALCULATED FROM FIELD MEASUREMENTS
(D)	DENOTES DEED DATA
TOB	DENOTES TOP OF BANK
TYP	DENOTES TYPICAL
FND	DENOTES FOUND
LB	DENOTES LICENSED BUSINESS
OHU	DENOTES OVERHEAD UTILITIES
POC	DENOTES POINT OF COMMENCEMENT
(BB)	DENOTES BEARING BASIS
C	DENOTES CHORD BEARING & DISTANCE
UE	DENOTES UTILITY EASEMENT
PLS	DENOTES PROFESSIONAL LAND SURVEYOR
IP	DENOTES IRON PIPE
IR	DENOTES IRON ROD
CM	DENOTES CONCRETE MONUMENT
CONC	DENOTES CONCRETE
IR & C	DENOTES 5/8" IRON ROD & CAP
Δ	DENOTES CENTRAL ANGLE
R	DENOTES RADIUS
	DENOTES ARC LENGTH
ORB	DENOTES OFFICIAL RECORDS BOOK
±	DENOTES PLUS OR MINUS
No.	DENOTES NUMBER
POB	DENOTES POINT OF BEGINNING
PK & D	DENOTES P.K. NAIL AND DISK
CMP	DENOTES CORRUGATED METAL PIPE
RCP	DENOTES REINFORCED CONCRETE PIPE
No ID	DENOTES NO IDENTIFICATION NUMBER
PRM	DENOTES PERMANENT REFERENCE MONUMENT
	DENOTES SEWER VALVE
	DENOTES WATER VALVE
	DENOTES ELEVATION (TYPICAL)
WM	DENOTES WATER METER

TREE LEGEND

- = PALM TREE
- = PINE TREE
- = OAK TREE
- = AUSTRALIAN PINE TREE
- = BUSH

BLUE SKY LANDING

GENERAL LOCATION MAP

05-22-2020

N

0' 30' 60' 120' 180'

SCALE: 1" = 60'-0"

WGI

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address:	OKEECHOBEE RD
Parcel ID:	2419-211-0004-000-8
Account #:	174088
Map ID:	24/19N
Use Type:	1000
Zoning:	General Co
City/County:	Fort Pierce



Ownership

St Lucie County
2300 Virginia AVE
Fort Pierce, FL 34982-5632

Legal Description

19 35 40 FROM NE COR OF SEC RUN N 01 20 45 E ALG E LI OF SEC 357.81 FT TO N RD R/W LI OF OKEE RD,TH S 52 29 55 W ALG NLY R/W LI 2102.04 FT,TH S 55 45 47 W 210.34 FT,TH S 52 29 33 W 71.28 FT,TH S 52 29 55 W 230.26 FT,TH S 29 51 40 W 31.18 FT,TH S 52 29 55 W 675.96 FT TO ELY R/W LI OF MCNEIL RD EXTENSION,TH N 37 30 05 W 350 FT,TH S 52 29 55 W 10 FT,TH N 37 30 05 W 230 FT TO CURVE CONC E,R OF 595 FT,TH NLY ALG ARC 441.86 FT,TH N 84 57 07 W 60 FT TO POB AND CURVE CONC E,R OF 655 FT,TH SLY ALG ARC 135.10 FT,TH S 89 21 58 W 391.21 FT,TH N 82 29 17 W 53.44 FT,TH N 05 25 09 E 509.05 FT,TH S 89 01 36 W 313.99 FT,TH N 45 38 03 W 28.13 FT,TH N 00 38 03 W 202.81 FT,TH N 89 01 38 E 671.63 FT TO CURVE CONC NE,R OF 250 FT,TH SELY ALG ARC 129.58 FT,TH S 70 24 24 E 66.44 FT TO CURVE CONC E,R OF 2,103.43 FT,TH SLY ALG ARC 521.35 FT TO POB (9.16 AC)

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	9.16
Land Size (SF):	399,010

Current Values

Just/Market Value:	$698,300
Assessed Value:	$698,300
Exemptions:	$698,300
Taxable Value:	$0

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Taxes for this parcel: SLC Tax Collector's Office □
Download TRIM for this parcel: Download PDF □

Sale History

Date:	Oct 27, 2017
Book/Page:	4217 / 2629
Sale Code:	0111
Deed:	TD
Grantor:	Board of County Commissioners of St Lucie Cty
Price:	$0

Date:	Jul 28, 2017
Book/Page:	4058 / 1727
Sale Code:	0111
Deed:	TD

Grantor:	Prime Homes At Portofino Landings Ltd
Price:	$0
Date:	Jan 30, 2006
Book/Page:	3254 / 1039
Sale Code:	XX03
Deed:	SP
Grantor:	Portofino Landings CDD
Price:	$0
Date:	Jan 30, 2006
Book/Page:	2483 / 1661
Sale Code:	XX02
Deed:	SP
Grantor:	2890 Inc
Price:	$5,100,000

Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	Sprinkled %: 0%



Image or Sketch unavailable for display

Special Features and Yard Items

Current Year Values

Current Values Breakdown

Building:	$0
Land:	$698,300
Just/Market:	$698,300
Ag Credit:	$0

Current Year Exemption Value Breakdown

Tax Year	Grant Year	Code	Description	Amount
2019	2018	8500	St Lucie County	$698,300

Save Our Homes or 10% Cap:	$0
Assessed:	$698,300
Exemption(s):	$698,300
Taxable:	$0

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2013	0054	9.16001	North St. Lucie Water Management District	$160.30

Start Year	AssessCode	Units	Description	Amount
2018	4060	0	Portofino Landings CDD	$0.00

This does not necessarily represent the total Special Assessements that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

Historical Values

Permits

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in Fort Pierce

All information is believed to be correct at this time, but is subject to change and is provided without any warranty.
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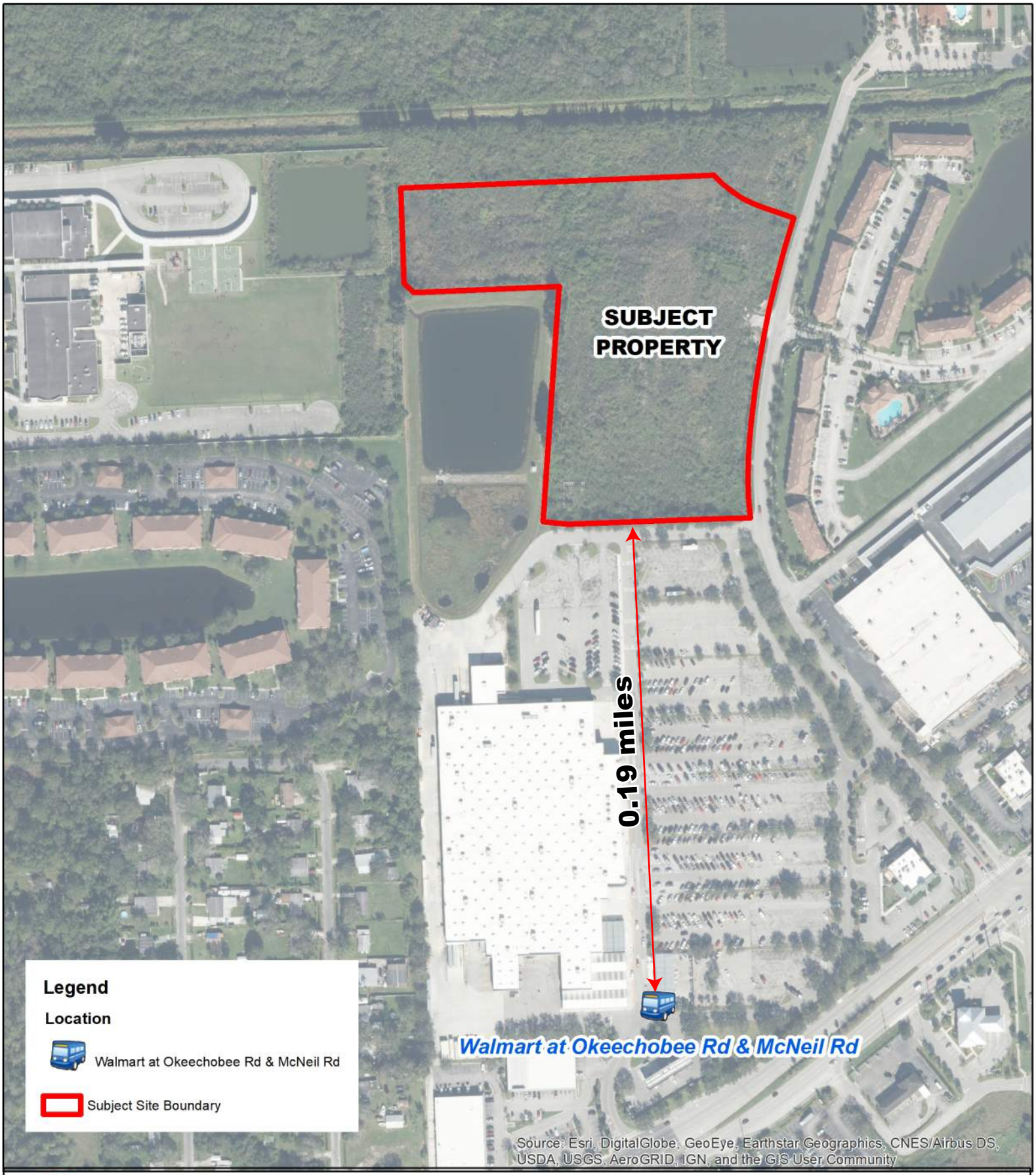


WGI
2035 Vista Parkway
West Palm Beach, FL 33411
561-687-2220

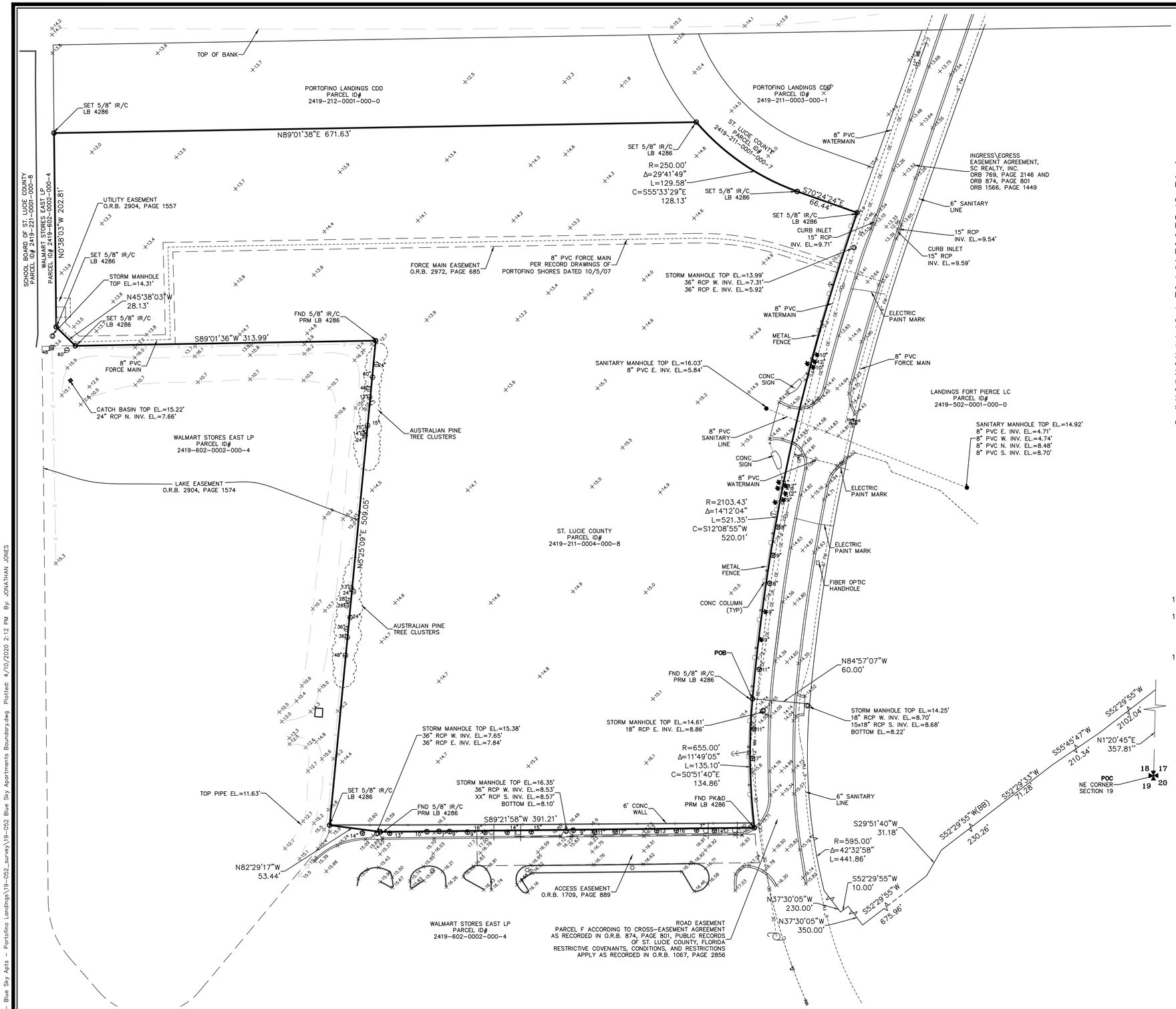
DISTANCE TO TRANSIT STOP
Blue Sky Landing

N

0 135 270 540
Feet

Map prepared by WGI, 7/1/2020
Data Source: St. Lucie County, FGDL (2019)

Maps are for graphical purposes only. They do not represent a legal survey. While every effort has been made to ensure that the data is accurate and reliable within the limits of the process, WGI cannot assume liability for any damages caused by any errors or omissions in the data. WGI makes no warranty, expressed or implied, nor does the fact of distribution constitute such a warranty.



LEGAL DESCRIPTION

A parcel of land lying in Section 19, Township 35 South, Range 40 East, St. Lucie County, Florida, being more particularly described as follows:

Commence at the Northeast corner of said Section 19, thence N01°20'45"E along the East line of Section 18, Township 35 South Range 40 East, a distance of 357.81 feet to the point of intersection with the Northerly right-of-way line of Okeechobee Road (AKA S.R. 70); thence S52°29'55"W along said northerly right-of-way line a distance of 2102.04 feet; thence S55°45'47"W a distance of 210.34 feet; thence S52°29'33"W a distance of 71.28 feet; thence South 52°29'55" West, a distance of 230.26 feet; thence South 29°51'40" West, a distance of 31.18 feet; thence South 52°29'55" West, a distance of 675.96 feet to the Easterly right-of-way line of McNeil Road Extension; thence along the Easterly right-of-way of McNeil Road Extension the following 4 courses and distances; thence North 37°30'05" West, a distance of 350.00 feet; thence South 52°29'55" West, a distance of 10.00 feet; thence North 37°30'05" West, a distance of 230.00 feet to a point of curve to the right having a radius of 595.00 feet and a central angle of 42°32'58"; thence Northwesterly along the arc a distance of 441.86 feet; thence North 84°57'07" West, a distance of 60.00 feet to the POINT OF BEGINNING of the following described parcel;

To an intersection with a non tangent curve concave to the East, having a radius of 655.00 feet, the chord of which bears South 00°51'40" East, 134.86 feet; thence Southerly along the arc of said curve, a distance of 135.10 feet through a central angle of 11°49'05"; thence South 89°21'58" West, a distance of 391.21 feet; thence North 82°29'17" West, a distance of 53.44 feet; thence North 05°25'09" East, a distance of 509.05 feet; thence South 89°01'36" West, a distance of 313.99 feet; thence North 45°38'03" West, a distance of 28.13 feet; thence North 00°38'03" West, a distance of 202.81 feet; thence North 89°01'38" East, a distance of 671.63 feet to the intersection with a non tangent curve concave to the Northeast, having a radius of 250.00 feet, the chord of which bears South 55°33'29" East, 128.13 feet; thence Easterly along the arc of said curve, a distance of 129.58 feet through a central angle of 29°41'49"; thence South 70°24'24" East, a distance of 66.44 feet to the intersection with a non tangent curve concave to the East, having a radius of 2,103.43 feet, the chord of which bears South 12°08'55" West, 520.01 feet; thence Southerly along the arc of said curve, a distance of 521.35 feet through a central angle of 14°12'04" to the POINT OF BEGINNING.

Containing 9.186 acres, more or less.

NOTES:

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2) Description shown hereon provided by the client and/or their agent.
3) The last date of field work was January 20, 2020.
4) Overall parcel contains 9.186 Acres, more or less.
6) Elevations shown hereon are referenced to the North American Vertical Datum (N.A.V.D.) of 1988 as established by Florida Department of Transporation, using benchmark 9496X020, having a published elevation of 14.586 feet.
7) Bearings shown hereon are relative to the Northerly right-of-way of Okeechobee Road having a bearing of S52°29'55"W.
8) Drainage and sewer pipe sizes and connections between structures have been compiled from various maps and field observations with limited visibility. These connections are believed to be accurate, however cannot be relied upon therefore is not certified by this survey. Invert elevations may vary when pipe openings is recessed.
9) Said described property appears to be located within an area having a Flood Zone Designation "X" and "AE", on Flood Rate Map No.12111C0167 J with a date of identification of February 16, 2012, in St. Lucie County, State of Florida, which is the current Flood Insurance Rate Map for the community in which said premises is situated. No additional search of the public records has been performed. There may be additional map amendments affecting this property.
10) Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
11) This survey has the benefit of a commitment by First American Title Insurance Company File No. 2037-4550456 with an effective date of December 01, 2019, @ 8:00am. The exceptions listed on this survey are from Schedule B-Section 2 of the Title Commitment above. The applicability of the title exceptions shown on this survey only indicate that the lands described in the title exception document describe lands contained within the boundary survey description but is not to be construed as validating the legality of the exception itself.
12) Features shown hereon were acquired using RTK GPS and trigonometric methods and were verified through a redundancy of measurements for accuracy.

LEGEND

℄	DENOTES CENTERLINE
(P)	DENOTES PLAT DATA
(C)	DENOTES CALCULATED FROM FIELD MEASUREMENTS
(D)	DENOTES DEED DATA
TOB	DENOTES TOP OF BANK
TYP	DENOTES TYPICAL
FND	DENOTES FOUND
LB	DENOTES LICENSED BUSINESS
OE	DENOTES OVERHEAD UTILITIES
POC	DENOTES POINT OF COMMENCEMENT
(BB)	DENOTES BEARING BASIS
C	DENOTES CHORD BEARING & DISTANCE
UE	DENOTES UTILITY EASEMENT
PLS	DENOTES PROFESSIONAL LAND SURVEYOR
IP	DENOTES IRON PIPE
IR	DENOTES IRON ROD
CM	DENOTES CONCRETE MONUMENT
CONC	DENOTES CONCRETE
IR & C	DENOTES 5/8" IRON ROD & CAP
Δ	DENOTES CENTRAL ANGLE
R	DENOTES RADIUS
L	DENOTES ARC LENGTH
ORB	DENOTES OFFICIAL RECORDS BOOK
±	DENOTES PLUS OR MINUS
No.	DENOTES NUMBER
POB	DENOTES POINT OF BEGINNING
PK & D	DENOTES P.K. NAIL AND DISK
CMP	DENOTES CORRUGATED METAL PIPE
RCP	DENOTES REINFORCED CONCRETE PIPE
No ID	DENOTES NO IDENTIFICATION NUMBER
	DENOTES SEWER VALVE
	DENOTES WATER VALVE
	DENOTES ELEVATION (TYPICAL)
WM	DENOTES WATER METER
	DENOTES STREET SIGN
	DENOTES CONCRETE POWER POLE
	DENOTES GUY ANCHOR

TREE LEGEND

- = PALM TREE
- = PINE TREE
- = OAK TREE
- = AUSTRALIAN PINE TREE
- = BUSH

THOMAS P. KIERNAN
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA CERTIFICATE NO. 6199

SIGNATURE DATE

COMPUTER FILE REF.	FIELD BK./PG.
19-052 BS BNDY	1706/79
	1907/01-02

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- REVISIONS -	BY	DATE

	BY	DATE
FIELD	SG	1-17-20
CALCS.		
DRAWN	GLM	2-5-20
DETAILED		
CHECKED		
APPROVED		

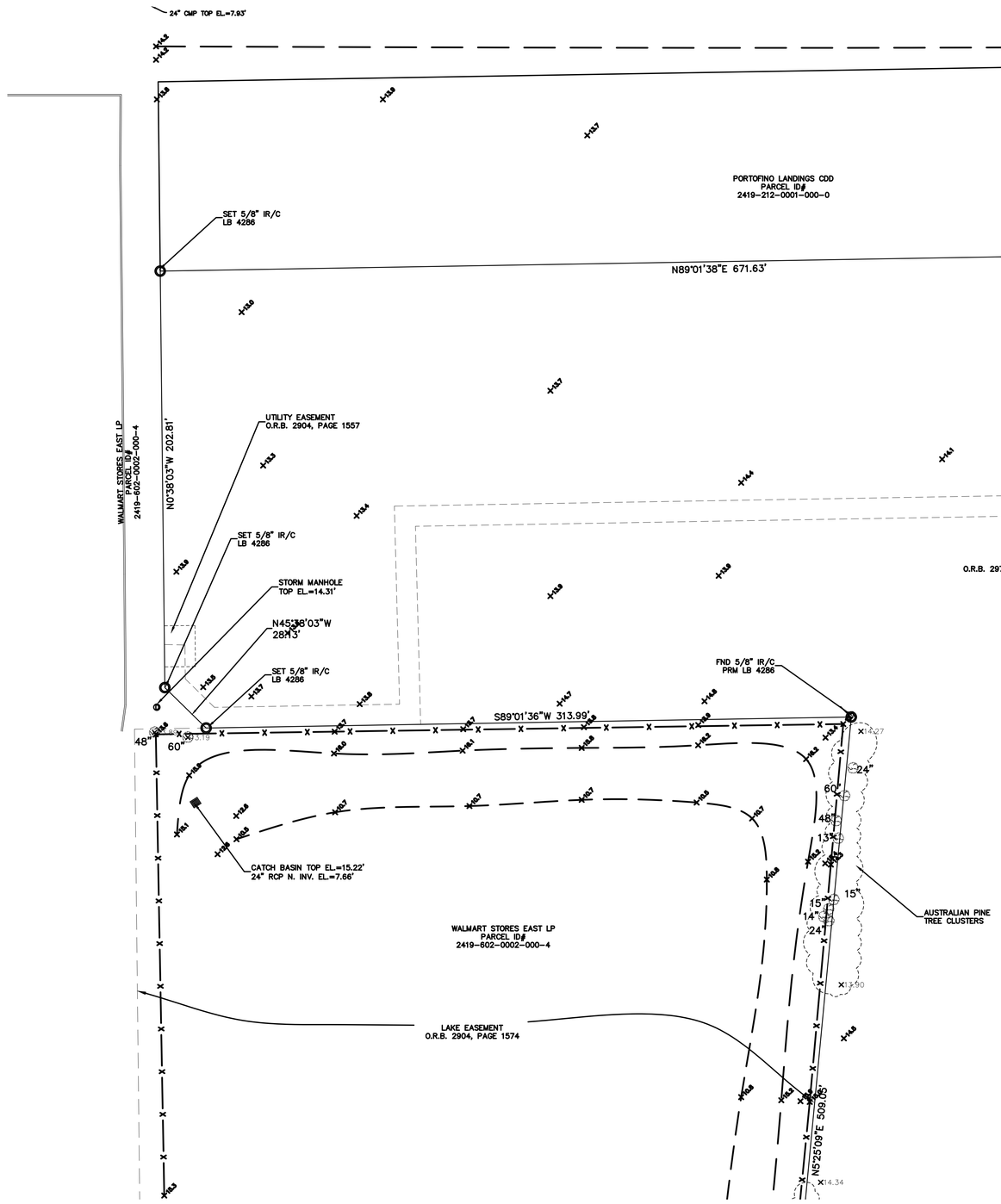
BOUNDARY, TOPOGRAPHIC & TREE SURVEY

PREPARED FOR

BLUE SKY APARTMENTS

DATE: 02-05-2020
HORIZ. SCALE: 1"=50'
VERT. SCALE: N\A
JOB No. 19-052
SHEET 1 OF 1

P:\Proj-2019\19-052 prt - Blue Sky Apts - Portofino Landings\19-052_survey\19-052 Blue Sky Apartments Boundary.dwg Plotted: 4/10/2020 2:12 PM By: JONATHAN JONES



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(IN FEET)
1 inch = 30 ft.

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THOMAS P. KIERNAN
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FLORIDA CERTIFICATE NO. 6199

SIGNATURE DATE

COMPUTER FILE REF.	FIELD BK./PG.
19-052 BS BNDY	1706/79
	1907/01-02

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– REVISIONS –	BY	DATE

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FIELD	SG	1-17-20
CALCS.		
DRAWN	GLM	2-5-20
DETAILED		
CHECKED		
APPROVED		

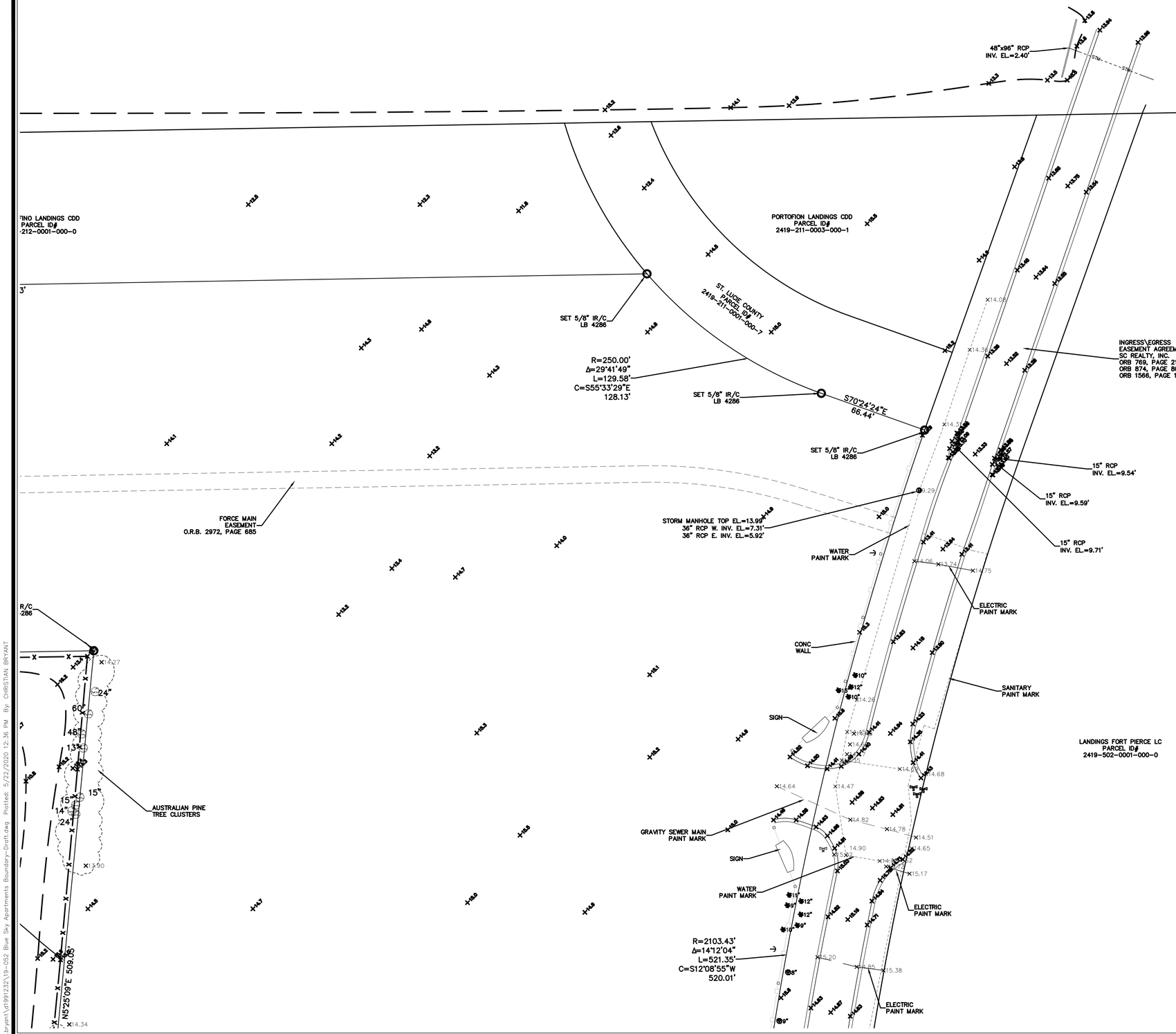
BOUNDARY, TOPOGRAPHIC & TREE SURVEY

PREPARED FOR

BLUE SKY APARTMENTS

DATE: 02-05-2020
HORIZ. SCALE: 1"=30'
VERT. SCALE: N\A
JOB No. 19-052
SHEET 1 OF 3

C:\pwworking\wgl\christian.bryant\d1991232\19-052 Blue Sky Apartments Boundary-Draft.dwg Plotted: 5/22/2020 12:36 PM By: CHRISTIAN BRYANT



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9) Said described property appears to be located within an area having a Flood Zone Designation "X" and "AE", on Flood Rate Map No.12111C0167 J with a date of identification of February 16, 2012, in St. Lucie County, State of Florida, which is the current Flood Insurance Rate Map for the community in which said premises is situated. No additional search of the public records has been performed. There may be additional map amendments affecting this property.
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LEGEND

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SIGNATURE DATE

COMPUTER FILE REF.	FIELD BK./PG.
19-052 BS BNDY	1706/79
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– REVISIONS –	BY	DATE

	BY	DATE
FIELD	SG	1-17-20
CALCS.		
DRAWN	GLM	2-5-20
DETAILED		
CHECKED		
APPROVED		

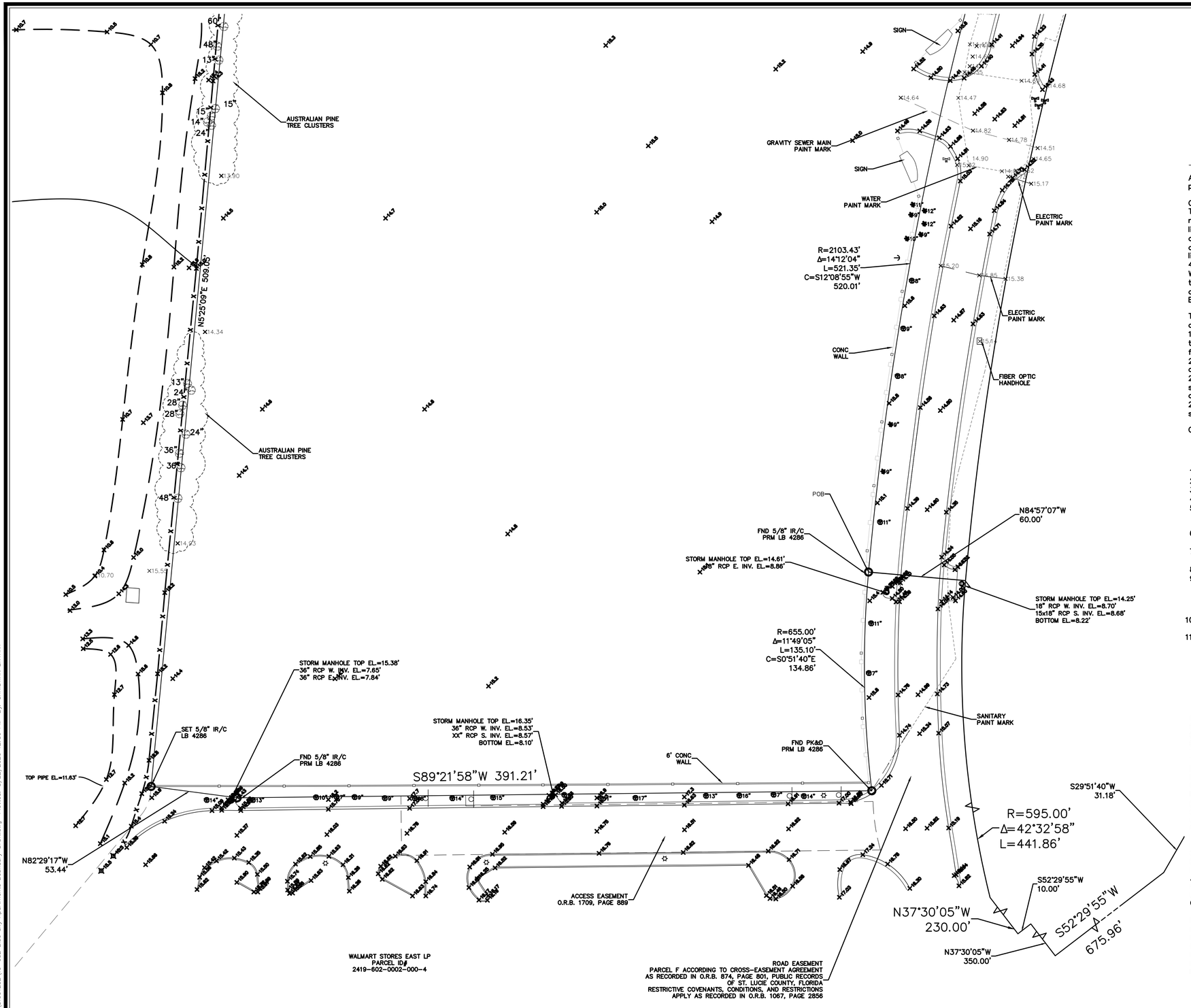
BOUNDARY, TOPOGRAPHIC & TREE SURVEY

PREPARED FOR

BLUE SKY APARTMENTS

DATE: 02-05-2020
HORIZ. SCALE: 1"=30'
VERT. SCALE: N\A
JOB No. 19-052
SHEET 2 OF 3

C:\pwworking\wg\christian.bryant\d1991232\19-052 Blue Sky Apartments Boundary-Draft.dwg Plotted: 5/22/2020 12:36 PM By: CHRISTIAN BRYANT



GRAPHIC SCALE
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NORTH

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℄	DENOTES CENTERLINE
(P)	DENOTES PLAT DATA
(C)	DENOTES CALCULATED FROM FIELD MEASUREMENTS
(D)	DENOTES DEED DATA
TOB	DENOTES TOP OF BANK
TYP	DENOTES TYPICAL
FND	DENOTES FOUND
LB	DENOTES LICENSED BUSINESS
OHU	DENOTES OVERHEAD UTILITIES
POC	DENOTES POINT OF COMMENCEMENT
(BB)	DENOTES BEARING BASIS
C	DENOTES CHORD BEARING & DISTANCE
UE	DENOTES UTILITY EASEMENT
PLS	DENOTES PROFESSIONAL LAND SURVEYOR
IP	DENOTES IRON PIPE
IR	DENOTES IRON ROD
CM	DENOTES CONCRETE MONUMENT
CONC	DENOTES CONCRETE
IR & C	DENOTES 5/8" IRON ROD & CAP
Δ	DENOTES CENTRAL ANGLE
R	DENOTES RADIUS
L	DENOTES ARC LENGTH
ORB	DENOTES OFFICIAL RECORDS BOOK
±	DENOTES PLUS OR MINUS
No.	DENOTES NUMBER
POB	DENOTES POINT OF BEGINNING
PK & D	DENOTES P.K. NAIL AND DISK
CMP	DENOTES CORRUGATED METAL PIPE
RCP	DENOTES REINFORCED CONCRETE PIPE
No ID	DENOTES NO IDENTIFICATION NUMBER
PRM	DENOTES PERMANENT REFERENCE MONUMENT
	DENOTES SEWER VALVE
	DENOTES WATER VALVE
	DENOTES ELEVATION (TYPICAL)
WM	DENOTES WATER METER

TREE LEGEND

= PALM TREE
= PINE TREE
= OAK TREE
= AUSTRALIAN PINE TREE
= BUSH

THOMAS P. KIERNAN
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA CERTIFICATE NO. 6199
SIGNATURE DATE

COMPUTER FILE REF.	FIELD BK./PG.
19-052 BS BNDY	1706/79
	1907/01-02

CULPEPPER & TERPENING INC
2980 SOUTH 25th STREET • FORT PIERCE, FLORIDA 34981
PHONE 772-464-3537 • FAX 772-464-9497 • www.ct-eng.com
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4286

– REVISIONS –	BY	DATE

	BY	DATE
FIELD	SG	1-17-20
CALCS.		
DRAWN	CLM	2-5-20
DETAILED		
CHECKED		
APPROVED		

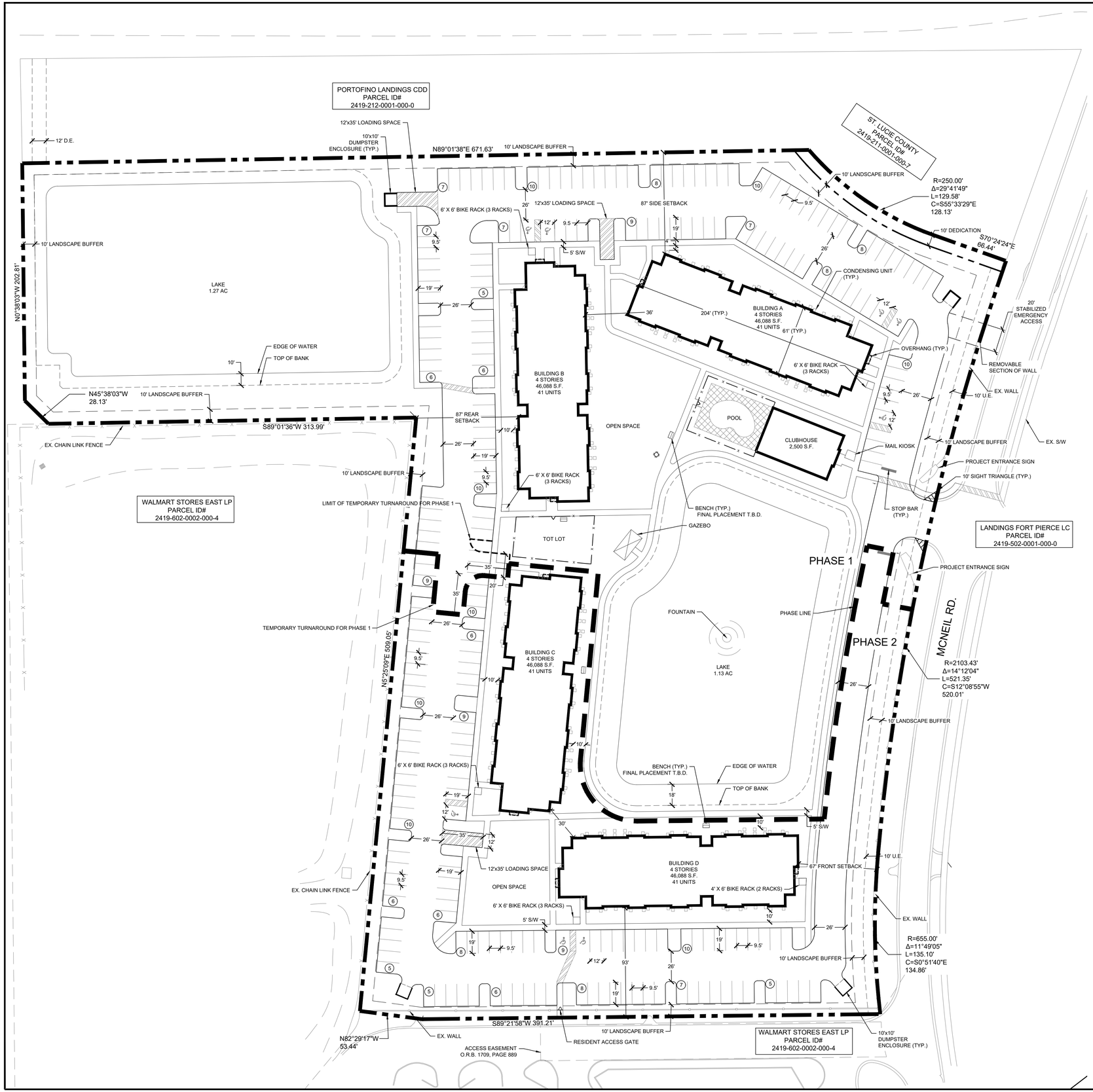
BOUNDARY, TOPOGRAPHIC & TREE SURVEY

PREPARED FOR

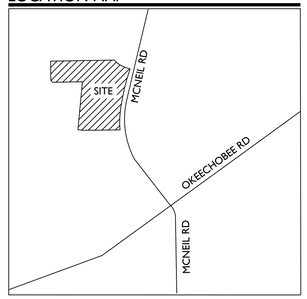
BLUE SKY APARTMENTS

DATE: 02-05-2020
HORIZ. SCALE: 1"=30'
VERT. SCALE: N\A
JOB No. 19-052
SHEET 3 OF 3

C:\pwworking\wgl\christian.bryant\d1991232\19-052 Blue Sky Apartments Boundary-Draft.dwg Plotted: 5/22/2020 12:36 PM By: CHRISTIAN BRYANT



LOCATION MAP



SITE DATA

NAME OF DEVELOPMENT	BLUE SKY LANDING
GROSS SITE AREA	9.186 AC
PHASE 1	6.45 AC
PHASE 2	2.73 AC
EXISTING ZONING	R-5, HIGH DENSITY RESIDENTIAL
BUILDING COVERAGE	48,528 S.F.
FAR	0.12
PROPOSED HEIGHT	4 STORY
PROPOSED UNITS	164 UNITS
PROPOSED DENSITY	17.83 DU/AC
PARKING REQUIRED	246 SP.
PHASE ONE PARKING REQUIRED (82 UNITS)	123 SP.
PHASE TWO PARKING REQUIRED (82 UNITS)	123 SP.
ADA REQUIRED	7 SP.
PARKING PROVIDED	246 SP.
PHASE ONE PARKING PROVIDED	123 SP.
PHASE TWO PARKING PROVIDED	123 SP.
ADA PROVIDED	8 SP.
LOADING REQUIRED	3 SP.
PHASE ONE LOADING REQUIRED	2 SP.
PHASE TWO LOADING REQUIRED	1 SP.
LOADING PROVIDED	3 SP.
PHASE ONE LOADING PROVIDED	2 SP.
PHASE TWO LOADING PROVIED	1 SP.
BIKE RACKS REQUIRED	17 SP.
PHASE ONE BIKE RACKS REQUIRED	9 SP.
PHASE TWO BIKE RACKS REQUIRED	8 SP.
BIKE RACKS PROVIDED	17 SP.
PHASE ONE BIKE RACKS PROVIDED	9 SP.
PHASE TWO BIKE RACKS PROVIDED	8 SP.
OPEN SPACE REQUIRED	1.84 AC 80,028 S.F. (20%)
OPEN SPACE PROVIDED	2.22 AC 96,558 S.F. (24%)
TOTAL LAKE AREA PROVIDED	2.40 AC (26%)

NOTES:
1. ALL SITE LIGHTING TO BE PROVIDED IN ACCORDANCE WITH LIGHTING STANDARDS AND REQUIREMENTS FOR CITY OF FORT PIERCE.

2. ALL IMPROVEMENTS SHOWN IN PHASE 2 ARE FUTURE IMPROVEMENTS TO BE COMPLETED WITH THAT PHASE.

PROPERTY DEVELOPMENT REGULATIONS

PROPERTY DEVELOPMENT REGULATIONS (FLU: RH ZONING: R-5)								
	LOT DIMENSIONS		MAX HT.	BLDG. COV.	SETBACKS			
	WIDTH & FRONTAGE	DEPTH			FRONT	SIDE	CORNER	REAR
REQUIRED	60'	80'	200'	50% MAX.	25'	10'	15'	20'
PROPOSED	650'	448.67'	50'	12.0%	67'	87'	N/A	87'

LEGEND

AC. = ACRES
BBL = BASE BUILDING LINE
CL = CENTERLINE
D.E. = DRAINAGE EASEMENT
D.U. = DWELLING UNITS
ESMT. = EASEMENT
EX. = EXISTING
FLU = FUTURE LAND USE
L.A.E. = LIMITED ACCESS EASEMENT
L.M.E. = LAKE MAINTENANCE EASEMENT
O.R.B. = OFFICIAL RECORD BOOK
P.B. = PLAT BOOK
PG. = PAGE
R = RADIUS
R.O.W. = RIGHT-OF-WAY
S = CAR SHARE STATION PARKING
S.B. = SETBACK
S.F. = SQUARE FEET
S/W = SIDEWALK
T.B.D. = TO BE DETERMINED
TYP = TYPICAL
U.E. = UTILITY EASEMENT

N

0 20 40 80
SCALE: 1" = 40'

WGI
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

NO.	DATE	DESCRIPTION	BY
1	05-29-2020	INITIAL SUBMITTAL	CB
2	07-02-2020	REVISIONS PER COMMENTS	
3	07-17-2020	REVISIONS PER COMMENTS	
4	07-23-2020	REVISIONS PER COMMENTS	
5	07-24-2020	REVISIONS PER COMMENTS	

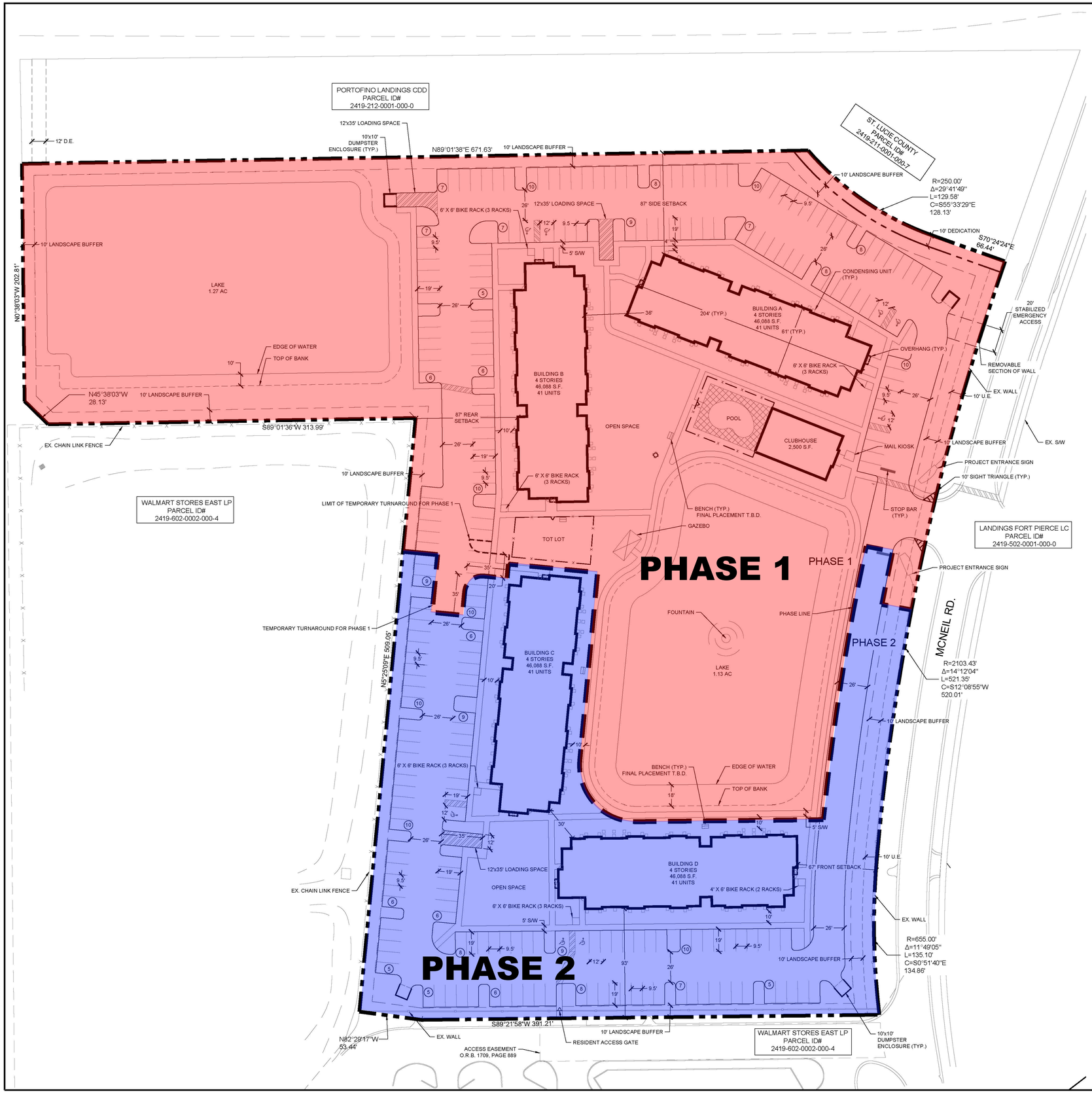
REVISIONS

CAD	JOB NO.	DRAWN BY	CHECK BY	DATE
3.00	5793.00	CB	JP	05-27-2020

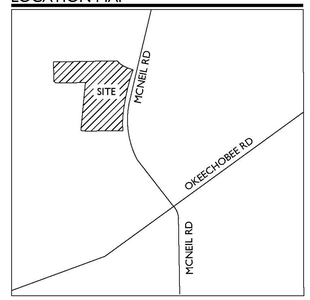
BLUE SKY LANDING
CITY OF FORT PIERCE, FL
SITE PLAN

SHEET:
SP-1

Christian Bryant C:\zworks\engr\christian.bryant\ACCDocs\5793\00\SITE-REDS.dwg — Plotted: 8/6/2020 3:39:45 PM Saved: 7/27/2020 8:32:31 PM



LOCATION MAP



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N

0 20 40 80
SCALE: 1" = 40'

WGL
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wglinc.com
Cert No. 6091 - LB No. 7055

NO.	DATE	DESCRIPTION	BY
1	05-29-2020	INITIAL SUBMITTAL	CB
2	07-02-2020	REVISIONS PER COMMENTS	
3	07-17-2020	REVISIONS PER COMMENTS	
4	07-23-2020	REVISIONS PER COMMENTS	
5	07-24-2020	REVISIONS PER COMMENTS	

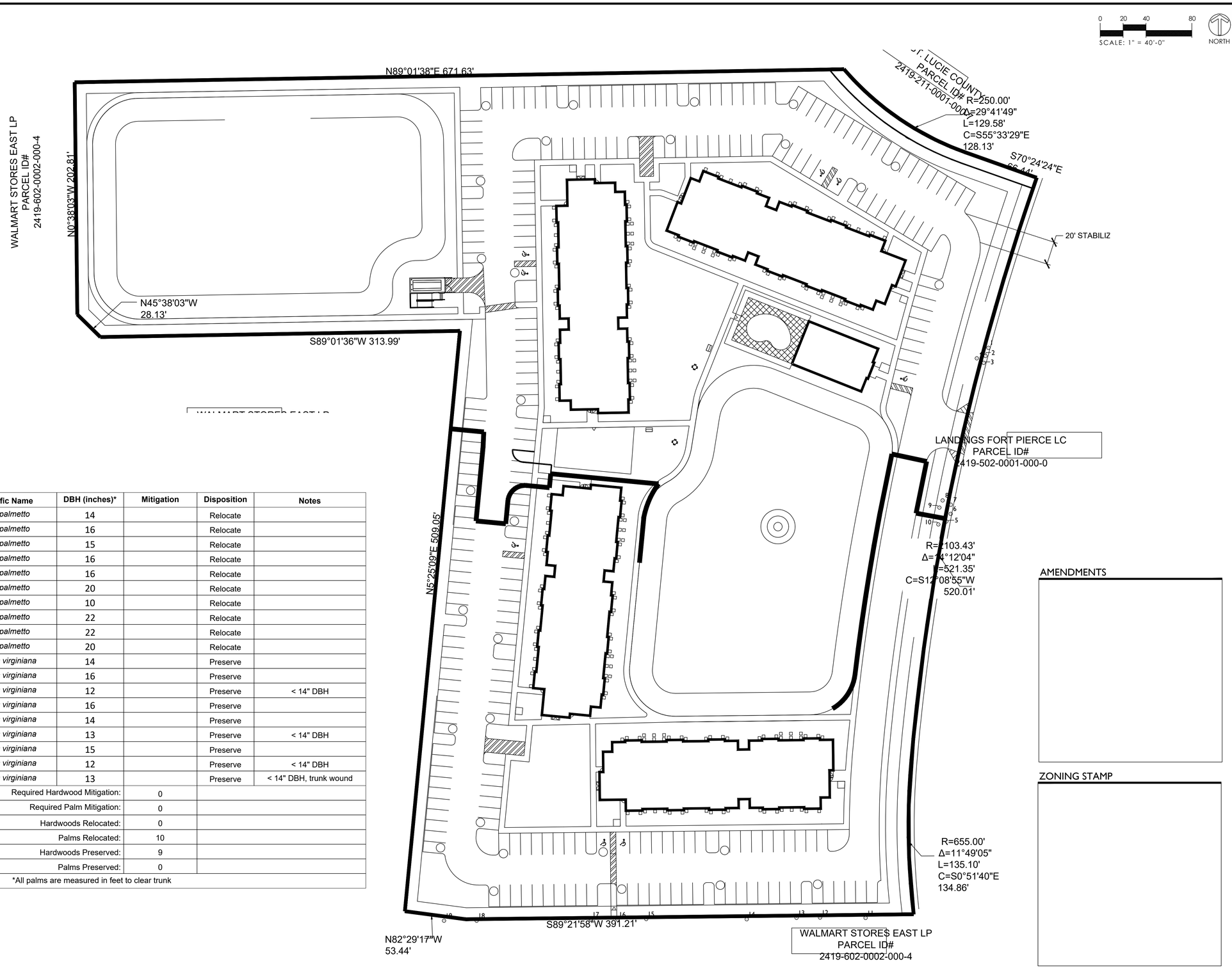
REVISIONS

CAD	
JOB NO.	5793.00
DRAWN BY	CB
CHECK BY	JP
DATE	05-27-2020

BLUE SKY LANDING
CITY OF FORT PIERCE, FL
SITE PLAN

SHEET:
SP-1

Christian Bryant C:\Users\chrisg\AppData\Roaming\Autodesk\ApplicationPlugins\AutoSave.bundle\Contents\Data\AutoSave.log — Pulled: 8/6/2020 3:58:45 PM Saved: 7/27/2020 8:55:21 PM



Tag #	Common Name	Scientific Name	DBH (inches)*	Mitigation	Disposition	Notes
1	Sabal Palm	*Sabal palmetto*	14		Relocate	
2	Sabal Palm	*Sabal palmetto*	16		Relocate	
3	Sabal Palm	*Sabal palmetto*	15		Relocate	
4	Sabal Palm	*Sabal palmetto*	16		Relocate	
5	Sabal Palm	*Sabal palmetto*	16		Relocate	
6	Sabal Palm	*Sabal palmetto*	20		Relocate	
7	Sabal Palm	*Sabal palmetto*	10		Relocate	
8	Sabal Palm	*Sabal palmetto*	22		Relocate	
9	Sabal Palm	*Sabal palmetto*	22		Relocate	
10	Sabal Palm	*Sabal palmetto*	20		Relocate	
11	Live Oak	*Quercus virginiana*	14		Preserve	
12	Live Oak	*Quercus virginiana*	16		Preserve	
13	Live Oak	*Quercus virginiana*	12		Preserve	< 14" DBH
14	Live Oak	*Quercus virginiana*	16		Preserve	
15	Live Oak	*Quercus virginiana*	14		Preserve	
16	Live Oak	*Quercus virginiana*	13		Preserve	< 14" DBH
17	Live Oak	*Quercus virginiana*	15		Preserve	
18	Live Oak	*Quercus virginiana*	12		Preserve	< 14" DBH
19	Live Oak	*Quercus virginiana*	13		Preserve	< 14" DBH, trunk wound
	Required Hardwood Mitigation:			0		
	Required Palm Mitigation:			0		
	Hardwoods Relocated:			0		
	Palms Relocated:			10		
	Hardwoods Preserved:			9		
	Palms Preserved:			0		

*All palms are measured in feet to clear trunk

AMENDMENTS

ZONING STAMP

WGI
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

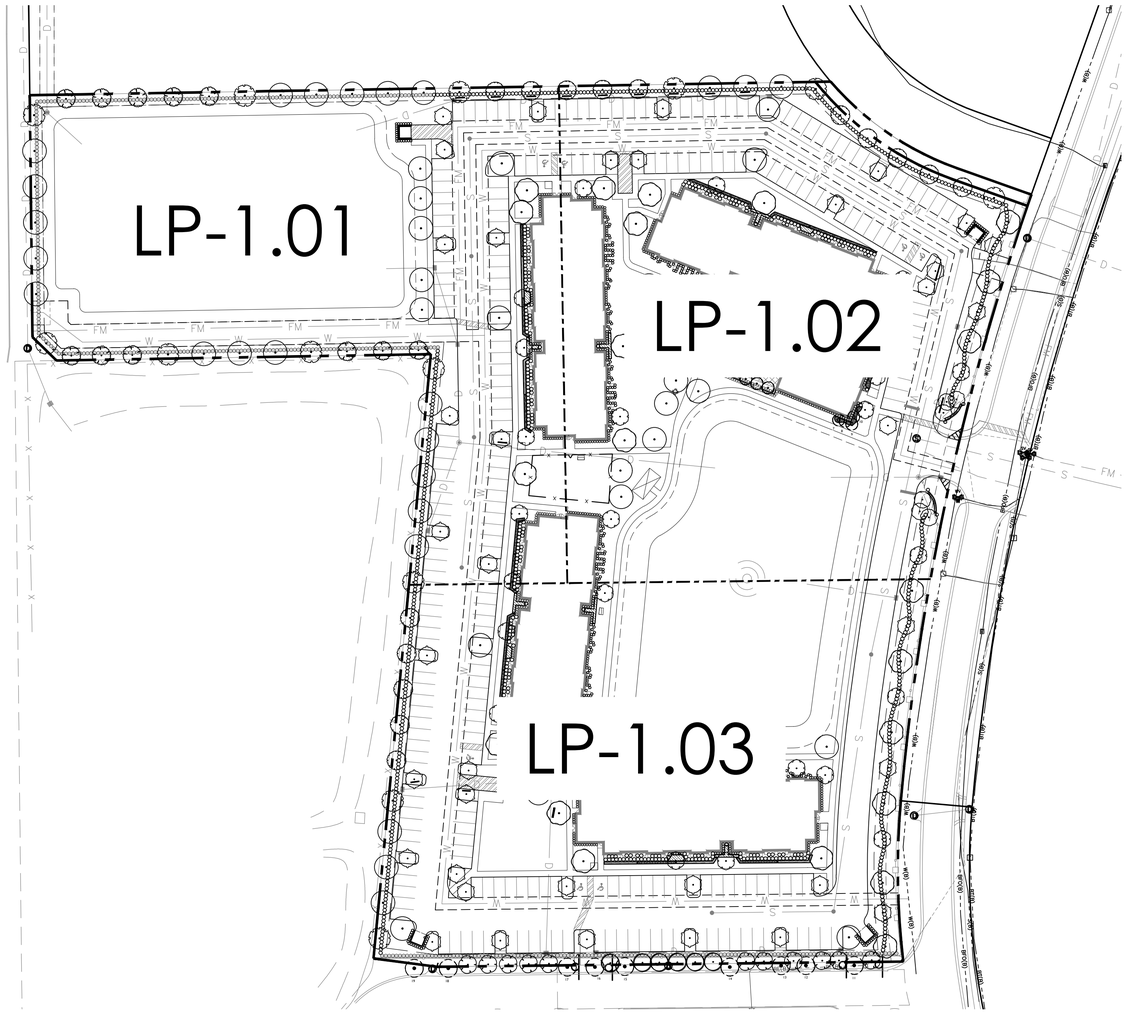
NO.	DATE	REVISIONS DESCRIPTION	BY

CAD 579300_EV-MAPS.DWG
DRAWN/DESIGNED CNC
CHECKED/QC RMH
JOB NO. 5793.00
DATE 05/05/2020

PROJECT: BLUE SKY LANDING
TASK: TREE INVENTORY PLAN

SHEET: TI.1

Rick Harman C:\pwworking\wgi\rick.harman\d1962605\579300_EV-MAPS.dwg ----- Plotted: 6/18/2020 11:54:53 AM Saved: 6/18/2020 11:51:34 AM



LANDSCAPE REQUIREMENTS		
		FORT PIERCE, FLORIDA
LANDSCAPING	REQUIRED (-ACCESS POINTS WHERE NECESSARY)	PROVIDED
LANDSCAPE BUFFER		
1 TREE PER 300 SF OF REQUIRED LANDSCAPE AREA	29,184 SF/300 = 98 TREES	98 TREES
CONTINUOUS HEDGE 36" HT.	CONTINUOUS HEDGE 36" HT.	CONTINUOUS HEDGE 36" HT.
INTERIOR LANDSCAPE		
1 TREE PER 1,250 SF OF REQUIRED LANDSCAPE AREA	57,302 SF/1,250 = 46 TREES	54 TREES, 10 RELOCATED PALMS & 6 PALMS @ 1:1 = 16 TREES TOTAL 70 TREES
3 SHRUBS PER 1,250 SF OF REQUIRED LANDSCAPE AREA	57,302 SF/1,250 SF X 3 = 138 SHRUBS	2,806 SHRUBS
VEHICULAR USE AREA LANDSCAPE		
1 TREE PER PARKING ISLAND	1 TREE PER PARKING ISLAND = 40 TREES	40 TREES

PLANT SCHEDULE OVERALL

TREES	QTY	COMMON NAME	BOTANICAL NAME	NATIVE	REMARKS
AR	15	Red Maple	Acer rubrum `Florida Flame`	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
CR	27	Pitch Apple	Clusia rosea	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
CES	11	Silver Buttonwood	Conocarpus erectus sericeus	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
CS	6	Orange Geiger Tree	Cordia sebestena	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
ED	6	Japanese Blueberry Tree	Elaeocarpus decipiens	NO	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
IC	38	Dahoon Holly	Ilex cassine	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
JS	13	Southern Red Cedar Tree	Juniperus silicicola	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.
MG	23	Southern Magnolia	Magnolia grandiflora	YES	12` HT. X 5` SPRD., 5` C.T., 3.5" MIN. CAL.
QV	48	Live Oak	Quercus virginiana	YES	12` HT. X 5` SPRD., 5` C.T., 3.5" MIN. CAL.
TD	11	Bald Cypress	Taxodium distichum	YES	12` HT. X 5` SPRD., 5` C.T., 2.5" MIN. CAL.

PALM TREES	QTY	COMMON NAME	BOTANICAL NAME	NATIVE	REMARKS
VM	6	Single Montgomery Palm	Veitchia montgomeryana	NO	10`-12` OA. HT.

SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	NATIVE	REMARKS
AO	6	Giant Silver Bromeliad	Alcantarea odorata	NO	30" O.A. HT., SPECIMEN
CAP	8	Jamaica Caper	Capparis cynophallophora	YES	36" HT. X 36" SPRD., FULL
CHY3	640	Green Cocoplum	Chrysobalanus icaco	YES	36" HT. X 36" SPRD. @ 36" O.C.
CHY2	173	Green Cocoplum	Chrysobalanus icaco	YES	24" HT. X 24" SPRD. @ 24" O.C.
CES3	433	Silver Buttonwood	Conocarpus erectus `Sericeus`	YES	36" HT. X 36" SPRD. @ 36" O.C.
CES2	343	Silver Buttonwood	Conocarpus erectus `Sericeus`	YES	24" HT. X 24" SPRD. @ 24" O.C.
HC	140	Dwarf Firebush	Hamelia patens `Compacta`	YES	24" HT. X 24" SPRD. @ 24" O.C.
MF3	184	Simpson`s Stopper	Myrcianthes fragrans	YES	36" HT. X 36" SPRD. @ 36" O.C.
MF2	93	Simpson`s Stopper	Myrcianthes fragrans	YES	24" HT. X 24" SPRD. @ 24" O.C.
POM	481	Podocarpus	Podocarpus macrophyllus maki	NO	4` HT., FULL TO BASE

SHRUB AREAS	QTY	COMMON NAME	BOTANICAL NAME	NATIVE	REMARKS
TF	120	Dwarf Fakahatchee Grass	Tripsacum dactyloides	YES	24" HT X 24" SPRD @ 30" O.C.

GROUND COVERS	QTY	COMMON NAME	BOTANICAL NAME	NATIVE	REMARKS
AG	339	Perennial Peanut	Arachis glabrata	NO	6" HT X 12" SPRD @ 12" O.C.
DT	26	Variegated Flax Lily	Dianella tasmanica `Variegata`	NO	12" HT X 12" SPRD @ 18" O.C.
MS	644	Powderpuff Mimosa	Mimosa strigillosa	YES	6" HT X 12" SPRD @ 12" O.C.
NE	244	Boston Fern	Nephrolepis exaltata	YES	12" HT X 12" SPRD @ 18" O.C.

NOTE:

1. ALL LANDSCAPE MATERIAL TO BE FLORIDA #1

Know what's BELOW. CALL before you dig

Call 811 two business days before digging

N

0 30 60 120

SCALE: 1" = 60'-0"

WGI®
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

NO.	DATE	DESCRIPTION	BY
1	07-24-2020	RESUBMITTAL	BJ

REVISIONS

LANDSCAPE ARCHITECT OF RECORD
TIFFANY D. MAY, PLA FL#6667274

JOB NO.	5793.00
DRAWN BY	BJ
CHECK BY	TM
DATE	5/29/2020

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
OVERALL LANDSCAPE PLAN

SHEET:
LP-1.00

Bryan Jackman C:\pwworking\wgi\bryan_jackman\d19626331\579300-LA.dwg ----- Plotted: 7/24/2020 1:28:58 PM Sheet: 7/24/2020 1:29:35 PM

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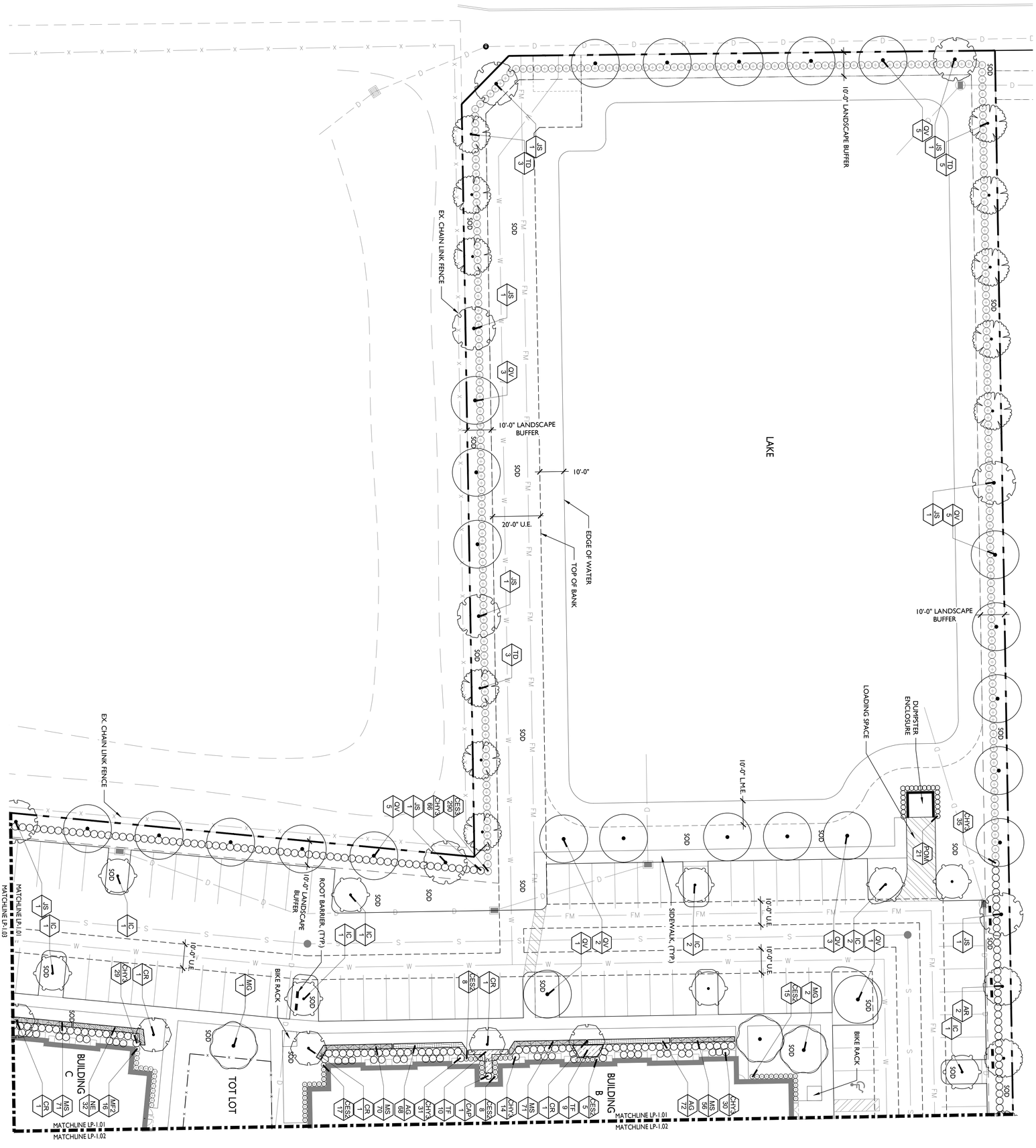

LEGEND

TREE/ PALM TO PRESERVE

RELOCATED TREE/ PALM

SHEET KEY MAP

SCALE: 1" = 20'-0"

N

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
LANDSCAPE PLAN

SHEET: LP-1.01

LANDSCAPE ARCHITECT OF RECORD TIFFANY D. MAY, PLA FL#6667274	
JOB NO.	5793.00
DRAWN BY	BJ
CHECK BY	TM
DATE	5/29/2020

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	07-24-2020	RESUBMITTAL	BJ

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2035 Vista Parkway, West Palm Beach, FL 33411
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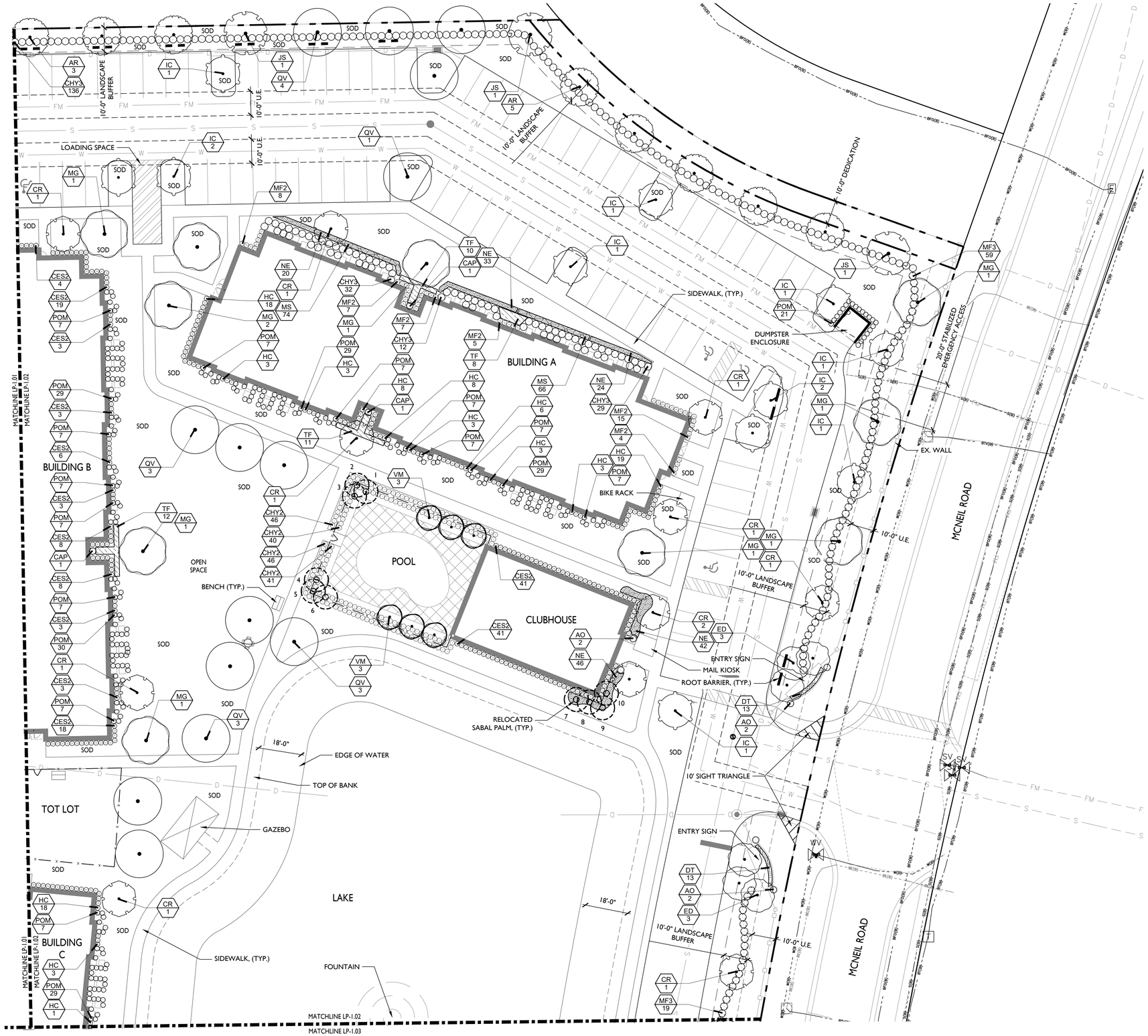

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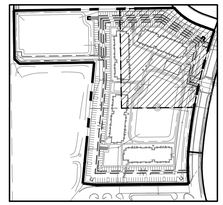

LEGEND

TREE/ PALM TO PRESERVE

RELOCATED TREE/ PALM

N

0 10 20 40

SCALE: 1" = 20'-0"

WGI®
2035 Vista Parkway, West Palm Beach, FL 33411
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REVISIONS

NO.	DATE	DESCRIPTION	BY
1	07-24-2020	RESUBMITTAL	BJ

LANDSCAPE ARCHITECT OF RECORD
TIFFANY D. MAY, PLA FL#6667274

JOB NO.	5793.00
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CHECK BY	TM
DATE	5/29/2020

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
LANDSCAPE PLAN

SHEET:
LP-1.02

Bryan Jackman C:\pwworking\wgi\bryan.jackman\d1962633\579300-LA.dwg ----- Plotted: 7/24/2020 1:30:01 PM Saved: 7/24/2020 1:29:35 PM

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LEGEND

TREE/ PALM TO PRESERVE

RELOCATED TREE/ PALM

SHEET KEY MAP

SCALE: 1" = 20'-0"

SHEET:	LP-1.03

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
LANDSCAPE PLAN

LANDSCAPE ARCHITECT OF RECORD TIFFANY D. MAY, PLA FL#6667274	
JOB NO.	5793.00
DRAWN BY	BJ
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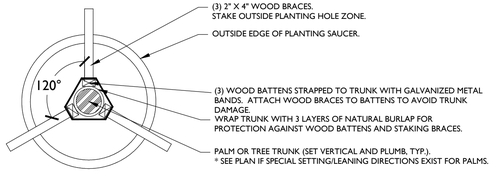
Cert No. 6091 - LB No. 7055

SMALL PALM STAKING PLAN

NTS.

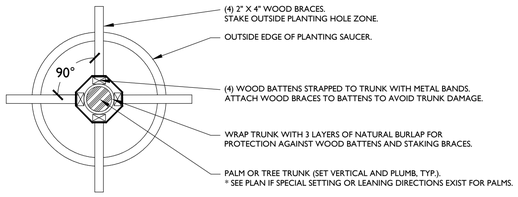
NOTE:
1. APPLICABLE TO ALL PALMS WITH CALIPER SIZE OF LESS THAN SIX (6) INCHES.
2. ALL TREE SUPPORTS MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS ESTABLISHED. TYPICALLY SIX MONTHS FOR SHADE TREES OR ONE YEAR FOR PALMS.



LARGE PALM OR TREE STAKING PLAN

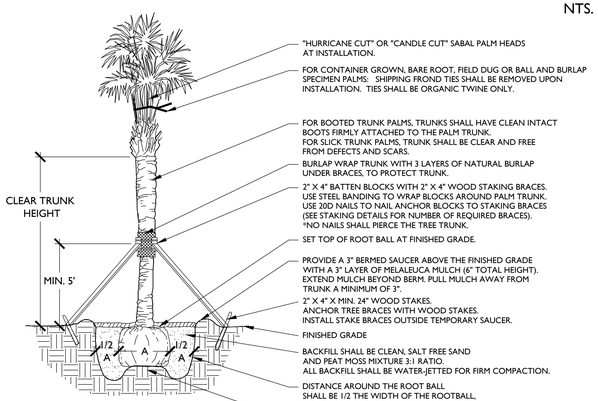
NTS.

NOTE:
1. APPLICABLE TO ALL MULTI-TRUNK PALMS AND PALMS WITH CALIPER SIZE OF SIX (6) INCHES OR GREATER
2. ALL TREE SUPPORTS MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS ESTABLISHED. TYPICALLY SIX MONTHS FOR SHADE TREES OR ONE YEAR FOR PALMS.



PALM PLANTING DETAIL

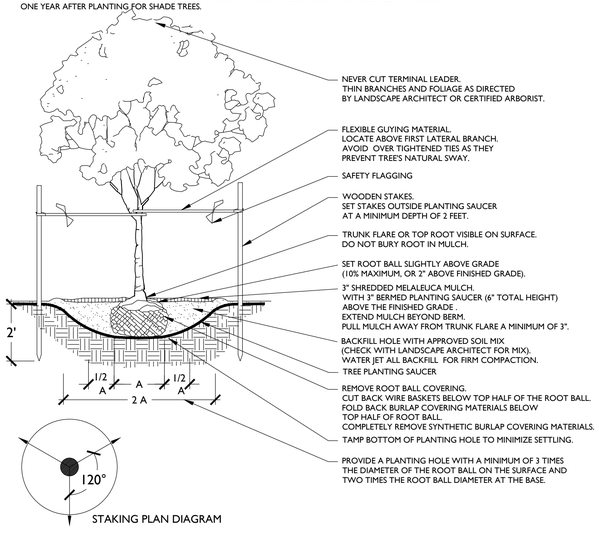
NTS.



TREE PLANTING DETAIL

NOTE:
1. ALL TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS ESTABLISHED. TYPICALLY SIX MONTHS TO ONE YEAR AFTER PLANTING FOR SHADE TREES.

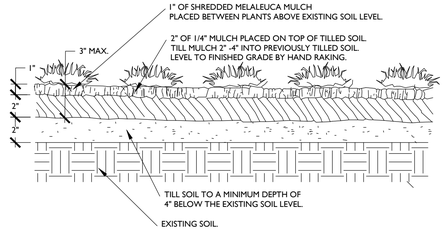
NTS.



STAKING PLAN DIAGRAM

GROUNDCOVER DETAIL

NTS.

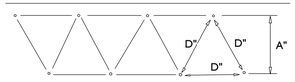


PLANT SPACING DETAIL

NTS.

SPACING "D"	ROW "A"
6" O.C.	5.2"
8" O.C.	6.93"
10" O.C.	8.66"
12" O.C.	10.4"
18" O.C.	15.6"
24" O.C.	20.8"
30" O.C.	26.0"
36" O.C.	31.2"
48" O.C.	41.6"

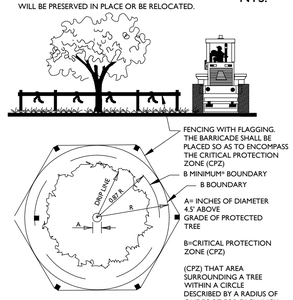
PLANT SPACING CHART



TREE PROTECTION DETAIL

NOTE: 1. THIS DETAIL APPLIES TO ALL TREES THAT WILL BE PRESERVED IN PLACE OR BE RELOCATED.

NTS.

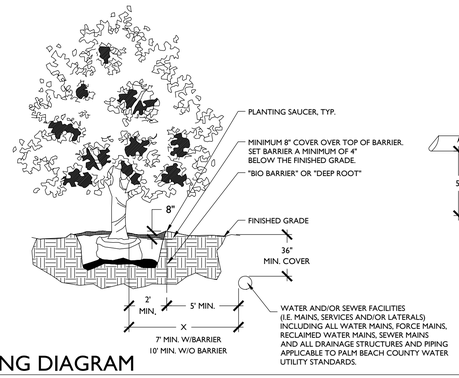


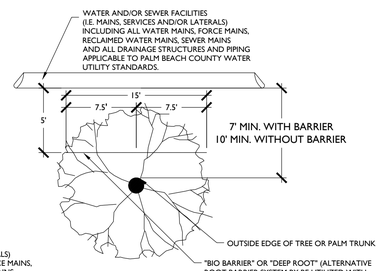
ROOT BARRIER DETAIL

NOTE:
1. TREES ARE TO BE INSTALLED WITH A MINIMUM TEN FOOT (10') SEPARATION FROM ANY PUBLIC WATER OR PUBLIC SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A TEN FOOT (10') SEPARATION CANNOT BE ACHIEVED, THE TREE SHALL BE INSTALLED WITH A ROOT BARRIER SYSTEM.

2. ROOT BARRIERS SHALL COMPLY WITH ALL REQUIREMENTS OF THE MUNICIPALITY WITHIN WHICH THEY ARE LOCATED AS WELL AS WITH ANY REQUIREMENTS OF THE UTILITY HOLDER OF THE AFFECTED UTILITIES. IN THE EVENT THAT CONFLICTING REQUIREMENTS EXIST BETWEEN THIS ROOT BARRIER DETAIL AND THE MUNTICPALITY/UTILITY HOLDER REQUIREMENTS, THE MORE STRINGENT OF THE REQUIREMENTS SHALL BE APPLICABLE.

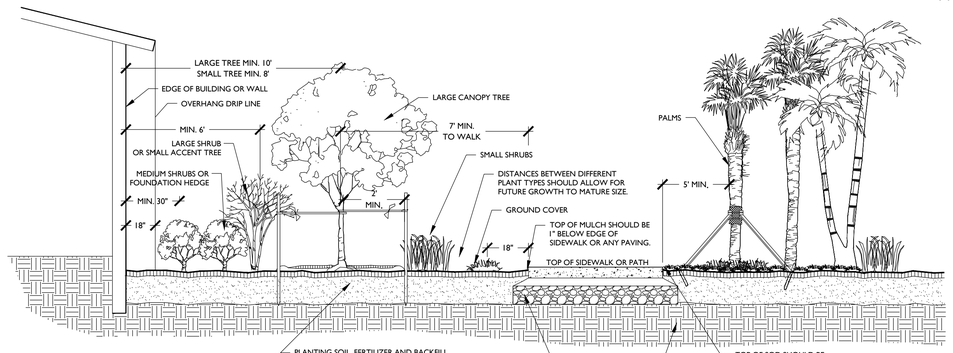
NTS.





TYPICAL PLANTING DIAGRAM

NTS.

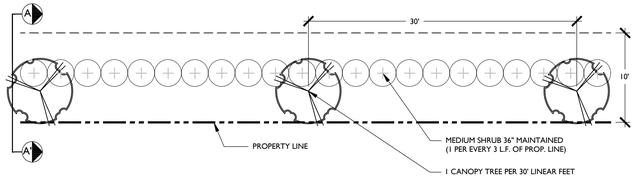


10' LANDSCAPE BUFFER

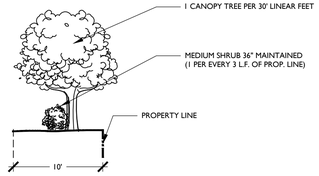
NOTE: MINIMUM TREE QUALIFICATIONS 12' HT. X 5' SPRD. x 2.5" CAL. MIN.

SCALE: 1/8" = 1'-0"

PLAN VIEW

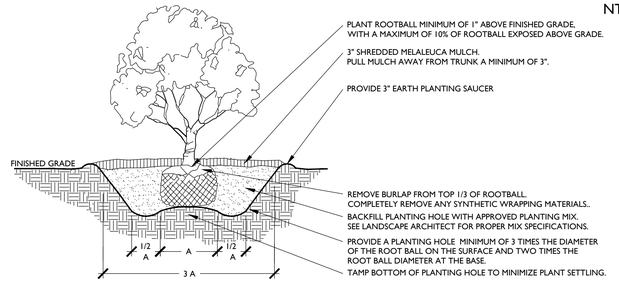


ELEVATION A-A'



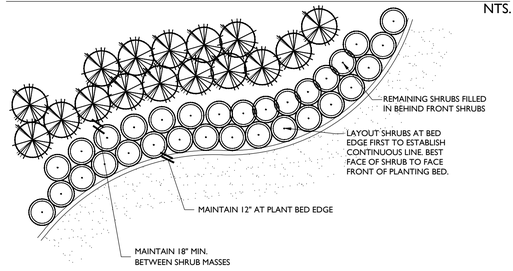
SHRUB PLANTING DETAIL

NTS.



SHRUB AND GROUNDCOVER PLANTING DETAIL

NTS.



LANDSCAPE NOTES:

1. STRUCTURAL ELEMENTS AND HARDSCAPE FEATURES INDICATED ON LANDSCAPE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. LANDSCAPE PLANS ARE TO BE UTILIZED FOR LOCATION OF LIVING PLANT MATERIAL ONLY. LANDSCAPE PLANS SHOULD NOT BE UTILIZED FOR STAKING AND LAYOUT OR LOCATION OF ANY STRUCTURAL SITE FEATURES INCLUDING BUT NOT LIMITED TO: BUILDINGS, SIGNAGE, PATHWAYS, EASEMENTS, BERMS, WALL, FENCES, UTILITIES OR ROADWAYS.
2. CONTRACTOR SHALL ACQUIRE ALL APPLICABLE FEDERAL, STATE, LOCAL, JURISDICTIONAL OR UTILITY COMPANY PERMITS REQUIRED PRIOR TO REMOVAL, RELOCATION, AND/OR INSTALLATION OF LANDSCAPE MATERIALS INDICATED WITHIN PLAN DOCUMENTS. THE CONTRACTOR SHALL HAVE PERMITS "IN HAND" PRIOR TO STARTING WORK. LANDSCAPE ARCHITECT SHALL BEAR NO RESPONSIBILITY FOR WORK PERFORMED WITHOUT PERMITTED DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES TO THE WORK, AT NO ADDITIONAL COST TO THE OWNER, AS A RESULT OF UNAUTHORIZED WORK PRIOR TO RECEIPT OF PERMIT.
3. TREES SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY. TREE SPACING IS BASED ON DESIGN REQUIREMENTS AND THE TREES SHOWN ON THESE PLANS ATTEMPT TO ACCOMPLISH THAT SPACING WHILE MAINTAINING THE REQUIRED SETBACKS FROM UTILITIES. IN THE EVENT OF A CONFLICT, AFFECTED PLANT MATERIAL SHALL BE FIELD ADJUSTED WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT TO AVOID CONFLICTS WITH THE WITH EXISTING AND PROPOSED UTILITIES, LIGHT POLES, DRAINAGE STRUCTURES OR LINES, LAKE MAINTENANCE EASEMENTS OR OTHER AFFECTED SITE FEATURES.
4. ANY PLANTING WITHIN THE SIGHT TRIANGLES SHALL PROVIDE UNOBSTRUCTED VIEWS AT A LEVEL BETWEEN 30" AND 8' ABOVE THE PAVEMENT.
5. ALL UTILITY BOXES/ STRUCTURES TO BE SCREENED ON 3 SIDES W/ APPROVED PLANTING MATERIAL.
6. IRRIGATION IS REQUIRED PROVIDING 100% COVERAGE WITH A MAXIMUM OF 50% OVERLAP, AN AUTOMATIC RAIN SENSOR MUST BE INCLUDED.
7. ALL PLANT MATERIAL TO BE INSTALLED SHALL CONFORM TO FLORIDA POWER AND LIGHT'S (FPL'S) RIGHT TREE RIGHT PLACE GUIDELINES.
8. IN CASE OF DISCREPANCIES PLANS TAKE PRECEDENCE OVER PLANT LIST.
9. LANDSCAPE CONTRACTOR RESPONSIBLE FOR VERIFICATION OF ALL QUANTITIES PRIOR TO BIDDING.
10. REMOVAL OF EXISTING VEGETATION IS RESPONSIBILITY OF LANDSCAPE CONTRACTOR.
11. RELOCATION OF EXISTING VEGETATION IS RESPONSIBILITY OF LANDSCAPE CONTRACTOR. REFER TO SPECIFICATIONS FOR RELOCATION INSTRUCTIONS.
12. ALL PLANT MATERIAL TO BE FLORIDA GRADE #1 AT TIME OF INSTALLATION UNLESS OTHERWISE NOTED.

WGI
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

NO.	DATE	DESCRIPTION	BY
1	07-24-2020	RESUBMITTAL	BJ

REVISIONS

LANDSCAPE ARCHITECT OF RECORD
TIFFANY D. MAY, PLA FL#6667274

JOB NO.	5793.00
DRAWN BY	BJ
CHECK BY	TM
DATE	5/29/2020

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
LANDSCAPE DETAILS

SHEET:
LP-3.01

Bryan Jackman C:\pwworking\wgi\bryan.jackman\d0182631\57930O-LA.dwg ----- Plotted: 7/24/2020 1:30:04 PM Saved: 7/24/2020 1:28:35 PM

Landscape Planting - Part I. General

I. Description of Work

A. Provide all exterior planting as shown on the drawings or inferable therefrom and/or as specified in accordance with the requirements of the Contract Documents. Landscape plans provided indicate the proposed location of living plant material only. Structural elements and hardscape features indicated on the landscape plans are for information purposes only. Landscape plans are not to be utilized for staking and layout or location of any structural site features including but not limited to, buildings, signage, pathways, easements, utilities or roadways.

B. These specifications include standards necessary for and incidental to the execution and completion of planting as indicated on the prepared drawings and specified herein.

C. All applicable federal, state and local permits shall be attained prior to the removal, relocation, or installation of plant materials indicated within the plan documents.

D. Protection of existing features. During construction, protect all existing trees, shrubs, and other specified vegetation, site features and improvements, structures, and utilities specified herein and/or on submitted drawings. Removal or destruction of existing plantings is prohibited unless specifically authorized by the owner, and with permit as required by associated federal, state and local government agencies.

II. Applicable Standards

A. American National Standards for Tree Care Operations, ANSI A300. American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.

B. American Standard for Nursery Stock, ANSI Z60.1. American Nursery and Landscape Association, 1250 Eye Street. NW, Suite 500, Washington, D.C. 20005.

C. Hortus Third, The Staff of the L.H. Bailey Hortorium. 1976. MacMillan Publishing Co., New York.

D. Florida Department of Agriculture "Grades and Standards for Nursery Plants", most recent addition.

E. National Arborist Association- Pruning Standards for Shade Trees

F. All standards shall include the latest additions and amendments as of the date of advertisement for bids

III. Qualifications

A. Landscape planting and related work shall be performed by a firm with a minimum of five years experience specializing in this type of work. All contractors and their sub-contractors who will be performing any landscape work included in this section of the specification shall be approved by the landscape architect.

B. Landscape Contractor shall be licensed and shall carry any necessary insurance and shall protect the Landscape Architect and Owner against all liabilities, claims or demands for injuries or damage to any person or property growing out of the performance of the work under this contract. All workers shall be covered by Workman's Compensation Insurance.

IV. Requirements of Regulatory Agencies

A. Certificates of inspection shall accompany the invoice for each shipment of plants as may be required by law for transportation. File certificates with the landscape architect prior to acceptance of the material. Inspection by federal or state authorities at place of growth does not preclude rejection of the plants at the site.

V. Submittals

A. Manufacturer's Data: Submit copies of the manufacturer's and/or source data for all materials specified, including soils, soil amendments and fertilizer materials. Comply with regulations applicable to landscape materials.

B. Samples: Submit samples of all topsoil, soil mixes, mulches, and organic materials. Samples shall weigh 1 kg (2 lb) and be packaged in plastic bags. Samples shall be typical of the lot of material to be delivered to the site and provide an accurate indication of color, texture, and organic makeup of the material.

C. Nursery Sources: Submit a list of all nurseries that will supply plants, along with a list of the plants they will provide and the location of the nursery.

D. Soil Test: Submit soil test analysis report for each sample of topsoil and planting mix from a soil testing laboratory approved by the landscape architect.

1. Provide a particle size analysis, including the following gradient of mineral content:

USDA Designation	Size in mm
Gravel	+2 mm
Very Course Sand	1-2 mm
Coarse Sand	0.5-1 mm
Medium Sand	0.25-0.5 mm
Fine Sand	0.1-0.25 mm
Very fine sand	0.05-0.1 mm
Silt	0.002-0.05 mm
Clay	smaller than 0.002

2. Provide a chemical analysis, including the following:
   a. pH and buffer pH
   b. Percentage of organic content by oven-dried weight.
   c. Nutrient levels by parts per million, including phosphorus, potassium magnesium, manganese, iron, zinc, and calcium. Nutrient test shall include the testing laboratory recommendations for supplemental additions to the soil based on the requirements of horticultural plants.
   d. Soluble salt by electrical conductivity of a 1:2, soil: water, sample measured in millimho per cm.
   e. Cation exchange capacity (CEC).

E. Material Testing: Submit the manufacturers particle size analysis, and the pH analysis and provide a description and source location for the content material of all organic materials.

F. Maintenance Instructions: Prior to the end of maintenance period, Landscape Contractor shall furnish three copies of written maintenance instructions to the Landscape Architect for transmittal to the Owner for maintenance and care of installed plants through their full growing season.

VI. Utility Verification

A. The contractor shall contact the local utility companies for verification of the location of all underground utility lines in the area of the work. The contractor shall be responsible for all damage resulting from neglect or failure to comply with this requirement.

Part 2. Materials

I. Plants

A. Plants shall be true to species and variety specified and nursery-grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project for at least two years. They shall have been freshly dug.

1. All plant names and descriptions shall be as defined in Hortus Third.
2. All plants shall be grown and harvested in accordance with the American Standard for Nursery Stock and Florida Department of Agriculture Grades and Standards for Nursery Plants.
3. Unless approved by the landscape architect, plants shall have been grown at a latitude not more than 325 km (200 miles) north or south of the latitude of the project unless the provenance of the plant can be documented to be compatible with the latitude and cold hardiness zone of the planting location.

B. Unless specifically noted, all plants shall be exceptionally heavy, symmetrical, and so trained or favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. They shall be sound, healthy, vigorous, well branched, and densely foliated when in leaf; free of disease and insects, eggs, or larvae; and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.

1. Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 20 mm (3/4 in.) in diameter that are not completely closed will be rejected.

C. Plants shall conform to the measurements specified, except that plants larger than those specified may be used if approved by the landscape architect. Use of larger plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.

1. Caliper measurements shall be taken on the trunk 150 mm (6 in.) above the natural ground line for trees up to and including 100 mm (4 in.) in caliper, and 300 mm (12 in.) above the natural ground line for trees over 100 mm (4 in.) in caliper. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to branch tip. Plants shall be measured when branches are in their normal position. If a range of sizes is given, no plant shall be less than the minimum size, and no less than 50 percent of the plants shall be as large as the maximum size specified. Measurements specified are minimum sizes acceptable after pruning, where pruning is required. Plants that meet measurements but do not possess a standard relationship between height and spread, according to the Florida Department of Agriculture Grades and Standards for Nursery Plants, shall be rejected.

D. Substitutions of plant materials will not be permitted unless authorized in writing by the landscape architect. If proof is submitted in writing that a plant specified is not obtainable, consideration will be given to the nearest available size or similar variety, with a corresponding adjustment of the contract price.

E. The plant schedule provided at the end of this section, or on the drawing, is for the contractor's information only, and no guarantee is expressed or implied that quantities therein are correct or that the list is complete. The contractor shall ensure that all plant materials shown on the drawings are included in his or her bid.

F. All plants shall be labeled by plant name. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered. Plant labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering.

G. Selection and Tagging

1. Plants shall be subject to inspection for conformity to specification requirements and approval by the landscape architect at their place of growth and upon delivery. Such approval shall not impair the right of inspection and rejection during progress of the work.
2. A written request for the inspection of plant material at their place of growth shall be submitted to the landscape architect at least ten calendar days prior to digging. This request shall state the place of growth and the quantity of plants to be inspected. The landscape architect may refuse inspection at this time if, in his or her judgment, sufficient quantities of plants are not available for inspection or landscape architect deems inspection is not required.
3. All field grown deciduous trees shall be marked to indicate the trees north orientation in the nursery. Place a 1-in. diameter spot of white paint onto the north side of the tree trunk within the bottom 12 inches of the trunk.

H. Anti-Desiccants

1. Anti-desiccants, if specified, are to be applied to plants in full leaf immediately before digging or as required by the landscape architect. Anti-desiccants are to be sprayed so that all leaves and branches are covered with a continuous protective film.

I. Balled and Burlapped (B&B) Plant Materials

1. Trees designated B&B shall be properly dug with firm, natural balls of soil retaining as many fibrous roots as possible, in sizes and shapes as specified in the Florida Department of Agriculture Grades and Standards for Nursery Plants. Balls shall be firmly wrapped with synthetic, natural, or treated burlap, and/or wire. All synthetic fabric should be removed from the rootball prior to planting. True biodegradable burlap can be left around the root ball. The root collar shall be apparent at surface of ball. Trees with loose, broken, processed, or manufactured root balls will not be accepted, except with special written approval before planting.

J. Container Plants

1. Plants grown in containers shall be of appropriate size for the container as specified in the most recent edition of the Florida Department of Agriculture Grades and Standards for Nursery Plants and be free of circling roots on the exterior and interior of the root ball.
2. Container plants shall have been grown in the container long enough to have established roots throughout the growing medium.

K. Bareroot and Collected Plants

1. Plants designated as bareroot or collected plants shall conform to the American Standard for Nursery Stock.
2. Bareroot material shall not be dug or installed after bud break or before dormancy.
3. Collected plant material that has not been taken from active nursery operations shall be dug with a root ball spread at least 1/3 greater than nursery grown plants. When specified or approved, shall be in good health, free from disease, insect or weed infestation and shall not be planted before inspection and acceptance at the site. Testing may be required at the discretion of the Landscape Architect and/or the Owner and shall be provided at no additional cost.

L. Specimen Material: Plant material specified as specimens are to be approved by the Landscape Architect before being brought to the site. Unless otherwise noted on the drawings, these plants shall be Florida Fancy.

M. Palms

1. Coconut Palms shall be grown from a certified seed.
2. All palm species except Sabal palmetto shall have roots adequately wrapped before transporting.
3. Sabal palms shall have a hurricane cut. Sabal palms shall be installed on site at the earliest opportunity in the construction process. All Sabal palms shall be from Palm Beach County or other sandy soils. All Sabal palms shall be Florida Fancy.
4. For booted trunk palms, trunks shall have clean intact boots firmly attached to the palm trunk. For slick trunk palms, trunk shall be clear and free from defect and scars.
5. The Contractor shall treat all palms as required to prevent infestation by the palmetto weevil.

N. Sod

1. Sod shall be graded #1 or better. Sod shall be loam or muck grown with a firm, full texture and good root development. Sod shall be thick, healthy and free from defects and debris including but not limited to dead thatch, insects, fungus, diseases and contamination by weeds, other grass varieties or objectionable plant material.
2. Sod shall be sufficiently thick to insure a dense stand of live grass. Sod shall be live, fresh, and uninjured at the time of planting. Plant sod within 48 hours after harvesting.
3. Sod area shall be all areas not otherwise identified and shall include the area beyond the property line to the edge of pavement and/or edge of water.

O. Immediately after harvesting plants, protect from drying and damage until shipped and delivered to the planting site. Rootballs shall be checked regularly and watered sufficiently to maintain root viability.

P. Transportation and Storage of Plant Material

1. Branches shall be tied with rope or twine only, and in such a manner that no damage will occur to the bark or branches.
2. During transportation of plant material, the contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, balls of earth broken or loosened, or areas of bark torn, the landscape architect may reject the injured tree(s) and order them replaced at no additional cost to the owner. All loads of plants shall be covered at all times with tarpaulin or canvas. Loads that are not protected will be rejected.
3. All bareroot stock sent from the storage facility shall be adequately covered with wet soil, sawdust, woodchips, moss, peat, straw, hay, or other acceptable moisture-holding medium, and shall be covered with a tarpaulin or canvas. Loads that are not protected in the above manner may be rejected.
4. Plants must be protected at all times from sun or drying winds. Those that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil, wet mulch, or other acceptable material, and kept well watered. Plants shall not remain unplanted any longer than three days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled with suitable support of the soil ball to avoid damaging it.

Q. Mechanized Tree Spade Requirements

Trees may be moved and planted with an approved mechanical tree spade. The tree spade shall move trees limited to the maximum size allowed for a similar B&B root-ball diameter according to the American Standard for Nursery Stock or the manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller. The machine shall be approved by the landscape architect prior to use. Trees shall be planted at the designated locations in the manner shown in the plans and in accordance with applicable sections of the specifications.

II Materials for Planting

A. Mulch: Except as otherwise specified, mulch shall be shredded Melaleuca mulch - grade "A". All Melaleuca mulch shall be made entirely from the wood and bark of the Melaleuca quinquinerva tree. It shall not contain more than 10% bark (by volume). Shreds and chips shall not be larger the ¾" diameter and 1½" in length. Mulch shall be free of weeds, seeds, and any other organic or inorganic material other than Melaleuca wood and bark. It shall not contain stones or other foreign material that will prevent its eventual decay. This shall be applied to all planted areas where indicated so that, after installation, the mulch thickness will not be less than 3". Submit sample for approval.

B. Peat: Shall be horticultural peat composed of not less than 60% decomposed organic matter by weight, on an oven dried basis. Peat shall be delivered to the site in a workable condition free from lumps.

C. Gravel Mulch: Use only where specifically indicated on the plans of the size and type shown. Unless otherwise specified it shall be water-worn, hard durable gravel, washed free of loam, sand, clay and other foreign substances. It shall be a minimum of 3" deep and shall be contained with edging or other approved gravel stop as indicated on the plans. It shall be a maximum of 1 1/2", a minimum of 3/4" and of a readily-available natural gravel color range. Provide geotextile filter fabric below aggregate rock.
Submit sample for approval.

D. Root Barrier: Where specified, root barriers shall be installed on all tree and palm material in accordance with the root barrier detail provided within the plan drawings. Root barriers shall comply with all requirements of the municipality within which they are located as well as with any utility holder requirements of any affected utilities. In the event that conflicting requirements exist between the root barrier detail provided within the plan documents and the municipality/utility holder requirements, the more stringent of the requirements shall be applicable.

E. Planter Edging: Use only where specifically indicated on plans. Edging shall be the color black.

F. Anti-desiccant: shall be an emulsion specifically manufactured for agricultural use, which provides a protective film over plant surfaces. Anti-desiccants shall be delivered in containers of the manufacturer and shall be mixed according to the manufacturer's directions. Submit manufacturer literature for approval.

III. Materials for Soil Amendment

A. Pine Bark: Horticultural-grade milled pine bark, with 80 percent of the material by volume sized between 0.1 and 15.0 mm.

1. Pine bark shall be aged sufficiently to break down all woody material. Pine bark shall be screened.
2. pH shall range between 4 and 7.0.
3. Submit manufacturer literature for approval.

B. Organic Matter: Leaf matter and yard waste composted sufficiently to break down all woody fibers, seeds, and leaf structures, and free of toxic and nonorganic matter. Organic matter shall be commercially prepared compost. Submit 0.5 kg (1 lb) sample and suppliers literature for approval.

C. Course Sand: Course concrete sand, ASTM C-33 Fine Aggregate, with a Fines Modulus Index of 2.75 or greater.

1. Sands shall be clean, sharp, natural sands free of limestone, shale and slate particles.
2. Provide the following particle size distribution:

Sieve	Percentage Passing
3/8 in (9.5 mm)	100
No. 4 (4.75 mm)	95-100
No. 8 (2.36 mm)	80-100
No. 16 (1.18 mm)	50-85
No. 30 (0.60 mm)	25-60
No. 50 (0.30 mm)	10-30
No. 100 (0.15 mm)	2-10

D. Lime: shall be ground, palletized, or pulverized lime manufactured to meet agricultural standards and contain a maximum of 60 percent oxide (i.e. calcium oxide plus magnesium oxide). Submit manufacturer literature for approval.

E. Sulfur: shall be flowers of sulfur, pelletized or granular sulfur, or iron sulfate. Submit manufacturer literature for approval.

F. Fertilizer: Agricultural fertilizer of a formula indicated by the soil test. Fertilizers shall be organic, slow-release compositions whenever applicable. Submit manufacturer literature for approval.

IV. Planting Mix

A. Planting Mix

1. Planting Mix for Trees, Shrubs, Groundcovers and vines: Check with landscape architect for appropriate mixture.
2. Planting Mix for Palms: Mixture of course sand and peat mixed to the following proportion:

Component	Percent by Volume
Coarse Sand	75%
Peat	25%

B. Planting mix shall be thoroughly mixed, screened, and shredded.

C. Prior to beginning the mixing process, submit a 1-kg (2-lb) sample of the proposed mix with soil test results that indicate the mix ratio and the results achieved.

D. During the mixing process but prior to installing the mix, submit a 1-kg (2-lb) sample for each 200 cubic meters (250 cubic yards) of planting mix, taken randomly from the finished soil mix, with soil test results for approval. In the event that the test results do not meet the required particle size distribution, remix and resubmit a revised planting mix.

E. Make all amendments of lime/sulfur and fertilizer indicated by the soil test results at the time of mixing.

F. All mixing shall take place in the contractors yard, using commercial mixing equipment sufficient to thoroughly mix all components uniformly

G. Protect the planting mix from erosion prior to installation.

Part 3. Execution

I. Excavation of Planted Areas

A. Locations for plants and/or outlines of areas to be planted are to be staked out at the site. Locate and mark all subsurface utility lines. Approval of the stakeout by the landscape architect is required before excavation begins.

B. Tree, shrub, and groundcover beds are to be excavated to the depth and widths indicated on the landscape plan detail drawings. If the planting area under any tree is initially dug too deep, the soil added to bring it up to the correct level should be thoroughly tamped.

1. The sides of the excavation of all planting areas shall be sloped at a 45 degrees. The bottom of all beds shall slope parallel to the proposed grades or toward any subsurface drain lines within the planting bed. The bottom of the planting bed directly under any tree shall be horizontal such that the tree sits plumb.
2. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not excavate compacted subgrades of adjacent pavement or structures.
3. Subgrade soils shall be separated from the topsoil, removed from the area, and not used as backfill in any planted or lawn area. Excavations shall not be left uncovered or unprotected overnight.

C. For trees and shrubs planted in individual holes in areas of good soil that is to remain in place and/or to receive amendment in the top 150-mm (6 in.) layer, excavate the hole to the depth of the root ball and to widths shown on the drawing. Slope the sides of the excavation at a 45 degree angle up and away from the bottom of the excavation.

1. In areas of slowly draining soils, the root ball may be set up to 75 mm (3 in.) or 1/8 of the depth of the root ball above the adjacent soil level.
2. Save the existing soil to be used as backfill around the tree.
3. On steep slopes, the depth of the excavation shall be measured at the center of the hole and the excavation dug as shown on the drawings.

D. Detrimental soil conditions: The landscape architect is to be notified, in writing, of soil conditions encountered, including poor drainage, that the contractor considers detrimental to the growth of plant material. When detrimental conditions are uncovered, planting shall be discontinued until instructions to resolve the conditions are received from the landscape architect.

E. Obstructions: If rock, underground construction work, utilities, tree roots, or other obstructions are encountered in the excavation of planting areas, alternate locations for any planting shall be determined by the landscape architect.

II. Installation of Planting Mix

A. Prior to the installation of the planting mix, install subsurface drains, irrigation main lines, lateral lines, and irrigation risers shown on the drawings.

B. The landscape architect shall review the preparation of subgrades prior to the installation of planting mix.

C. Do not proceed with the installation of planting mix until all utility work in the area has been installed.

D. Protect adjacent walls, walks, and utilities from damage or staining by the soil. Use 12-mm (1/2 in.) plywood and/or plastic sheeting as directed to cover existing concrete, metal, masonry work, and other items as directed during the progress of the work.

1. Clean up any soil or dirt spilled on any paved surface at the end of each working day.
2. Any damage to the paving or architectural work caused by the soils installation contractor shall be repaired by the general contractor at the soils installation contractors expense.

E. Till the subsoil into the bottom layer of topsoil or planting mix.

1. Loosen the soil of the subgrade to a depth of 50 to 75 mm (2 to 3 in.) with a rototiller or other suitable device.
2. Spread a layer of the specified topsoil or planting mix 50 mm (2 in.) deep over the subgrade. Thoroughly till the planting mix and the subgrade together.
3. Immediately install the remaining topsoil or planting mix in accordance with the following specifications. Protect the tilled area from traffic. DO NOT allow the tilled subgrade to become compacted.
4. In the event that the tilled area becomes compacted, till the area again prior to installing the planting mix.

F. Install the remaining topsoil or planting mix in 200- to 250-mm (8- to 10-in.) lifts to the depths and shown on the drawing details. The depths and grades shown on the drawings are the final grades after soil settlement and shrinkage of the organic material. The contractor shall install the soil at a higher level to anticipate this reduction of soil volume, depending on predicted settling properties for each type of soil.

1. Phase the installation of the soil such that equipment does not have to travel over already-installed topsoil or planting mixes.
2. Compact each lift sufficiently to reduce settling but not enough to prevent the movement of water and feeder roots through the soil. The soil in each lift should feel firm to the foot in all areas and make only slight heel prints. Overcompaction shall be determined by the following field percolation test.
   a. Dig a hole 250 mm (10 in.) in diameter and 250 mm (10 in.) deep.
   b. Fill the hole with water and let it drain completely. Immediately refill the hole with water, and measure the rate of fall in the water level.
   c. In the event that the water drains at a rate less than 25 mm (1 in.) per hour, till the soil to a depth required to break the overcompaction.
   d. The landscape architect shall determine the need for, and the number and location of percolation tests based on observed field conditions of the soil.
3. Maintain moisture conditions within the soils during installation to allow for satisfactory compaction. Suspend installation operations if the soil becomes wet. Do not place soils on wet subgrade.
4. Provide adequate equipment to achieve consistent and uniform compaction of the soils. Use the smallest equipment that can reasonably perform the task of spreading and compaction.
5. Add lime, sulfur, fertilizer, and other amendments during soil installation. Spread the amendments over the top layer of soil and till into the top 100 mm (4 in.) of soil. Soil amendments may be added at the same time that organic matter, when required, is added to the top layer of soil.
6. Protect soil from overcompaction after placement. An area that becomes overcompacted shall be tilled to a depth of 125 mm (6 in.). Uneven or settled areas shall be filled and regraded.

III. Fine Grading

A. It shall be the responsibility of the Contractor to finish grade (min. 6" below adjacent F.F.E.). Finish grades in planting areas shall be one inch lower than adjacent paving and are to include 3" of mulching. New earthwork shall blend smoothly into the existing earthwork, and grades shall pitch evenly between spot grades. All planted areas must pitch to drain at a minimum of 1/4" per foot. Any discrepancies not allowing this to occur shall be reported to the Landscape Architect prior to continuing work.

B. Fill all dips and remove any bumps in the overall plane of the slope.

1. The tolerance for dips and bumps in lawn areas shall be a 12-mm (1/2 in.) deviation from the plane in 3,000 mm (10 ft).
2. The tolerance for dips and bumps in shrub planting areas shall be a 25-mm (1 in.) deviation from the plane in 3,000 mm (10 ft).
3. All fine grading shall be inspected and approved by the landscape architect prior to planting, mulching, sodding, or seeding.

C. Berming shall not be placed within 10' of any existing tree nor will it be allowed to encroach upon any utility, drainage, or maintenance easement. Berming shall not impede or obstruct any necessary swales needed to drain other areas for the property.

IV. Planting Operations

A. Plants shall be set on flat-tamped or unexcavated pads at the same relationship to finished grade as they were to the ground from which they were dug, unless otherwise noted on the drawings. Plants must be set plumb and braced in position until topsoil or planting mix has been placed and tamped around the base of the root ball. Improper compacting of the soil around the root ball may result in the tree settling or leaning. Plants shall be set so that they will be at the same depth and so that the root ball does not shift or move laterally one year later.

1. Determine the elevation of the root flare and ensure that it is planted at grade. This may require that the tree be set higher than the grade in the nursery.
2. If the root flare is less than 50 mm (2 in.) below the soil level of the root ball, plant the tree the appropriate level above the grade to set the flare even with the grade. If the flare is more than 50 mm (2 in) at the center of the root ball the tree shall be rejected.

B. Lift plants only from the bottom of the root balls or with belts or lifting harnesses of sufficient width not to damage the root balls. Do not lift trees by their trunk or use the trunk as a lever in positioning or moving the tree in the planting area.

C. Remove plastic, paper, or fiber pots from containerized plant material. Pull roots out of the root mat. Loosen the potting medium and shake away from the root mat. Immediately after removing the container, install the plant such that the roots do not dry out. Pack planting mix around the exposed roots while planting.

D. The roots of bare-root trees shall be pruned at the time of planting to remove damaged or undesirable roots (those likely to become a detriment to future growth of the root system). Bare-root trees shall have the roots spread to approximate the natural position of the roots and shall be centered in the planting pit. The planting-soil backfill shall be worked firmly into and around the roots, with care taken to fill in completely with no air pockets.

E. Cut ropes or strings from the top of shrub root balls and trees smaller than 3 in. caliper after plant has been set. Remove burlap or cloth wrapping and any wire baskets from around top half of balls. Do not turn under and bury portions of burlap at top of ball.

1. Do not immediately remove the ropes and burlap from trees larger than 3 in. caliper. Return to each tree three months after planting and cut all ropes around the trunks and tops of the root balls of these trees.
2. Completely remove any waterproof or water-repellant strings or wrappings from the root ball and trunk before backfilling.

F. Set balled and burlapped trees in the hole with the north marker facing north unless otherwise approved by the landscape architect.

G. Place native soil, topsoil, or planting mix into the area around the tree, tamping lightly to reduce settlement.

1. For plants planted in individual holes in existing soil, add any required soil amendments to the soils, as the material is being backfilled around the plant. Ensure that the amendments are thoroughly mixed into the backfill.
2. For plants planted in large beds of prepared soil, add soil amendments during the soil installation process.
3. Ensure that the backfill immediately around the base of the root ball is tamped with foot pressure sufficient to prevent the root ball from shifting or leaning.

H. Solid sod shall be laid with closely abutting joints with a tamped or rolled, even surface. Stagger strips to offset joints in adjacent courses. Bring the sod edge in a neat, clean manner to the edge of all paving and shrub areas. Sod along slopes shall be pegged to hold sod in place along slopes or banks a wood peg acceptable to the Landscape Architect shall be used at no additional cost to the Owner. If, in the opinion of the Landscape Architect, top-dressing is necessary after rolling, clean sand will be evenly applied over the entire surface and thoroughly washed in without additional charge.

I. Thoroughly water all plants immediately after planting. Apply water by hose directly to the root ball and the adjacent soil.

J. Remove all tags, labels, strings, etc. from all plants.

K. Remove any excess soil, debris, and planting material from the job site at the end of each workday.

L. Form watering saucers 100 mm (4 in.) high immediately outside the area of the root ball of each tree as indicated on the drawings.

V. Relocation of Existing Material:

A. Landscape Contractor shall root prune trees which are to be relocated in accordance with approved horticultural practices and the following procedures.

1. Select a healthy tree
2. Selectively trim the canopy removing dead limbs, cross branching over crowned areas, and lower undesirable limbs. Fertilize and water trees before pruning.
3. Root prune 50% of the root system approximately 18"-2' deep (depending upon species and size). This is done by hand with sharp hand tools or a root pruning saw. The diameter of the root ball to be pruned is 8-12 inches per every one inch of diameter at breast height of the tree.
4. Back fill the existing soil with peat moss to stimulate new root growth of the pruned roots.
5. Water in thoroughly and treat with a mycorrhizae and a low nitrogen fertilizer (so not to burn the pruned roots). Brace trees if deemed necessary.
6. The root pruned tree should be watered every day (especially during warm months of the season), the equivalent of 5 gallons for every DBH of tree per day.
7. Root pruned trees should be let to stand for a minimum of 6 weeks for trees less than 8" DBH and as long as 3 months for larger specimens prior to transplanting.
8. For best results and survivorship, new root growth should be evident on root pruned trees prior to transplanting.
9. Upon transplanting, water should be applied every day as outlined in step 6 for at least one year.

VI. Staking and Guying

A. The Contractor shall stake all trees and palms in accordance with the tree and palm staking details provided within the plan drawings. Alternate methods of guying or staking may be employed with the prior approval of the Landscape Architect.

B. The Contractor shall be responsible for the replacement or adjustment of all trees, palms or shrubs that fall or lean during the guarantee period. The Contractor shall be responsible for any damage caused by the falling or leaning of trees.

C. Stakes and guys shall be installed immediately upon approval or planting, and shall be removed in accordance with the staking details provide within the plan drawings. Any tree that is not stable at the end of the warranty period shall be rejected.

VII. Pruning

A. Plants shall not be heavily pruned at the time of planting. Pruning is required at planting time to correct defects in the tree structure, including removal of injured branches, waterspouts, suckers, and interfering branches. Healthy lower branches and interior small twigs should not be removed except as necessary to clear walks and roads. In no case should more than one-quarter of the branching structure be removed. Retain the normal or natural shape of the plant.

B. All pruning shall be completed using clean, sharp tools. All cuts shall be clean and smooth, with the bark intact with no rough edges or tears.

C. Pruning of large trees shall be done from a hydraulic man-lift such that it is not necessary to climb the tree.

VIII. Mulching

A. All trees, palms, shrubs, and other plantings will be mulched with mulch previously approved by the landscape architect. The mulch shall be a minimum 3" thick layer over all tree, shrub and ground cover planting areas, unless otherwise specified. All mulch layers shall be of the specified thickness at the time of the final acceptance of the work. Mulch must not be placed within 3 inches of the trunks of trees, palms or shrubs.

B. Place mulch at least 3" in depth in a circle around all trees located in lawn areas. The diameter of the circle shall be 18" in diameter larger than the ball of the plant provided. Mulch must not be placed within 3 inches of the trunks of trees, palms or shrubs.

IX. Maintenance of Trees, Shrubs, and Vines

A. Maintenance shall begin immediately after each plant is planted and continue until its acceptance has been confirmed by the landscape architect.

B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, fertilizing, tightening and repairing guys and stakes, resetting plants to proper grades or upright position, restoring of the planting saucer, and furnishing and applying such sprays or other materials as necessary to keep plantings free of insects and diseases and in vigorous condition.

C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If a plant becomes damaged or injured, it shall be treated or replaced as directed by the landscape architect at no additional cost.

D. Watering: Contractor shall irrigate as required to maintain vigorous and healthy tree growth. Overwatering or flooding shall not be allowed. The contractor shall monitor, adjust, and use existing irrigation facilities, if available, and furnish any additional material, equipment, or water to ensure adequate irrigation. Root balls of all trees and shrubs shall be kept watered using handheld hoses during the first four months after planting, as required to ensure adequate water within the root ball.

E. During periods of restricted water usage, all governmental regulations (permanent and temporary) shall be followed. The contractor may have to transport water from ponds or other sources, at no additional expense to the owner when irrigation systems are unavailable.

F. Remove soil ridges from around watering basins prior to end of maintenance period, as directed by Landscape Architect

X. Acceptance

A. The landscape architect shall inspect all work for acceptance upon written request of the contractor. The request shall be received at least ten calendar days before the anticipated date of inspection.

B. Acceptance of plant material shall be for general conformance to specified size, character, and quality and shall not relieve the contractor of responsibility for full conformance to the contract documents, including correct species.

C. Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the landscape architect, the landscape architect shall certify in writing that the work has been accepted.

XI. Acceptance in Part

A. Work may be accepted in parts when the landscape architect and contractor deem that practice to be in their mutual interest. Approval must be given in writing by the landscape architect to the contractor verifying that the work is to be completed in parts. Acceptance of work in parts shall not waive any other provision of this contract.

XII. Guarantee Period and Replacements

A. The guarantee period for trees and shrubs shall begin at the date of acceptance.

B. The contractor shall guarantee all plant material to be in healthy and flourishing condition for a period of one year from the date of acceptance.

C. When work is accepted in parts, the guarantee periods extend from each of the partial acceptances to the terminal date of the guarantee of the last acceptance. Thus, all guarantee periods terminate at one time.

D. The contractor shall replace, without cost, as soon as weather conditions permit, and within a specified planting period, all plants determined by the landscape architect to be dead or in an unacceptable condition during and at the end of the guarantee period. To be considered acceptable, plants shall be free of dead or dying branches and branch tips and shall bear foliage of normal density, size, and color. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this specification.

E. The guarantee of all replacement plants shall extend for an additional period of one year from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of said extended guarantee period, the landscape architect may elect subsequent replacement or credit for that item.

F. At the end of the guarantee, the contractor shall reset grades that have settled below the proposed grades on the drawings.

G. The contractor shall make periodic inspections, at no extra cost, during the guarantee period to determine what changes, if any, should be made in the maintenance program. If changes are recommended, they shall be submitted in writing to the landscape architect. Claims by the contractor that the owners maintenance practices or lack of maintenance resulted in dead or dying plants will not be considered if such claims have not been documented by the contractor during the guarantee period.

XIII. Final Inspection and Final Acceptance

At the end of the guarantee period and upon written request of the contractor, the landscape architect will inspect all guaranteed work for final acceptance. The request shall be received at least ten calendar days before the anticipated date for final inspection. Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the landscape architect at that time, the landscape architect shall certify, in writing, that the project has received final acceptance.

WGI®
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

NO.	DATE	DESCRIPTION	BY
1	07-24-2020	RESUBMITTAL	BJ

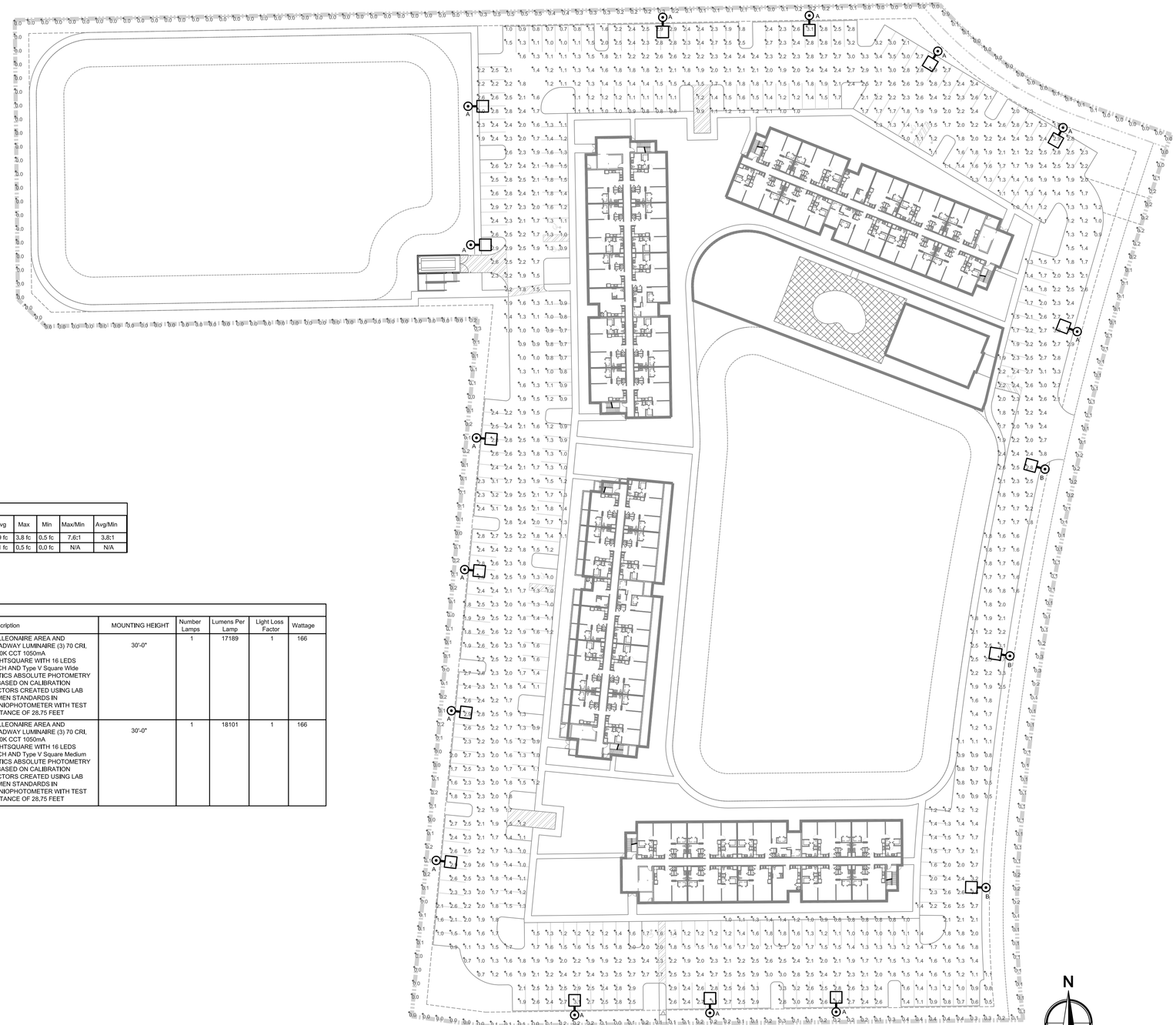
LANDSCAPE ARCHITECT OF RECORD
TIFFANY D. MAY, PLA FL#6667274

JOB NO.	5793.00
DRAWN BY	BJ
CHECK BY	TM
DATE	5/29/2020

BLUE SKY LANDING
CITY OF FORT PIERCE, FLORIDA
LANDSCAPE SPECIFICATIONS

SHEET:
LP-3.02

Bryan Jackson C:\praworking\wgi\bryan.jackson\pf#6263\5793\00-LA.dwg ---- Plotted: 7/24/2020 1:30:05 PM Scaled: 7/24/2020 1:29:35 PM



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PARKING	+	1,9 fc	3,8 fc	0,5 fc	7,6:1	3,8:1
PROPERTY LINE	+	0,1 fc	0,5 fc	0,0 fc	N/A	N/A

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	MOUNTING HEIGHT	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	A	14	COOPER LIGHTING SOLUTIONS - McGRAW-EDISON (FORMERLY EATON)	GLNA-AF-03-LED-E1-SL4	GALLEONAIRE AREA AND ROADWAY LUMINAIRE (3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V Square Wide OPTICS ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIOPHOTOMETER WITH TEST DISTANCE OF 28,75 FEET	30'-0"	1	17189	1	166
	B	3	COOPER LIGHTING SOLUTIONS - McGRAW-EDISON (FORMERLY EATON)	GLNA-AF-03-LED-E1-SL3	GALLEONAIRE AREA AND ROADWAY LUMINAIRE (3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V Square Medium OPTICS ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIOPHOTOMETER WITH TEST DISTANCE OF 28,75 FEET	30'-0"	1	18101	1	166

PHOTOMETRIC PLAN

N

0 20 40 80

SCALE: 1" = 40'

KBA ENGINEERING, INC.
201 FLAGSHIP DR., SUITE 106,
LUTZ, FLORIDA 33549
VOICE: (813) 909-1845
FAX: (813) 909-0764
FL. ENGINEERING BUSINESS
NUMBER: 00008135

PROJECT:
BLUE SKY LANDING
CITY OF FORT PIERCE, FL

SHEET TITLE:
PHOTOMETRIC PLAN

REVISION:

SEAL:

SIGNATURE DATE

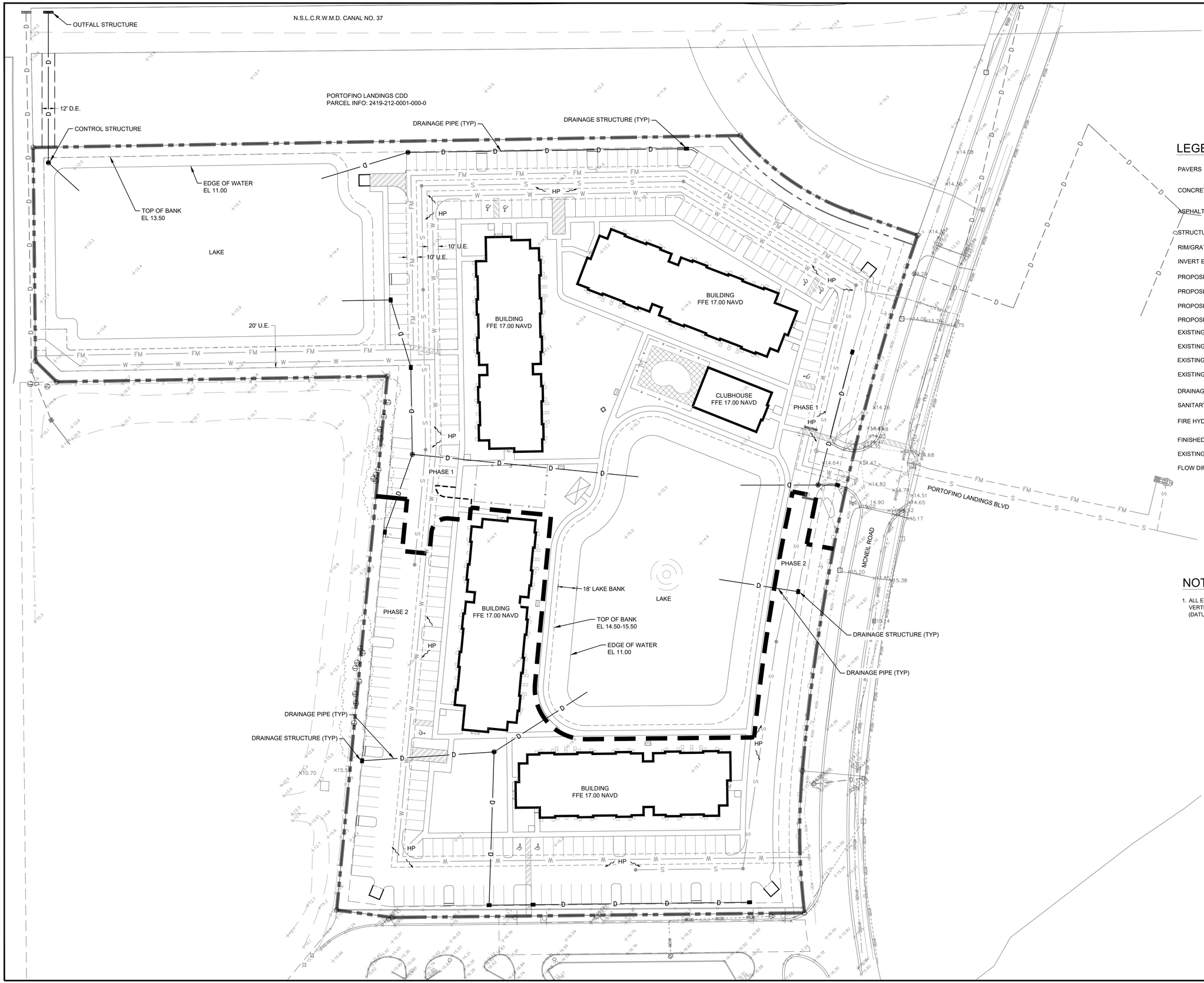
PROJECT NUMBER:
XX-XXXX

DATE:
MAY 22, 2020

DRAWN BY: SMM

CHECKED BY: KGC

SHEET #:
ESP-1 OF 1



N

0 20 40 80

SCALE: 1" = 40'

LEGEND

PAVERS	
CONCRETE PAVEMENT	
ASPHALT PAVEMENT	
STRUCTURE NUMBER	S-35
RIM/GRATE EL.	20.00
INVERT EL. AND DIRECTION	13.50 N 13.00 S
PROPOSED WATER MAIN	W
PROPOSED SEWER PIPE	S
PROPOSED DRAINAGE PIPE	D
PROPOSED FORCE MAIN	FM
EXISTING WATER MAIN	W
EXISTING GRAVITY SEWER	S
EXISTING DRAINAGE PIPE	D
EXISTING SEWER FORCE MAIN	FM
DRAINAGE STRUCTURES	
SANITARY MANHOLE	
FIRE HYDRANT	
FINISHED GROUND ELEVATION	XX.XX
EXISTING GROUND ELEVATION	+17.45
FLOW DIRECTION	

NOTES

1. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (DATUM SHIFT: NAVD88 MINUS NGVD29 = -1.49 FT)

WGI
2035 Vista Parkway, West Palm Beach, FL 33411
Phone No. 866.909.2220 www.wginc.com
Cert No. 6091 - LB No. 7055

REVISIONS

NO.	DATE	DESCRIPTION	BY
			###
			###
			###
			###
			###
			###
			###
			###

CAD 579300-CV-BASE.DWG	
JOB NO.	5793.00
DRAWN BY	AWR
CHECK BY	BPA
DATE	05/20/2020

ENGINEER OF RECORD
####
PE# ####

BLUE SKY LANDING

PRELIMINARY DRAINAGE PLAN

SHEET:
C-1



EXISTING SIGN



PROPOSED SIGN

NOTE: PROPOSED SIGNAGE TO COMPLY WITH CITY OF FORT PIERCE SIGN REQUIREMENTS.

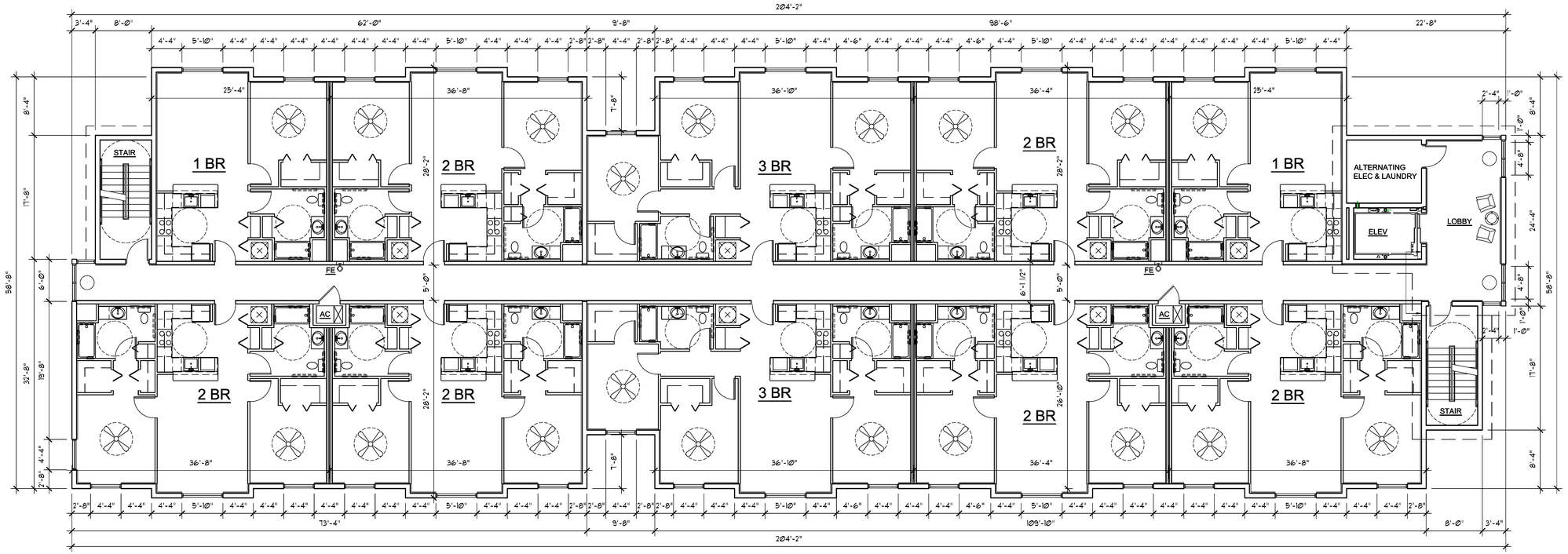
BLUE SKY LANDING

07-24-2020

PRELIMINARY SIGN ELEVATION EXHIBIT

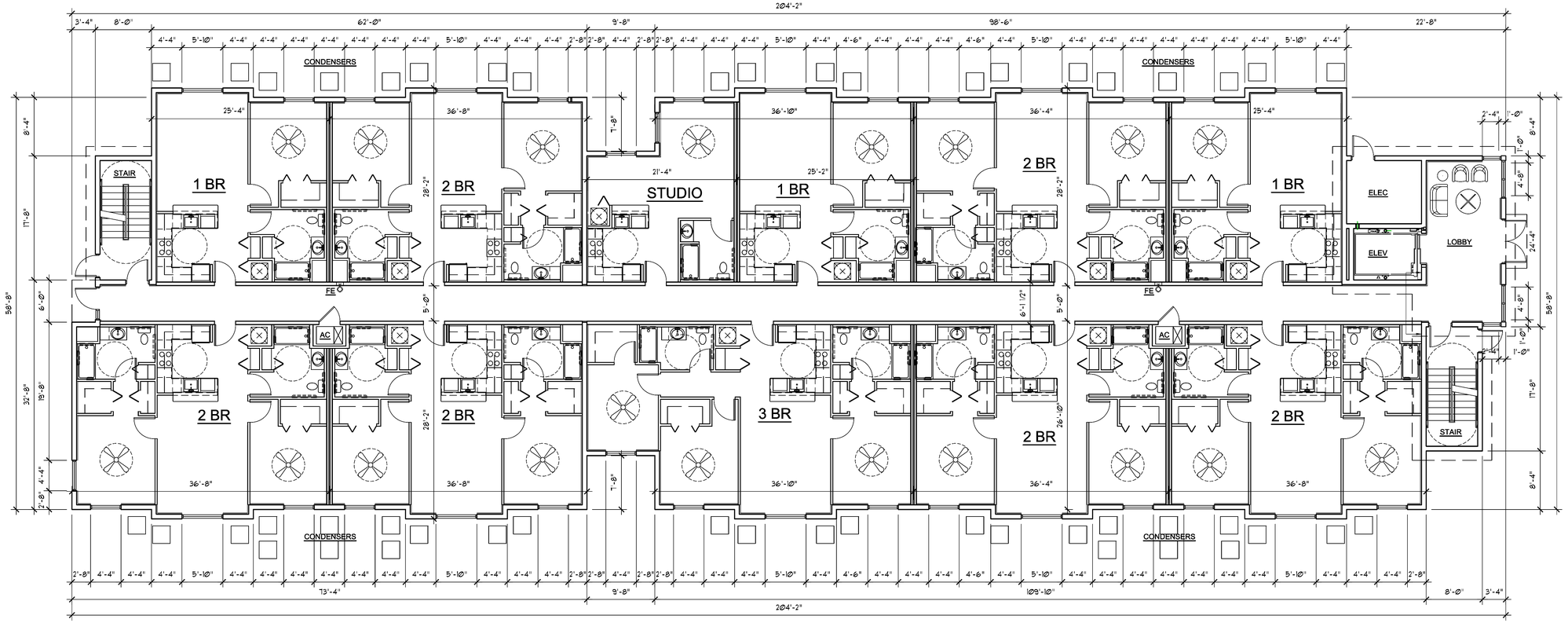
N.T.S.

WGI



TYP FLOOR PLAN - 10 UNITS X 3 FLRS

11,527 GROSS SF TYP FLOOR



GROUND FLOOR PLAN - 11 UNITS

11,507 GROSS SF GROUND FL

TYP BLDG

Blue Sky Landing

Proposed Multi Family Housing

McNeil Rd, Fort Pierce, FL 34947

SK-2

Project No. 2020-030C
Date: May 26, 2020

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EXTERIOR (STREET) ELEVATION



ENTRY END ELEVATION



END ELEVATION



INTERIOR (POND) ELEVATION

P1 SW 7006 Extra White
Paint on Stucco

P2 SW 7646 First Star
Paint on Stucco
MT1 Clear Anodized Alum Finishes

P3 SW 7650 Ellie Gray
Paint on Stucco
ST1 NSVI – Ledgestone/Diamond Ridge

P4 SW 9175 Deep Forset Brown
Paint on Stucco/Trims
MT2 Dark Bronze – Flashing/Misc

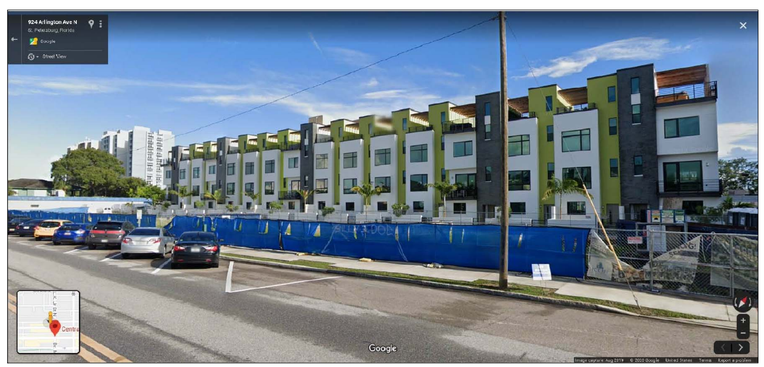
P5 SW 9032 Stay In Lime
Paint on Stucco

SHERWIN WILLIAMS
COLOR SCHEME



Diamond Ridge™

STONE VENEER EXAMPLE



INSPIRATIONAL PRECEDENT

Blue Sky Landing

Proposed Multi Family Housing

McNeil Rd, Fort Pierce, FL 34947

SK-3

Project No. 2020-030C
Date: May 26, 2020

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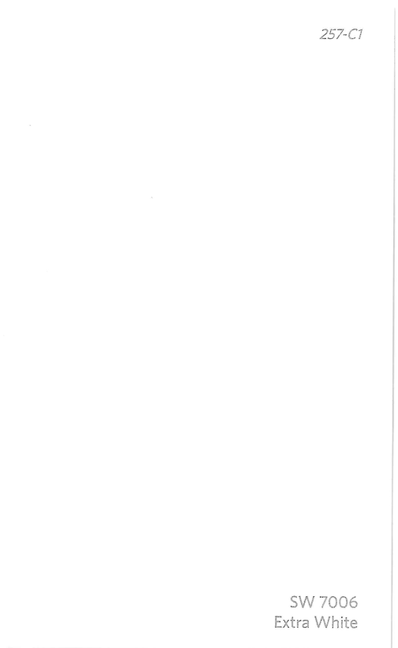
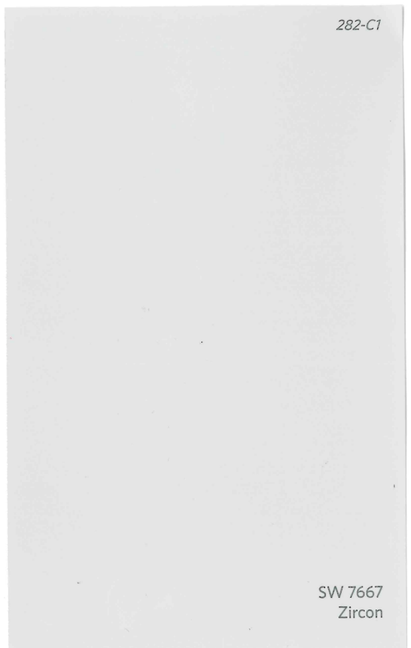
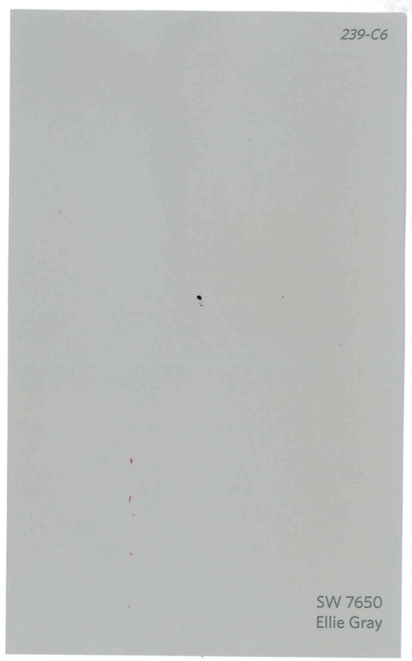
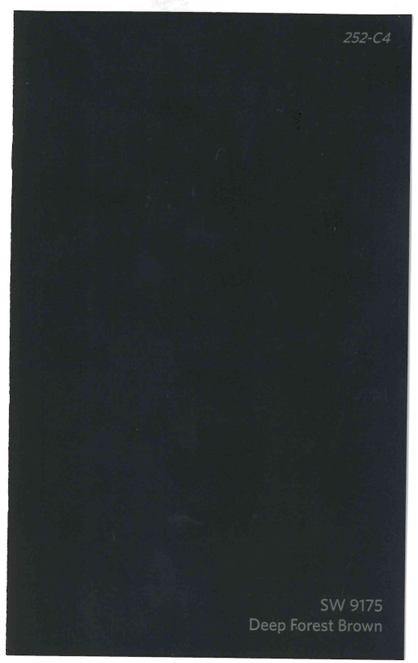
info@architectonicsstudio.com www.architectonicsstudio.com











P1 SW 7006 Extra White
Paint on Stucco

P2 SW 7667 Zircon
Paint on Stucco
MT1 Clear Anodized Alum Finishes

P3 SW 7650 Ellie Gray
Paint on Stucco
ST1 NSVI – Ledgestone/Diamond Ridge

P4 SW 9175 Deep Forset Brown
Paint on Stucco/Trims
MT2 Dark Bronze – Flashing/Misc

P5 SW 9032 Stay In Lime
Paint on Stucco

SHERWIN WILLIAMS
COLOR SCHEME

Blue Sky Landing

Proposed Multi Family Housing

McNeil Rd, Fort Pierce, FL 34947

SK-4

Project No. 2020-030C
Date: May 26, 2020

ARCHITECTONICS studio
architects + planners
Lic. # AA-0003347
2600 Dr. MLK Jr. Street N. Suite 600, St. Petersburg, FL 33704
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Cut/Fill Report

Generated: 2020-05-28 11:14:22

By user: Brian.Arnold

Drawing: C:\pwworking\wgi\brian.arnold\d1962584 \C:\pwworking\wgi\brian.arnold\d1962584\579300-CV-C3D.dwg

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Proposed to EL-16	full	1.000	1.000	399694.90	3434.42	24511.73	21077.31<Fill>
Existing to EL-16	full	1.000	1.000	400660.28	407.88	20934.00	20526.12<Fill>

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	800355.18	3842.30	45445.73	41603.43<Fill>

* Value adjusted by cut or fill factor other than 1.0

BLUE SKY LANDING

PRELIMINARY FLOODPLAIN COMPENSATION CALCULATIONS

"Fill" represents the storage volume below Base Flood Elevation 16.0 NAVD.

Post Development: 24,511.73 CY

Pre Development: 20,934.00 CY

Floodplain Storage Increase of 3,577.73 CY

BLUE SKY LANDING
TRAFFIC IMPACT STUDY

Prepared for

BLUE SKY COMMUNITIES

PINDER TROUTMAN CONSULTING, INC.
Certificate of Authorization Number: 7989
2005 Vista Parkway, Suite 111
West Palm Beach, FL 33411
(561) 296-9698

#PTC20-030
April 27, 2020

This item has been electronically signed and sealed by Linda Riccardi, P.E. on 4/27/20 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

BLUE SKY LANDING
TRAFFIC IMPACT ANALYSIS

Introduction

Pinder Troutman Consulting, Inc. (PTC) has been retained to conduct a traffic impact analysis for a proposed residential development located in the City of Ft. Pierce. The purpose of this study is to examine the traffic impacts of the proposed development on the surrounding roadway network and to determine compliance with Chapter V – Adequate Public Facilities, of the St. Lucie County Land Development Code and the Transportation Element of the City of Ft Pierce Comprehensive Plan.

Site Data

The site is located on the west side of McNeil Road, north of Okeechobee Road, as shown on Exhibit 1. Proposed access to the site is via one full access driveway connection to McNeil Road. It is proposed to develop 164 multi-family residential units in two phases. Phase 1 consists of 82 multi-family units to be completed by 2022 and Phase 2 consists of 82 multi-family units to be completed by 2023. The site is currently vacant. Issues related to driveway location, turn lanes and geometrics would be addressed during final design. Any reference to intersection geometrics is conceptual in nature and subject to final design and approval by others. A buildout year of 2023 for the entire project is proposed.

Existing Traffic Conditions

The latest available daily and peak hour traffic volumes and adopted level of service volumes for the surrounding roadway network were used. The source of the level of service volumes for the links is the St. Lucie Transportation Planning Organization (TPO) "Traffic Counts and Level of Service Report Fall 2019/Winter 2020" which is provided in Appendix A.

Roadway Improvements

The Transportation Improvement Program from the St. Lucie TPO was reviewed to determine if any roadways within the study area are scheduled to be improved. There are no roadway widening projects funded and assured in the impact area.

Trip Generation

The Institute of Transportation Engineers (ITE), Trip Generation, *10th Edition* was reviewed to determine an appropriate trip generation rate for the proposed project Exhibit 2 provides the daily, AM and PM peak hour trip generation data for the proposed development. Based on the net external daily trip generation of 892 and the St. Lucie County TPO standards, a one mile Radius of Area of Influence was utilized.

Trip Distribution and Assignment

A directional distribution was developed based on a review of land use patterns, approved traffic studies in the area and existing travel patterns. The project traffic distribution is shown on Exhibit 3A. Exhibits 3B and 3C show the assignment of AM and PM peak hour project traffic on the surrounding roadway network, as well as the project's impact percentage (% of peak hour directional service volume) to determine project significance. Project traffic is considered to be significant on the directly accessed Major Road where Project traffic consumes one percent or more of the directional capacity, and on any other Major Road within one mile where Project traffic consumes five percent or more of the directional capacity. As shown on Exhibits 3B and 3C, the project has an insignificant impact on all roadways within the Radius of Area of Influence.

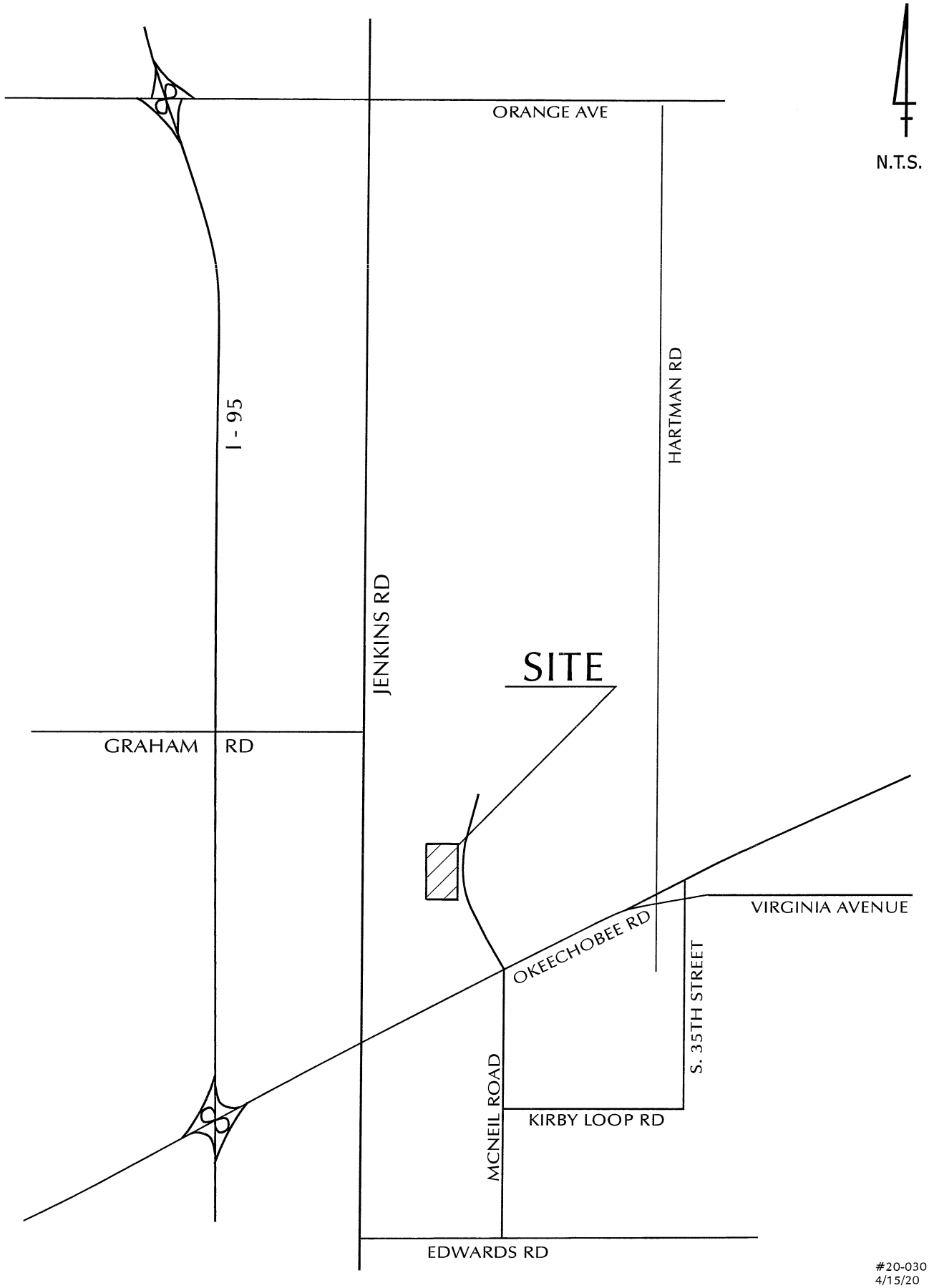
Driveway Volumes

Driveway volumes are shown on Exhibit 4. Full access to the site is provided by a main driveway on McNeil Road. The proposed southern driveway on McNeil Road will provide emergency access only to the site. No turn lanes are recommended.

Conclusions

This analysis shows that the project traffic has an insignificant impact on the roadway links and intersections surrounding the site. Therefore, the project is in conformance with the requirement of Chapter V – Adequate Public Facilities, of the St. Lucie County Land Development Code.

EXHIBITS



#20-030
4/15/20

BLUE SKY LANDING

EXHIBIT 1
PROJECT LOCATION

PTC

Exhibit 2
Blue Sky Landing
Trip Generation

Daily

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips	Internal Trips		External Trips	Pass-by Trips		New Trips
Residential Multi Family- 3+ stories	221	164 DUs	5.44 /DU	892	-	0.0%	892	-	0%	892
TOTALS				892	-	0.0%	892	-		892

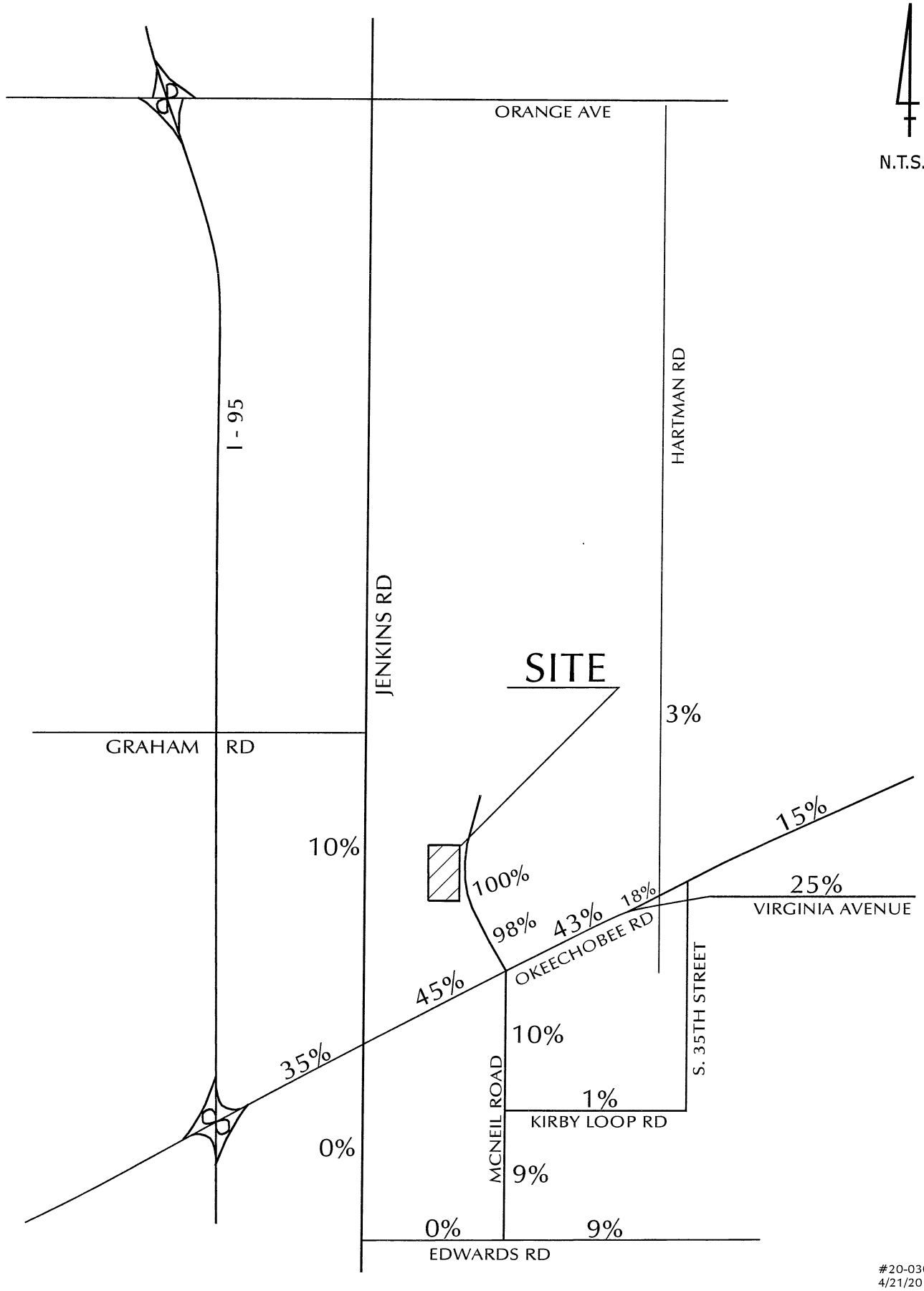
AM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips		External Trips			Pass-by Trips		New Trips		
				In	Out	Trips			In	Out	Trips			In	Out	Trips
Residential Multi Family- 3+ stories	221	164 DUs	0.36 /DU (26/74)	15	44	59	-	0.0%	15	44	59	-	0%	15	44	59
TOTALS				15	44	59	-	0.0%	15	44	59	-		15	44	59

PM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips		External Trips			Pass-by Trips		New Trips		
				In	Out	Trips			In	Out	Trips			In	Out	Trips
Residential Multi Family- 3+ stories	221	164 DUs	0.44 /DU (61/39)	44	28	72	-	0.0%	44	28	72	-	0%	44	28	72
TOTALS				44	28	72	-	0.0%	44	28	72	-		44	28	72

(1) Source: ITE, Trip Generation, 10th Edition.



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4/21/20

BLUE SKY LANDING

EXHIBIT 3A
PROJECT TRAFFIC DISTRIBUTION

PTC

Exhibit 3B
Blue Sky Landing
Project Traffic Assignment

AM Peak

Roadway	Link	Existing Lanes	Road Class	Dir	Project Traffic 15 44 % Dist	Project Traffic In Out Trips	Total Project Impact	Service Volume (1)	Significant Impact? (Yes/No)
Hartman Rd	Okeechobee Rd to Peterman Rd	2L	Major City/Cty	NB	3%	1	0.13%	750	No
				SB	3%	0	0.00%	750	No
Jenkins Rd	Edwards Rd to Okeechobee Rd	2L	I	NB	0%	0	0.00%	880	No
				SB	0%	0	0.00%	880	No
	Okeechobee Rd to Graham Rd	2L	Major City/Cty	NB	10%	4	0.43%	920	No
				SB	10%	2	0.22%	920	No
McNeil Rd	Okeechobee Rd to Kirby Loop Rd	2L	Major City/Cty	NB	10%	2	0.25%	790	No
				SB	10%	4	0.51%	790	No
	Kirby Loop Rd to Edwards Rd	2L	Major City/Cty	NB	9%	1	0.19%	540	No
				SB	9%	4	0.74%	540	No
Edwards Rd	Jenkins Rd to McNeil Rd	2L	I	EB	0%	0	0.00%	630	No
				WB	0%	0	0.00%	630	No
	McNeil Rd to Selvitz Rd	2L	I	EB	9%	4	0.57%	700	No
				WB	9%	1	0.14%	700	No
Kirby Loop Rd	McNeil Rd to 35th Street	2L	Major City/Cty	EB	1%	0	0.00%	630	No
				WB	1%	0	0.00%	630	No
Okeechobee Rd	I-95 to Jenkins Rd	8LD	II	EB	35%	5	0.12%	4240	No
				WB	35%	15	0.35%	4240	No
	Jenkins Rd to McNeil Rd (2)	8LD	II	EB	45%	7	0.17%	4040	No
				WB	45%	20	0.50%	4040	No
	McNeil Rd to Virginia Ave (2)	6LD	II	EB	43%	19	0.60%	3170	No
				WB	43%	6	0.19%	3170	No
	Virginia Ave to Hartman Rd	4LD	II	EB	18%	8	0.38%	2100	No
				WB	18%	3	0.14%	2100	No
	Hartman Rd to 35th Street	4LD	II	EB	15%	7	0.43%	1630	No
				WB	15%	2	0.12%	1630	No
Virginia Ave	Okeechobee Rd to 35th Street	6LD	II	EB	25%	11	0.36%	3020	No
				WB	25%	4	0.13%	3020	No

(1) St. Lucie County TPO Fall 2019/Winter 2020 Traffic Counts and LOS Report in Appendix A.

(2) First accessed roadway link.

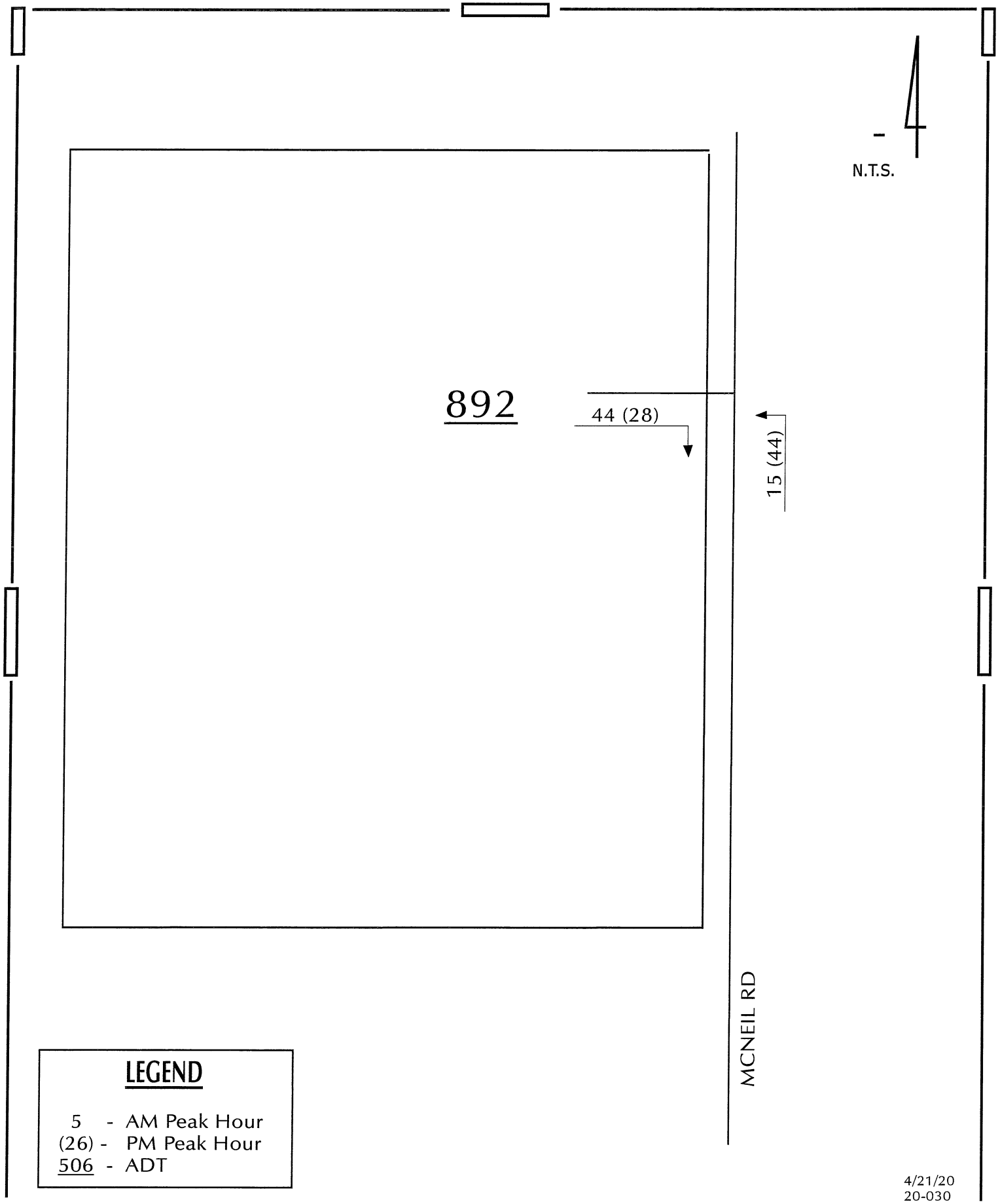
Exhibit 3C
Blue Sky Landing
Project Traffic Assignment

PM Peak

Roadway	Link	Existing Lanes	Road Class	Dir	Project Traffic 44 28 % Dist	Project Traffic In Out Trips	Total Project Impact	Service Volume (1)	Significant Impact? (Yes/No)
Hartman Rd	Okeechobee Rd to Peterman Rd	2L	Major City/Cty	NB	3%	1	0.13%	750	No
				SB	3%	1	0.13%	750	No
Jenkins Rd	Edwards Rd to Okeechobee Rd	2L	I	NB	0%	0	0.00%	880	No
				SB	0%	0	0.00%	880	No
	Okeechobee Rd to Graham Rd	2L	Major City/Cty	NB	10%	3	0.33%	920	No
				SB	10%	4	0.43%	920	No
McNeil Rd	Okeechobee Rd to Kirby Loop Rd	2L	Major City/Cty	NB	10%	4	0.51%	790	No
				SB	10%	3	0.38%	790	No
	Kirby Loop Rd to Edwards Rd	2L	Major City/Cty	NB	9%	4	0.74%	540	No
				SB	9%	3	0.56%	540	No
Edwards Rd	Jenkins Rd to McNeil Rd	2L	I	EB	0%	0	0.00%	630	No
				WB	0%	0	0.00%	630	No
	McNeil Rd to Selvitz Rd	2L	I	EB	9%	3	0.43%	700	No
				WB	9%	4	0.57%	700	No
Kirby Loop Rd	McNeil Rd to 35th Street	2L	Major City/Cty	EB	1%	0	0.00%	630	No
				WB	1%	0	0.00%	630	No
Okeechobee Rd	I-95 to Jenkins Rd	8LD	II	EB	35%	15	0.35%	4240	No
				WB	35%	10	0.24%	4240	No
	Jenkins Rd to McNeil Rd (2)	8LD	II	EB	45%	20	0.50%	4040	No
				WB	45%	13	0.32%	4040	No
	McNeil Rd to Virginia Ave (2)	6LD	II	EB	43%	12	0.38%	3170	No
				WB	43%	19	0.60%	3170	No
	Virginia Ave to Hartman Rd	4LD	II	EB	18%	5	0.24%	2100	No
				WB	18%	8	0.38%	2100	No
	Hartman Rd to 35th Street	4LD	II	EB	15%	4	0.25%	1630	No
				WB	15%	7	0.43%	1630	No
Virginia Ave	Okeechobee Rd to 35th Street	6LD	II	EB	25%	7	0.23%	3020	No
				WB	25%	11	0.36%	3020	No

(1) St. Lucie County TPO Fall 2019/Winter 2020 Traffic Counts and LOS Report in Appendix A.

(2) First accessed roadway link.



4/21/20
20-030

BLUE SKY LANDING

EXHIBIT 4
PROJECT DRIVEWAY VOLUMES

PTC

APPENDIX A

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd. Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
EAST TORINO PKWY	TORINO PKWY to MIDWAY RD	237	14,500	2020	880	1,030	F	1.170	978	F	1.111
EASY ST	US 1 to BUCHANAN DR	106	8,029	2018	750	601	D	0.801	483	D	0.644
EASY ST	BUCHANAN DR to YUCCA DR	106	8,029	2018	540	601	F	1.036	483	D	0.894
EDWARDS RD	JENKINS RD to MCNEIL RD	174	11,500	2020	630	573	C	0.955	594	C	0.990
EDWARDS RD	MCNEIL RD to SELVITZ RD	174	11,500	2020	700	573	C	0.868	594	C	0.900
EDWARDS RD	SELVITZ RD to 25TH ST	110	15,000	2020	880	755	C	0.910	771	C	0.929
EDWARDS RD	25TH ST to SUNRISE BLVD	108	16,697	2019	1,630	877	D	0.538	867	D	0.532
EDWARDS RD	SUNRISE BLVD to OLEANDER AVE	502	15,207	2019	1,630	754	D	0.463	735	D	0.451
EDWARDS RD	OLEANDER AVE to US 1	173	9,581	2019	1,630	527	C	0.722	460	C	0.630
FARMER'S MARKET RD	OLEANDER AVE to US 1	112	1,876	2019	750	130	C	0.351	127	C	0.343
FLORESTA DR	OAKLYN ST to PORT ST LUCIE BLVD	317	13,000	2019	920	900	D	0.978	687	C	0.790
FLORESTA DR	THORNHILL DR to CROSSTOWN PKWY	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	PORT ST LUCIE BLVD to THORNHILL DR	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	CROSSTOWN PKWY to PRIMA VISTA BLVD	109	11,000	2019	920	671	C	0.771	576	C	0.662
FLORESTA DR	PRIMA VISTA BLVD to AIROSO BLVD	107	9,600	2019	920	559	C	0.643	601	C	0.691
FLORESTA DR	SELVITZ RD to BAYSHORE BLVD	313	4,467	2018	630	349	C	0.582	365	C	0.608
FLORESTA DR	AIROSO BLVD to SELVITZ RD	313	4,467	2018	880	349	C	0.420	365	C	0.440
FT PIERCE BLVD	INDRIO RD to EMERSON AVE	226	3,555	2019	540	267	C	0.989	273	D	0.506
GARDENIA AVE	OLEANDER AVE to US 1	666	2,817	2017	750	188	C	0.508	200	C	0.541
GATLIN BLVD	W OF I-95 to E OF I-95	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	E OF I-95 to SAVAGE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVAGE BLVD to ROSSER BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	ROSSER BLVD to SAVONA BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVONA BLVD to PORT ST LUCIE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GEORGIA AVE	25TH ST to OKEECHOBEE RD	667	4,700	2020	600	290	C	0.967	262	C	0.873

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
*** Counts with an ID format of 6 digits have data extracted from FDOT count stations.**

St. Lucie Transportation Planning Organization

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466 SW Port St. Lucie Blvd. Suite 111
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772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
GEORGIA AVE	OKEECHOBEE RD to 17TH ST	667	4,700	2020	750	290	C	0.784	262	C	0.708
GEORGIA AVE	17TH ST to 13TH ST	508	4,733	2019	600	264	C	0.880	268	C	0.893
GEORGIA AVE	13TH ST to 7TH ST	506	2,169	2019	600	134	C	0.447	137	C	0.457
GEORGIA AVE	7TH ST to US 1	504	1,938	2019	600	122	C	0.407	135	C	0.450
GILSON RD	MARTIN C.L. to BECKER RD	111	11,000	2019	710	949	F	1.249	954	F	1.255
GILSON RD	BECKER RD to LAKERIDGE DR	111	11,000	2019	540	949	F	1.636	954	F	1.645
GLADES CUT-OFF RD	RANGE LINE RD to RESERVE BLVD	668	2,833	2017	1,070	200	B	0.526	252	B	0.663
GLADES CUT-OFF RD	RESERVE BLVD to COMMERCE CENTER DR	119	3,585	2016	1,070	332	B	0.874	332	B	0.874
GLADES CUT-OFF RD	CARLTON RD to RANGE LINE RD	668	2,833	2017	390	200	B	0.909	252	C	0.646
GLADES CUT-OFF RD	COMMERCE CENTER DR to MIDWAY RD	940279	2,770	2017	920	210	C	0.241	192	C	0.221
GLADES CUT-OFF RD	MIDWAY RD to JENKINS RD	115	12,500	2020	790	669	D	0.847	687	D	0.870
GLADES CUT-OFF RD	JENKINS RD to SELVITZ RD	113	6,600	2020	830	370	C	0.474	385	C	0.494
GRAHAM RD	KINGS HWY to JENKINS RD	669	3,733	2017	630	255	C	0.425	243	C	0.405
GREEN RIVER PKWY	MARTIN C.L. to CHARLESTON DR	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	CHARLESTON DR to MELALEUCA BLVD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	MELALEUCA BLVD to WALTON RD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
HARTMAN RD	OKEECHOBEE RD to PETERSON RD	670	5,867	2017	750	388	D	0.517	357	C	0.965
HARTMAN RD	PETERSON RD to DELAWARE AVE	670	5,867	2017	540	388	D	0.719	357	D	0.661
HARTMAN RD	DELAWARE AVE to ORANGE AVE	670	5,867	2017	790	388	C	0.995	357	C	0.915
HEADER CANAL RD	OKEECHOBEE RD to ORANGE AVE	121	560	2019	670	46	B	0.209	56	B	0.255
HILLMOOR DR	US 1 to LENNARD RD	671	5,900	2019	790	306	C	0.785	389	C	0.997
I-95	GATLIN BLVD to ST LUCIE WEST BLVD	941901	79,065	2017	4,580	4,048	C	0.884	3,657	C	0.798
I-95	ST LUCIE WEST BLVD to MIDWAY RD	941904	63,486	2017	4,580	3,571	C	0.780	3,079	B	0.916
I-95	MIDWAY RD to OKEECHOBEE RD	941902	75,846	2017	4,580	4,578	C	10	3,717	C	0.812
I-95	OKEECHOBEE RD to ORANGE AVE	941903	45,500	2009	7,320	1,822	B	0.405	1,894	B	0.421

* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
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						Volume	LOS	V/C	Volume	LOS	V/C
I-95	ORANGE AVE to INDRIO RD	941905	43,452	2017	7,320	2,090	B	0.464	1,924	B	0.428
INDIAN RIVER DR	CITRUS AVE to ORANGE AVE	945029	5,228	2017	750	311	C	0.841	356	C	0.962
INDIAN RIVER DR	ORANGE AVE to AVENUE A	940003	5,888	2017	750	344	C	0.930	335	C	0.905
INDIAN RIVER DR	AVENUE D to SEAWAY DR	940004	5,971	2017	790	349	C	0.895	411	D	0.520
INDIAN RIVER DR	AVENUE A to AVENUE D	940004	5,971	2017	540	349	D	0.646	411	D	0.761
INDRIO RD	PRIVATE RD to I-95 W RAMP	940128	951	2017	1,080	69	B	0.168	75	B	0.183
INDRIO RD	I-95 W RAMP to I-95 E RAMP	940128	951	2017	3,240	69	B	0.038	75	B	0.041
INDRIO RD	I-95 E RAMP to KOBLEGARD RD	940038	10,455	2017	3,240	598	B	0.330	629	B	0.348
INDRIO RD	KOBLEGARD RD to JOHNSTON RD	940038	10,455	2017	700	598	C	0.906	629	C	0.953
INDRIO RD	JOHNSTON RD to EMERSON AVE	940038	10,455	2017	880	598	C	0.720	629	C	0.758
INDRIO RD	EMERSON RD to SEMINOLE RD	940281	9,876	2017	920	595	C	0.684	501	C	0.576
INDRIO RD	SEMINOLE RD to KINGS HWY	940281	9,876	2017	790	595	D	0.753	501	D	0.634
INDRIO RD	KINGS HWY to SLASH PINE TRL	114	6,600	2020	790	422	D	0.534	413	D	0.523
INDRIO RD	SLASH PINE TRL to US 1	114	6,600	2020	920	422	C	0.485	413	C	0.475
INDRIO RD	US 1 to OLD DIXIE HWY	672	917	2016	750	64	C	0.173	86	C	0.232
JENNINGS RD	US 1 to LENNARD RD	673	4,600	2016	2,100	304	C	0.151	248	C	0.123
JENKINS RD	EDWARDS RD to OKEECHOBEE RD	133	10,500	2020	880	549	C	0.661	553	C	0.666
JENKINS RD	OKEECHOBEE RD to GRAHAM RD	131	10,500	2020	920	593	C	0.682	569	C	0.654
JENKINS RD	GRAHAM RD to PETERSON RD	131	10,500	2020	630	593	C	0.988	569	C	0.948
JENKINS RD	PETERSON RD to ORANGE AVE	131	10,500	2020	920	593	C	0.682	569	C	0.654
JOHNSTON RD	ANGLE RD to L20	674	2,600	2016	1,070	176	B	0.463	171	B	0.450
JOHNSTON RD	L20 to MEADOWOOD DR	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	MEADOWOOD DR to OLD JOHNSTON RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	OLD JOHNSTON RD to INDRIO RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	INDRIO RD to RUSSOS RD	135	9,600	2020	1,070	544	C	0.716	545	C	0.717

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JOHNSTON RD	RUSSOS RD to INDIAN RIVER C.L.	135	9,600	2020	1,070	544	C	0.716	545	C	0.717
JUANITA AVE	53RD ST to 25TH ST	122	2,432	2017	750	157	C	0.424	143	C	0.386
JUANITA AVE	25TH ST to US 1	120	3,321	2017	750	185	C	0.500	182	C	0.492
KEEN RD	ANGLE RD to JUANITA AVE	129	2,885	2019	630	174	C	0.290	203	C	0.338
KEEN RD	JUANITA AVE to ST LUCIE BLVD	129	2,885	2019	630	174	C	0.290	203	C	0.338
KINGS HWY	OKEECHOBEE RD to CROSSROADS PKWY	940757	8,234	2017	830	361	C	0.435	369	C	0.445
KINGS HWY	CROSSROADS PKWY to GRAHAM RD	940757	8,234	2017	660	361	C	0.547	369	C	0.559
KINGS HWY	GRAHAM RD to PICOS RD	940076	8,216	2017	660	405	C	0.614	389	C	0.589
KINGS HWY	PICOS RD to ORANGE AVE	940076	8,216	2017	830	405	C	0.488	389	C	0.469
KINGS HWY	ORANGE AVE to ANGLE RD	940077	16,792	2017	870	885	D	0.962	890	D	0.967
KINGS HWY	ANGLE RD to ST LUCIE BLVD	940751	11,394	2017	830	627	C	0.755	630	C	0.759
KINGS HWY	ST LUCIE BLVD to INDRIO RD	940006	13,481	2017	830	836	D	0.950	786	C	0.947
KITTERMAN RD	OLEANDER AVE to US 1	124	3,402	2018	750	224	C	0.605	203	C	0.549
KITTERMAN RD	US 1 to LENNARD EXT	678	2,250	2017	750	128	C	0.346	130	C	0.351
KIRBY LOOP RD	EDWARDS RD to 35TH ST	677	4,479	2016	630	296	C	0.493	362	C	0.603
LENNARD RD	US 1 to MARIPOSA AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MARIPOSA AVE to MELALEUCA BLVD	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MELALEUCA BLVD to JENNINGS RD	325	18,500	2019	1,630	953	D	0.585	984	D	0.604
LENNARD RD	JENNINGS RD to HILLMOOR DR	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	HILLMOOR DR to TIFFANY AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	TIFFANY AVE to WALTON RD	323	5,765	2016	1,710	301	C	0.391	305	C	0.396
LENNARD RD	WALTON RD to S OF SAVANNA CLUB BLVD	679	4,455	2016	790	390	C	10	381	C	0.977
LYNGATE DR	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	306	9,400	2020	920	588	C	0.676	626	C	0.720
LYNGATE DR	MORNINGSIDE BLVD to US 1	306	9,400	2020	920	588	C	0.676	626	C	0.720
MARIPOSA AVE	LENNARD RD to HALLAHAN ST	166	6,400	2019	880	485	C	0.584	686	C	0.827

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MCNEIL RD	OKEECHOBEE RD to KIRBY LOOP RD	682	4,600	2020	790	281	C	0.721	280	C	0.718
MCNEIL RD	KIRBY LOOP RD to EDWARDS RD	682	4,600	2020	540	281	D	0.520	280	D	0.519
MCCARTY RD	WILLIAMS RD to MIDWAY RD	680	375	2017	540	33	C	0.122	35	C	0.130
MCCARTY RD	MIDWAY RD to OKEECHOBEE RD	681	400	2020	540	34	C	0.126	35	C	0.130
MELALEUCA BLVD	LENNARD RD to GREEN RIVER PKWY	683	9,804	2018	920	648	C	0.745	584	C	0.671
MIDWAY RD	EAST TORINO PKWY to MILNER DR	134	22,500	2020	880	1,216	F	1.382	1,304	F	1.482
MIDWAY RD	MILNER DR to W OF SELVITZ RD	134	22,500	2020	790	1,216	F	1.539	1,304	F	1.651
MIDWAY RD	OKEECHOBEE RD to SHINN RD	940732	5,118	2017	760	295	C	0.440	376	C	0.561
MIDWAY RD	SHINN RD to MCCARTY RD	940732	5,118	2017	630	295	C	0.492	376	C	0.627
MIDWAY RD	MCCARTY RD to I-95	940732	5,118	2017	700	295	C	0.447	376	C	0.570
MIDWAY RD	I-95 to GLADES CUT-OFF RD	945140	16,655	2017	2,100	926	C	0.461	1,027	C	0.511
MIDWAY RD	GLADES CUT-OFF RD to EAST TORINO PKWY	228	21,500	2020	2,100	1,226	C	0.610	1,281	C	0.637
MIDWAY RD	W OF SELVITZ RD to SELVITZ RD	134	22,500	2020	920	1,216	F	1.322	1,304	F	1.417
MIDWAY RD	SELVITZ RD to CHRISTENSEN RD	132	18,500	2020	920	973	F	1.058	940	F	1.022
MIDWAY RD	CHRISTENSEN RD to 25TH ST	132	18,500	2020	790	973	F	1.158	940	F	1.119
MIDWAY RD	25TH ST to SUNRISE BLVD	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	SUNRISE BLVD to OLEANDER AVE	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	OLEANDER AVE to US 1	242	15,309	2016	790	808	E	0.962	800	E	0.952
MIDWAY RD	US 1 to WALLACE ST	940023	3,709	2017	790	287	C	0.736	317	C	0.813
MIDWAY RD	WALLACE ST to WEATHERBEE RD	940023	3,709	2017	920	287	C	0.330	317	C	0.364
MIDWAY RD	WEATHERBEE RD to INDIAN RIVER DR	940023	3,709	2017	630	287	C	0.478	317	C	0.528
MORNINGSIDE BLVD	WESTMORELAND BLVD to PORT ST LUCIE BLVD	333	2,654	2017	920	159	C	0.183	152	C	0.175
MORNINGSIDE BLVD	PORT ST LUCIE BLVD to LYNGATE DR	331	2,900	2020	880	230	C	0.277	244	C	0.294
NEBRASKA AVE	25TH ST to 13TH ST	684	3,767	2017	1,710	234	C	0.304	197	C	0.256
OAKRIDGE DR	MOUNTWELL ST to OAKLYN ST	621	6,000	2019	700	373	C	0.565	324	C	0.491

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OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

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US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIO RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIO RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

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ENVIRONMENTAL IMPACT REPORT
BLUE SKY LANDING PROPERTY
CITY OF FT. PIERCE, FLORIDA

PREPARED BY:
WANTMAN GROUP, INC.
2035 VISTA PARKWAY
WEST PALM BEACH, FL 33411
561-687-2220

PREPARED FOR:
BLUE SKY COMMUNITIES LLC

MAY 12, 2020

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ENVIRONMENTAL IMPACT REPORT
BLUE SKY LANDING PROPERTY
City of Ft. Pierce, FL
May 12, 2020

INTRODUCTION

The intent of this environmental impact report is to provide a preliminary assessment of the natural features within the below identified property including wetlands, upland habitat, protected trees and other vegetation, and the potential for threatened and endangered species. Based upon the preliminary assessment of these natural features, WGI discusses the types of environmental permits that may apply and provides an opinion on the feasibility of obtaining the environmental permits.

The subject property consists of approximately 9.19 acres and is located on the west side of McNeil Road just north of Okeechobee Road in the City of Ft. Pierce, St. Lucie County, Florida (folio numbers 2419-212-0001-000-0). Multi-family residences are to the east beyond McNeil Road, a mixture of commercial, residential, and institutional uses are to the west of the property, a commercial lot is to the south, and multi-family residences are located to the north of the property. Please refer to Exhibit A (Location Map) for details.

SOURCES OF INFORMATION

Literature reviews, agency database searches and coordination, and a field review were conducted to document existing habitat types within and around the property. The information collected and databases reviewed included:

- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Map
- USDA NRCS Soil Survey of St. Lucie County, Florida, 1980;
- Florida Association of Professional Soil Classifiers, Hydric Soils of Florida Handbook, 4th ed. (Hurt et. al. 2007)
- U.S. Fish and Wildlife Service (FWS), Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et. al. 1979; 2013)
- Florida Natural Areas Inventory (FNAI)
- National Wetland Inventory Maps
- Various Florida Fish and Wildlife Conservation Commission (FWC) GIS data layers
- FWS, South Florida Ecological Services Office Wood Stork Florida Nesting Colonies Maps
- FWS Critical habitat for threatened and endangered species mapper
- Florida Department of Transportation (FDOT) Florida Land Use, Cover and Forms Classifications System (FLUCFCS), 3rd ed., January 1999
- St. Lucie County Property Appraiser's Website; https://www.paslc.org/
- South Florida Water Management District ePermitting Website; https://my.sfwmd.gov/ePermitting/MainPage.do
- City of Ft. Pierce, Code of Ordinances; https://library.municode.com/fl/fort_pierce/codes/code_of_ordinances

SITE DESCRIPTION

Prior to the field review, the approximate boundaries of upland and surface waters within the property were mapped on true color aerial photographs. Each community type was classified using FLUCFCS (FDOT 1999).

WGI scientists familiar with Florida natural communities conducted a field review on May 4, 2020. During this review, each vegetative community type was walked and visually inspected to verify community boundaries, dominant vegetation, and the presence or potential for occurrence of threatened and endangered species. Based on in-house and the field review, one upland land use/ cover types and surface water or wetland habitat types were determined to be present within the project area. Each of these habitat types, as well as soils within the property, are described below.

SOILS

Based upon the USDA NRCS Soil Survey for St. Lucie County, Florida, one soil type is mapped within the property. A soils map is included as Exhibit B. Listed below are the soil types found within the property and general descriptions of their characteristics.

(38) Riviera Fine Sand - This poorly drained, nearly level soil is in hammocks and along drainageways. The water table is at a depth of less than 10 inches for 2 to 4 months in most years, and at a depth of 10 to 30 inches for most of the rest of the year. Natural vegetation is cabbage palms and scattered longleaf pine and slash pine and an understory of wax myrtle, and saw palmetto. The most common native grasses are pineland three awn and blue maidencane. This soil is listed as hydric by the *Hydric Soils of Florida Handbook* (2007).

(55) Winder Loamy Sand - This poorly drained, nearly level soil is in hammocks and along drainageways. The water table is at a depth of less than 10 inches for 2 to 4 months and between depths of 10 to 40 inches for most of the rest of the year. Natural vegetation is cabbage palm, willow oak, scattered longleaf pine, and slash pine. An understory of wax myrtle and saw palmetto. The common native grasses are pineland three awn and blue maidencane. This soil is listed as not hydric by the *Hydric Soils of Florida Handbook* (2007).

EXISTING LAND USE

Within the subject property, land use consists primarily of disturbed land. The property is heavily impacted by exotic and invasive vegetation due to a previous clearing and subsequent abandonment. There are numerous piles of concrete pipes throughout the property as well. Land use adjacent to the subject property consists of a mixture of multi-family residential, commercial, and institutional uses.

Existing land uses and natural habitats within the subject property were classified using the FLUCFCS (1999). A total of one upland land use/cover types and no surface water types were observed within the subject property. A map depicting these existing land use and habitat types encountered within the property are attached as Exhibit C (Existing Land Use Map). General descriptions of each of the land use and habitat types encountered within the subject property are provided in the following subsections.

UPLAND COMMUNITIES

The property consists entirely of disturbed uplands and is best described as urban land in transition without positive indicators of intended activity. The site was previously cleared and has been left fallow allowing for opportunistic and invasive species to recruit and dominate on the site. There are cleared paths from geotechnical sampling present but otherwise the site is uniformly covered in dense vegetative growth.

The following descriptions of upland habitats on the subject property are below.

193 – Urban Land in Transition without Positive Indicators of Intended Activity (9.19 acres)
This code describes the entire property.

The following is a list of the dominant native and non-native plant species identified in the uplands on the property during the field review:

Common Name	Scientific Name	Designation
Live oak	*Quercus virginiana*	Native
Cabbage palm	*Sabal palmetto*	Native
Saltbush	*Baccharis halimifolia*	Native
Partridge pea	*Chamaecrista fasciculata*	Native
Elderberry	*Sambucus nigra*	Native
American Black Nightshade	*Solanum americanum*	Native
Candlesticks	*Senna alata*	Native
Hedgeflower	*Lantana camara*	Native
Pokeweed	*Phytolacca americana*	Native
Betony	*Stachys floridana*	Native
Beggarweed	*Desmodium tortuosum*	Native
Brazilian pepper	*Schinus terebinthifolia*	Non-native
Australian pine	*Casuarina equisetifolia*	Non-native
Napier grass	*Pennisetum purpureum*	Non-native
Cogon grass	*Imperata cylindrica*	Non-native

WETLANDS AND SURFACE WATERS

WGI scientists familiar with Florida wetland communities conducted a field review of the subject property on May 4, 2020. The purpose of the field review was to delineate the limits of, and gather pertinent information about, existing onsite wetlands and surface waters. These features were delineated in accordance to the Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (ERDC/EL TR-10-20), and Chapter 62-340 Florida Administrative Code (F.A.C.), Delineation of the Landward Extent of Wetlands and Surface Waters. During the field review, the lowest elevation location on the property according to the topographic survey was inspected for hydrologic indicators. No signs of hydrology, hydric soils, or hydrophytic vegetation was observed.

The field review identified no surface waters or wetlands located within the property. This is consistent with the findings within the SFWMD Environmental Resources Permit (ERP) #56-00577-S-03, Application #: 060104-14 that states, “there are no wetlands within or affected by the proposed project.”

THREATENED AND ENDANGERED SPECIES

In order to determine federal and state listed protected plant and animal species that have the potential to occur within the property, available site-specific data was collected and evaluated. In addition, a field review was conducted by WGI scientists on May 4, 2020. The purpose of the field review was to identify any listed species present within the subject property, to assess the potential for the occurrence of protected species within the subject property, and to identify any critical habitat that might be located within or adjacent to the subject property. During the field review, the property was canvassed for direct observations of listed species or signs of their presence, including trails, tracks, scats, nests (cavity or stick), burrows, or calls.

The FWC wading bird rookery database was searched for active wading bird rookeries within one mile of the project area. According to this FWC database, there are no active wading bird rookeries within one mile of the project area.

The FWC eagle nest locator website was searched for bald eagle nests within one mile of the project area. According to the FWC database, there are no active bald eagle nests within one mile of the project area.

The following species have FWS consultation areas that overlap with the subject property.

Wood Stork

The FWS wood stork colony website was searched for active wood stork colonies located within 15 miles of the project area. This 15-mile distance corresponds to the core foraging area (CFA) established by the FWS for the wood stork in the South Florida region. According to the FWS wood stork colony website, the project area is located within the 15-mile CFA of one wood stork nesting colonies. According to the Wood Stork Effect Determination Key prepared by FWS and the USACE, this project is not likely to adversely affect with a key path of A → B → NLAA.

Everglades Snail Kite

The following habitat description has been copied from the Multi-Species Recovery Plan for South Florida. Snail kite habitat consists of freshwater marshes and the shallow vegetated edges of lakes (natural and man-made) where apple snails can be found. These habitats occur in humid, tropical ecoregions (Bailey 1978) of peninsular Florida and are characterized as palustrine-emergent, long-hydroperiod wetlands (Cowardin et al. 1979) often on an organic peat substrate overlying oolitic limestone or sand or directly on limestone or marl (Davis 1946). Suitable foraging habitat for the snail kite is typically a combination of low profile (< 3 m) marsh with an interdigitated matrix of shallow (0.2-1.3 m deep) open water, which is relatively clear and calm. The marsh vegetation is dominated by spike rush (Eleocharis cellulosa), maidencane (Panicum hemitomon), sawgrass (Cladium jamaicense), and/or cattails (Typha spp.). The shallow open-water areas are with or without sparse vegetation, such as white water lily (Nymphaea odorata), arrowhead (Sagittaria lancifolia), pickerel weed (Pontederia lanceolata), and floating heart (Nymphoides aquatica). Giant bulrush (Scirpus validus) often grows at the deep-water edge of marshes in the lakes. Low trees and shrubs also are often interspersed with the marsh and open water. These often include willow (Salix caroliniana), dahoon holly (Ilex cassine), pond apple (Annona glabra), bald cypress (Taxodium distichum), pond cypress (T. ascendens), wax myrtle (Myrica cerifera), buttonbush (Cephalanthus

occidentalis), and Melaleuca quinquenervia, an invasive exotic species. Snail kites require foraging areas that are relatively clear and open in order to visually search for apple snails. Therefore, dense growth of herbaceous or woody vegetation is not conducive to efficient foraging. The interspersed emergent vegetation enables apple snails to climb near the surface to feed, breathe, and lay eggs. Nearly continuous flooding of wetlands for > 1 year is needed to support apple snail populations that in turn sustain foraging by the snail kite (Sykes 1979, Beissinger 1988).

No nesting or foraging habitat is available on the subject project for the snail kite.

Audubon's Crested Caracara

The following habitat description has been copied from the FWS Crested Caracara Draft Survey Protocol (2017). The Florida caracara population commonly occurs on dry or wet prairies with scattered cabbage palms (Sabal palmetto). It may also be found in lightly wooded areas. Scattered saw palmetto (Serenoa repens), scrub oaks (Quercus geminate, Q. minima, Q. pumila), and cypress (Taxodium spp.) may also be present. Widespread changes in land use may have caused a change in habitat use in this species. Morrison and Humphrey (2001) found a strong association of caracara home ranges with improved pasture. The presence of seasonal wetlands, which may serve as foraging habitat, is an important factor in the attractiveness of these pastures to caracaras (Service 1999). Therefore, today we recognize caracara foraging habitat (and nesting territories) as those areas with short herbaceous vegetation. This includes native wet and dry prairies, but also improved, unimproved, and woodland pastures, sod farms, row crops, levees, and rangeland. Juvenile caracaras may also use citrus and tree farms.

The primary nesting substrate is cabbage palm, although there have been rare reports of nesting in slash pine (pers. Obs.), cypress, oak, red cedar (Morrison 2007), Australian pine (Casuarina spp.), saw palmetto, and black gum (Nyssa sylvatica), and even more atypical locations such as an electrical substation, radio tower, and billboard (Dwyer and DallaRosa 2015).

The subject property does not contain suitable foraging or nesting habitat for the caracara as it is described above. Impacts to the caracara are not anticipated from the proposed activities.

Florida Scrub Jay

The following habitat description has been copied from the FWS Species Conservation Guidelines for the Florida Scrub Jay (2004). Suitable habitats for the scrub jay are not only the more "classic" xeric oak scrub, scrubby pine flatwoods, scrubby coastal strand, and sand pine scrub, but also include: improved, unimproved, and woodland pastures (211-213); citrus groves (221); rangeland (310-330); pine flatwoods (411); longleaf pine xeric oak (412); sand pine (413); sand pine plantations (4411); forest regeneration areas (443); sand other than beaches (720); disturbed rural land in transition without positive indicators of intended activity (741); and disturbed burned areas (745). The presence of scrub oaks, no matter how sparsely distributed, is a key indicator of scrub habitat. Fitzpatrick et al. (1991) defined three classes of scrub jay habitat:

Type I – any upland plant community in which percent cover of the substrate by scrub oak species is 15 percent or more.
Type II – any plant community, not meeting the definition of type I habitat, in which one or more scrub oak species is represented.

Type III – any upland or seasonally dry wetland within 400 m (0.25 mi) of any area designated as Type I or Type II habitats.

The subject property does not fall within any of the three classes of scrub jay habitat. There are no scrub oak species present on the property and there are none within a quarter mile.

Florida Grasshopper Sparrow

According to the FWS's Species Conservation Guidelines for the Florida Grasshopper Sparrow, habitat for the Florida grasshopper sparrow has been described as dry prairie that is relatively open and low in stature (Shriver and Vickery 1999). The habitat consists of treeless, relatively poorly-drained grasslands that have a history of frequent fires (Service 1999). The prairie vegetative community is typically dominated by saw palmetto (Serenoa repens) and dwarf oaks (Quercus minima) ranging from 30 to 70 cm (12 to 28 in) in height. Bluestem grasses (Andropogon spp.), St. John's wort (Hypericum spp.), and wiregrasses (Aristida spp.) are important components of Florida grasshopper sparrow habitat (Delany et al. 1985). Florida grasshopper sparrows generally occupy an open landscape, and tend to avoid forested edges and preferentially use the centers of open patches (Vickery 1996). Edge effects, including reduced reproductive success and increased predation, may extend up to 400 m (1,312 ft) from an edge. Optimal habitat occurs at the peak in a fire maintained system with a early summer (June) three-year burn cycle. Consequently, sparrows often occur in conditions that are suboptimal. Recent survey efforts on public lands have shown that Florida grasshopper sparrows also reproduce successfully in pastures that are overgrown or ungrazed (Service 1999). In these cases, sparrows seem to prefer pastures that are not bahia monocultures, but instead have some other plant types (low forbs and shrubs). These other plants appear to provide some structural diversity to the prairies. However, as pastures become heavily grazed, sparrow populations decrease or disappear (Delany and Linda 1994). Thus flatwoods that have been converted to pasture that are lightly grazed should be considered suitable habitat for Florida grasshopper sparrows.

The subject property does not represent suitable habitat for the grasshopper sparrow. No effect on the sparrow is anticipated.

Eastern Indigo Snake

According to the Eastern Indigo Snake Programmatic Effect Determination Key, the proposed project should be considered as not likely to adversely affect (NLAA) the Eastern Indigo Snake. The key path is A →B →C →D →E →NLAA.

The applicant is willing to follow the Standard Protection Measures and as such, this project should be a NLAA finding.

Gopher Tortoise

A preliminary 15% gopher tortoise burrow survey was performed on May 4, 2020 by an Authorized Gopher Tortoise Agent covering the most likely places within the property to contain tortoise burrows. No burrows or evidence of gopher tortoise presence was observed during the survey.

Based upon the information collected, as well as a site-specific field review, federal or state listed protected plant and animal species were identified as occurring or having the potential to occur within the property. The potential of occurrence for each species was ranked as Low, Moderate, or

High based on the habitat requirements for each species, the presence of habitat within the property and documented occurrences of the species within one mile of the property. A Low ranking indicates that preferred habitat for that species was found within the project area, but the species has not been documented within one mile of the project area. A Moderate ranking indicates that suitable habitat exists, and the species has been documented within one mile of the project area. A High ranking indicates that suitable habitat exists and the species was observed during field reviews.

The following table lists the protected species, their federal or state protection status, preferred habitat, and a ranking of potential for occurrence within the property.

Species	Designated Status			Habitat Preference	Potential for Occurrence On-Site
	FWS	FWC	DOACS		
FAUNA					
REPTILIAN / AMPHIBIAN					
Eastern indigo snake *Drymarchon corais couperi*	T			Pine and scrubby flatwoods, high pine, dry prairie, edges of freshwater marshes, agricultural fields, coastal dunes, and human altered habitats	Low
Gopher tortoise *Gopherus polyphemus*		T		Xeric oak, sandhills, scrub habitats, dry pine flatwoods, old fields, pastures, and roadsides	Low
AVIAN					
Audubon's Crested Caracara *Polyborus plancus*	T			Dry or wet prairies with scattered cabbage palms.	Low
Everglades Snail Kite *Rostrhamus socialbilis plumbeus*	E			Relatively shallow wetland vegetation, either within extensive marsh systems, or in lake littoral zones. Emergent aquatic vegetation are important because they allow apple snails to occupy the area.	Low
Florida burrowing owl *Athene cunicularia floridana*		SSC		High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhill. Makes extensive use of ruderal areas such as pastures, airports, ball fields, parks, school grounds, university campuses, road right-of-ways, and vacant spaces in residential areas.	Low
Florida Grasshopper Sparrow *Ammodramus savannarum floridanus*	E			Dry prairie that is relatively open and low in stature. Treeless, relatively poorly drained grasslands that have a history of frequent fires.	Low
Florida Scrub Jay *Aphelocoma coerulescens*	T			Xeric oak scrub, scrubby pine flatwoods, scrubby coastal strand, and sand pine scrub. The presence of scrub oak is a key indicator.	Low
Wood stork *Mycteria Americana*	T			Fresh- and saltwater marshes, tidal flats, wet prairies, forested wetlands, flooded pastures, and ditches.	Moderate**

MAMMALS					
Sherman's Fox Squirrel *Sciurus niger shermani*		SSC		Sandhills (high pine), pine flatwoods, and pastures and other open, ruderal habitats with scattered pines and oaks.	Low

Legend:
FWS = United States Fish and Wildlife Service
FWC = Florida Fish and Wildlife Conservation Commission
DOACS = Florida Department of Agriculture & Consumer Services
E = Endangered
T = Threatened
SSC = Species of Special Concern
(S/A) = Threatened/Similarity of Appearance
Low = Preferred habitat found within the project area, but no documented element occurrence of the species within one (1) mile of the project area and no observations were made during field reviews.
Moderate = Suitable habitat exists and the species has been documented within one (1) mile of the project area, but no observations were made during field reviews.
High = Suitable habitat exists and species was observed within the project area during field reviews.
*Observed onsite during the field reconnaissance.
**Wading birds were not observed onsite, and there is little to no suitable habitat for nesting and therefore no significant restriction to development is expected.

FINDINGS AND DISCUSSION

Based on the above findings, there are natural features present on the property that are regulated by both federal, state, and local agencies and permits will be required as part of the entitlement process. The following is a summary of the processes and environmental permits required for each component of this subject property.

Wetlands and Surface Waters

Wetland protection is mandated under both federal and state regulations. The U. S. Army Corps of Engineers (USACE) regulates activities in Waters of the United States pursuant to the Clean Water Act (PL92-500, Section 404) as further defined in the USACE regulatory program (33 CFR 320-330).

The State of Florida Department of Environmental Protection (FDEP) has established the Environmental Resource Program (ERP) under Chapter 62-330, F.A.C. that governs the "construction, alteration, operation, maintenance, repair, abandonment, and removal of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, and works (including docks, piers, structures, dredging, and filling located in, on or over wetlands or other surface waters, as defined and delineated in chapter 62-340, F.A.C.)". The FDEP has delegated authority for certain ERP activities to the South Florida Water Management District (SFWMD) and this includes large scale residential developments.

It is the opinion of WGI that there are no wetlands or surface water features present on the property. This is supported by the now-expired SFWMD permit from 2006 stating that no wetlands are present on the property. The site was previously permitted and cleared with some grading earthwork finished in 2007 and due to the Great Recession was left abandoned before the project was completed.

An ERP permit modification would still be required for the stormwater management system associated with new development of the property.

While the previous SFWMD ERP determination of no wetlands is not associated with nor addresses any jurisdiction of the USACE, it does provide assurances that no wetlands or surface waters on the property would meet the criteria required by the USACE to be regulated. No engagement of the USACE is required if no jurisdictional wetlands exist on the property however a preliminary jurisdictional determination request can be made to the USACE to verify the assertion of no wetlands on the property.

Threatened and Endangered Species

Listed species are afforded special protective status by federal and state agencies. This special protection is federally administered by the United States Department of the Interior, FWS pursuant to the Endangered Species act of 1973 (as amended). The FWS administers the federal list of animal species (50 CFR 17.11) and plant species (50 CFR 17.12). Federal protection of marine species is the responsibility of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS).

The State of Florida affords special protection to animal species designated as State designated threatened or species of special concern, pursuant to Chapter 68A-27, F.A.C., which is administered by the FWC. In November 2010, a revision to the FWC threatened species rules changed the designation of federal listed species that occur in Florida to federally designated endangered or federally designated threatened species. Those species that are only state listed are now designated as State threatened or State species of special concern.

The State of Florida also protects and regulates plant species designated as endangered, threatened or commercially exploited as identified on the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (DOACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C.

All listed species with defined consultation areas that overlap the subject property have been discussed in the Threatened and Endangered Species section. None of the species are expected to utilize the site as there is no suitable habitat available.

Protected Tree Species

The City of Ft. Pierce (City) has regulations for tree removal. All native trees with a diameter at breast height (DBH) of 14 inches and larger and native palms greater than 10 feet in clear trunk height are protected under Section 22-194 of the City's Code of Ordinances. The City will require a tree removal permit in order to remove any existing protected vegetation. Each protected tree removed must be replaced at a 1:1 ratio of DBH inches. Protected palms must be replaced on a palm for palm basis. The minimum size of planted replacement tree is 12' tall. Mitigation in the form of a payment in lieu of replacement may be accepted if replacement is not an option. Payment amount is based on a price per inch DBH removed.

Based on a tree inventory prepared by WGI staff on May 4, 2020, there are only 15 protected trees and palms on the property. These live oaks and cabbage palms are along the eastern and southern property lines and are part of the previously planted landscape buffer.

CONCLUSION

- Wetlands and Surface Waters: It is WGI's opinion that there are no jurisdictional wetlands or surface waters on the subject property. An ERP permit from the SFWMD will be needed for the stormwater management system of the proposed development.
- Vegetation: A Tree Removal permit will be required by the City for the removal of existing protected vegetation prior to site development. A tree inventory was conducted, and the 15 protected trees and palms are lined along the eastern and southern property lines as part of a previously planted landscape buffer. The City will expect the preservation or relocation of these trees and palms.
- Listed Species: WGI did not observe protected species, their habitat, or signs of their presence within the subject property that would present a significant limitation on site development.



Source: Google Earth

BLUE SKY LANDING

EXHIBIT A

PREPARED FOR BLUE SKY COMMUNITIES LLC

LOCATION MAP

N

SCALE: NTS

WGI

DRAWN BY:	RMH
DRAWING #:	579300_EV-MAPS.dwg
FILE #:	5793.00
DATE:	05/12/2020

2035 VISTA PARKWAY • WEST PALM BEACH, FLORIDA 33411 • P : (561) 687-2220 • F : (561) 687-1110



Soil Series
38 - Riviera Fine Sand
55 - Winder Loamy Sand

Source: Web Soil Survey

BLUE SKY LANDING

EXHIBIT B

PREPARED FOR BLUE SKY COMMUNITIES LLC

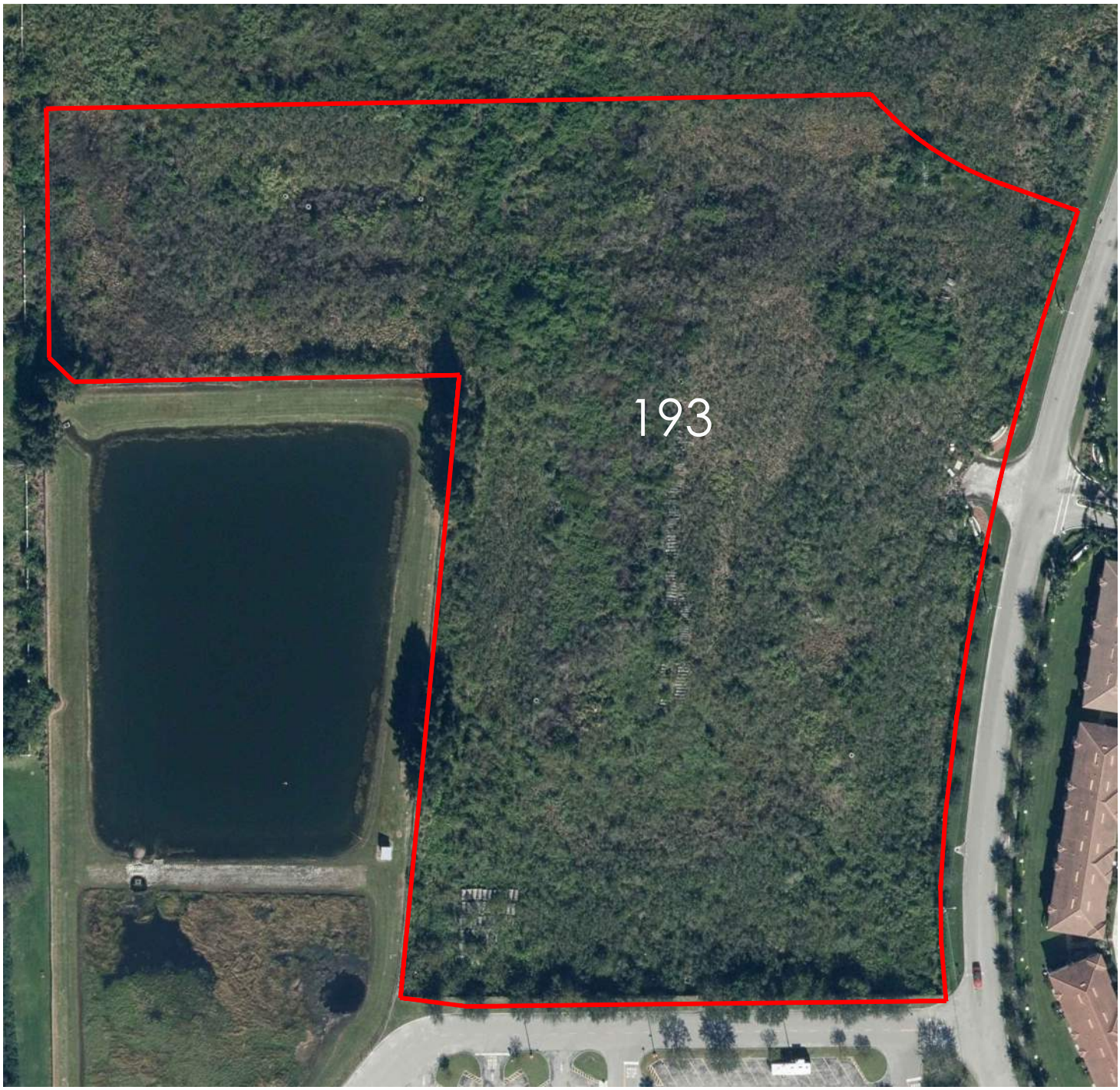
SOIL SURVEY

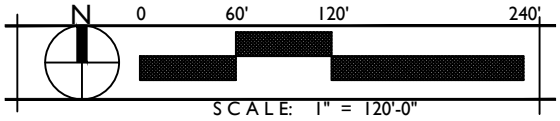
N

SCALE: NTS

DRAWN BY:	RMH
DRAWING #:	579300_EV-MAPS.dwg
FILE #:	5793.00
DATE:	05/06/2020

2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411 P: (561) 687-2220 F: (561) 687-1110





FLUCCS CODE
193 - Urban Land in Transition - 9.19 ac.

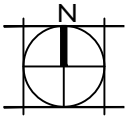
Source: FDOT Aerials GIS

BLUE SKY LANDING

EXHIBIT C

PREPARED FOR BLUE SKY COMMUNITIES LLC

FLUCCS MAP



SCALE: 1" = 120'0"

DRAWN BY:	RMH
DRAWING #:	579300_EV-MAPS.dwg
FILE #:	5793.00
DATE:	05/06/2020

2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411 P : (561) 687-2220 F : (561) 687-1110

Exhibit D
Site Photographs



Photo 1: View from center of site towards the west.



Photo 2: View from center of the site looking north



Photo 3: View along eastern property line looking southwest. Photo credit: Google StreetView



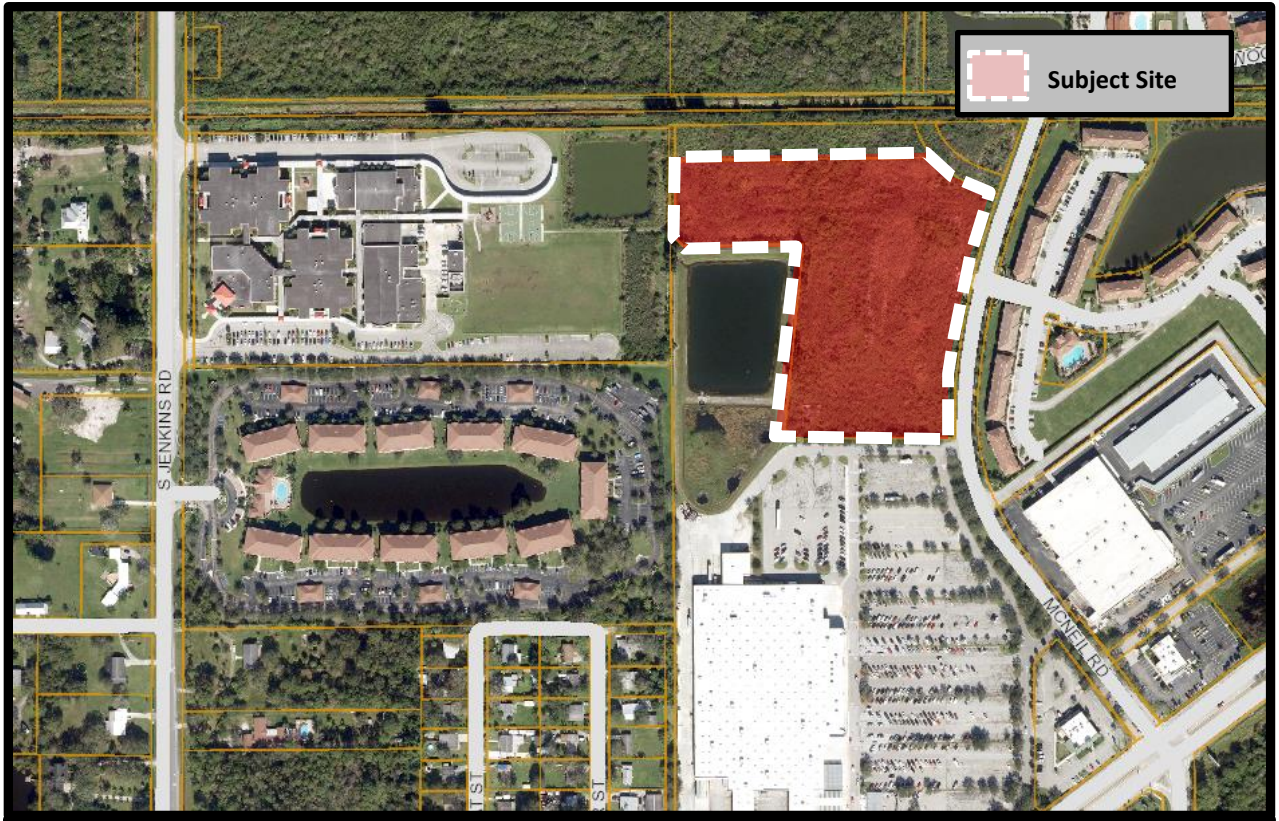
Photo 4: View along eastern property line looking east. Photo credit: Google StreetView



Photo 5: View of eastern property line looking northwest. Photo credit: Google StreetView



Photo 6: View along southern property line looking into property towards the northwest. Photo credit: Google StreetView



THE SUNRISE CITY
FORT PIERCE
Florida

Development Review & Design Review
Blue Sky Landing – NE of Jenkins Rd & Okeechobee Rd
Aerial

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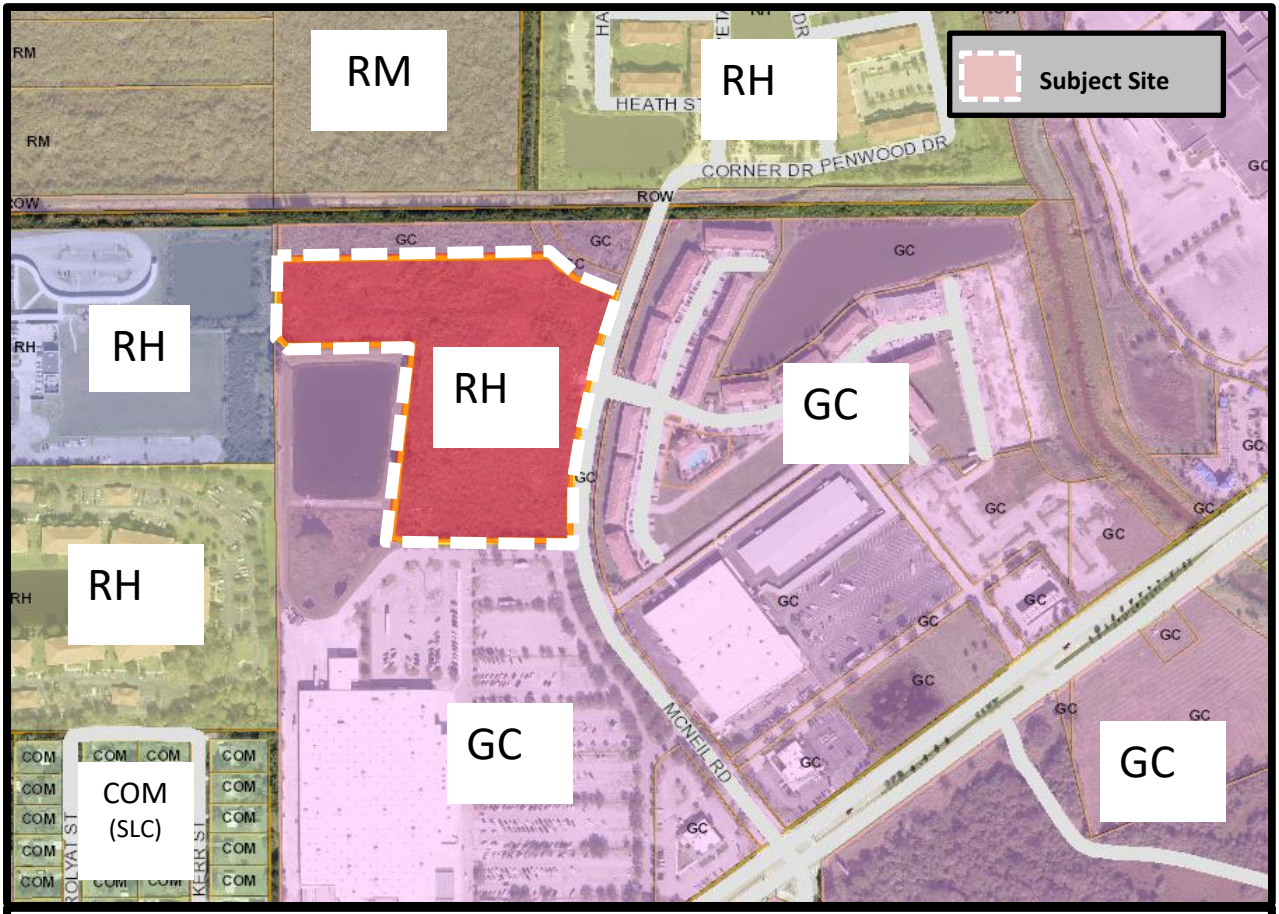

THE SUNRISE CITY
FORT PIERCE
Florida

Development Review & Design Review
Blue Sky Landing – NE of Jenkins Rd & Okeechobee Rd
Future Land Use Map

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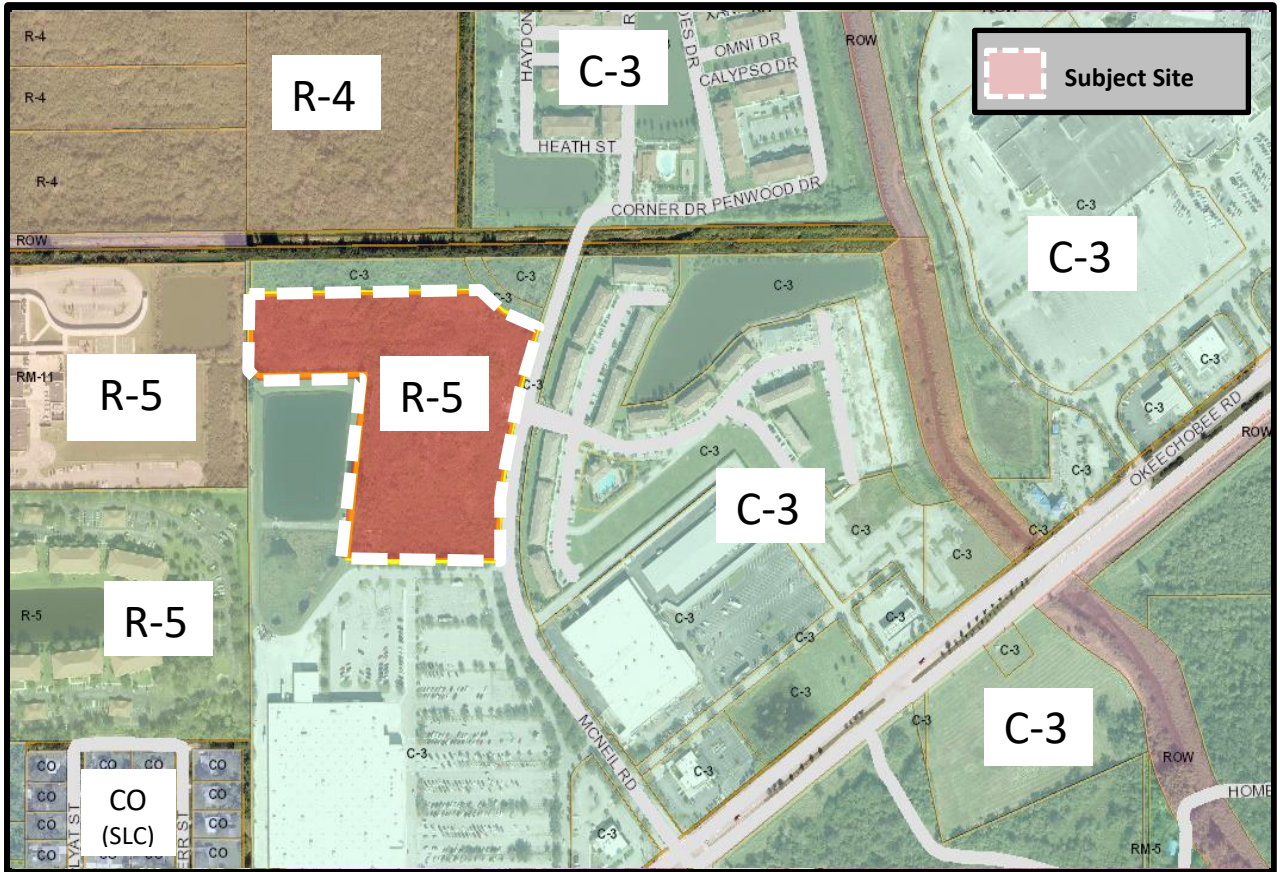


THE SUNRISE CITY
FORT PIERCE
Florida

Development Review & Design Review
Blue Sky Landing – NE of Jenkins Rd & Okeechobee Rd
Zoning Map

N
W E
S

June 17, 2020

Blue Sky Communities
5300 W Cypress Street, Suite 200
Tampa, FL 33607

SUBJECT: **Blue Sky Landing**
TECHNICAL REVIEW PROJECT: # 20-07000004

Fort Pierce Planning:

1. Are you providing a water feature for the lake in the rear of the property?

2. It appears that there is a pedestrian access for the dumpster enclosure, can you confirm this. Will trash be thrown away in one central location in each building or will the whole development use the one dumpster enclosure that is denoted on the plans?

3. Provide more benches around the lakes/community, especially the lake in the rear of the property to provide an opportunity for someone who is exercising to sit down?

4. A Landscape Bond will need to be provided at the time of Certificate of Occupancy for each building pursuant to City Code 22-180. The Landscape Bond for the common areas, clubhouse, lakes, & parking areas shall be submitted before the Certificate of Occupancy is issued for the first building in each phase.

5. It is noted that the McNeil Road R.O.W. is not in the control of the developer and is owned by the Portofino Landings CDD. Has there been any discussions about putting sidewalks along this R.O.W. to improve pedestrian connectivity in the area?

6. Put stop signs and stop bars at the entrance of the development to mitigate potential traffic conflicts.

7. Consider adding some lighting along the path that goes around the lake in the rear of the property for safety. Is there lighting proposed around the tot lot or the pool? If not, this should also be considered for safety.

8. A Tree Survey/Mitigation Plan shall be submitted in accordance with City Code 22-191 through 22-194. Please coordinate with the City Arborist Paul Bertram. Overall, the landscape Plan looks great.

9. Review Chapter 15 of the City Code for sign requirements to ensure the proposed signs meet the requirements of the code section as proposed.

10. Add a page to the landscape plan that shows the cross section for the landscape buffer.

11. Provide an additional phasing sheet that is color coded for each phase. This will act as a visual aid

12. Provide a map that shows the transit stop that is within ¼ mile of the site that is being utilized to obtain the density bonus pursuant to City Code 22-72.

Please provide a written response to all TRC comments and provide an electronic submittal of materials. The presented review is specific to the proposed facility. Please contact me should you have any questions regarding the project at (772) 467-3742 or by e-mail: bcreagan@city-ftpierce.com.

Sincerely,

Brandon Creagan, LEED Green Associate
Planner

Fort Pierce City Arborist

Paul Bertram

Blue Sky Landing (McNeil Road)

1. Tree survey

2. Site inspection with Landscape Architect to verify condition of trees to be saved and or relocated.

3. Substitute Red Maple for Cypress or Coastal Plain Willow around retention area.

4. Good to see the Magnolia and the Live Oak trees at 3.5 “caliber minimum.

5. Simpson’s Stopper is going to be high maintenance around the retention area. Suggest using a native slow growing species maybe Muhly grass mixed with a Saw Palmetto.

THE SUNRISE CITY
FORT PIERCE
Florida
ENGINEERING
DEPARTMENT

TO : Brandon Creagan, Planner

FROM : John R. Andrews, P.E., City Engineer

RE : Blue Sky Landing Major Site Plan – McNeil Road
TRC No. 20-07000004

DATE : June 17, 2020

This is to advise you that we have completed the review of the following documents as received by this office on June 9, 2020:

- [x] Site Plan
- [ ] Test Reports & Related Documents
- [ ] Record Drawings
- [ ] Clearances from all applicable Local, State and Federal Agencies
- [ ] P/D Drawings
- [ ] Certificate of Completion
- [ ] Permits from applicable Local, State & Federal Agencies

Based on our reviews and appropriate site final inspection, we

- [x] Recommend
- [ ] Do Not Recommend

- [x] Approval of Site Plan
- [ ] Building Permit
- [ ] C/O

Developer, Owner, Engineer, Contractor and other members of the Development Team must be aware, the above recommendation is based only on the construction requirements of the engineering plans and other engineering documentation approved by this department. The Development Team shall be responsible for the compliance with other City department requirements and all approved documents, as well as Local, State and Federal regulations. The development requirements for this project may necessitate additional construction requirements that are not subject to this department's review for approval.

- [x] See attached for engineering advisory comments

100 NORTH US 1, FORT PIERCE, FLORIDA 34950 ▪ CITYOFFORTPIERCE.COM ▪ TEL: 772.467.3000 ▪ FAX: 772.460.6847

ENGINEERING COMMENTS:

1. **ADVISORY COMMENT:** The boundary and topographic survey was not signed and sealed. At time of Building Permit submittal please provide a signed and sealed survey in accordance with the City of Fort Pierce Code of Ordinances Section 17-27(a)(7).

JRA/TST/tst

+5

THE SUNRISE CITY
FORT PIERCE
BUILDING DEPARTMENT Florida

BUILDING DEPARTMENT
TECHNICAL REVIEW COMMITTEE (TRC)
COMMENT FORM

RECEIVED
JUN 10 2020
CITY OF FORT PIERCE
PLANNING & ZONING

Meeting Date: 6.11.20
Property Address: Blue Sky Landing 2419-211-0004-0008 Major Site Plan

Please be advised that the project may trigger the requirements indicated below:

☑ 1. Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

☐ 2. Pre-construction meeting with the City's Building Department is requested.

☐ 3. Any construction will need to meet the requirements of the Florida Building Code 6th Edition.

☐ 4. Means of egress is required.

☐ 5. Means of ingress is required.

☐ 6. Must meet the following Accessibility requirements:

- ☐ Accessible route
- ☐ Handicapped parking spaces
- ☐ Means of egress

☐ 7. Change of Use required

- ☐ to include a signed and sealed Life Safety Plan
- ☐ to include a signed and sealed detailed comprehensive building plan.

☑ 8. Property exists in Special Flood Hazard Area. All Federal and State requirements shall be addressed.

☑ 9. Flood Development Permit required.

☐ 10. Building Permit required.

☐ 11. Signed and sealed construction drawings required.

☐ 12. Will need to meet the Fire Code.

☐ 13. Sprinkler system is required.

☐ 14. Smoke alarm system is required.

☐ 15. Other

Additional Comments/Requirements:

F.D.E.P. Approval required

Building Official's or Representative's Signature _____ Date: 6/9/20

Technical Review Committee meeting

June 18th, 2020

Case # 20-07000004

Planner: Brandon Creagan

Major Site Plan

Blue Sky Landing, McNeil Road near Wal-Mart, Ft. Pierce.

Comments:

No comments at this time.

Officer Damian Spotts

Crime Prevention Practitioner

Fort Pierce Police Department.

Fort Pierce Utilities Authority
Water/Wastewater Engineering
1701 South 37th Street
Fort Pierce, FL 34947
772.466.1600 x3473

Technical Review Committee Meeting

June 18, 2020

TECHNICAL REVIEW PROJECT # 20-07000004

Major Site Plan – Blue Sky Landing – 2419-211-0004-000-8

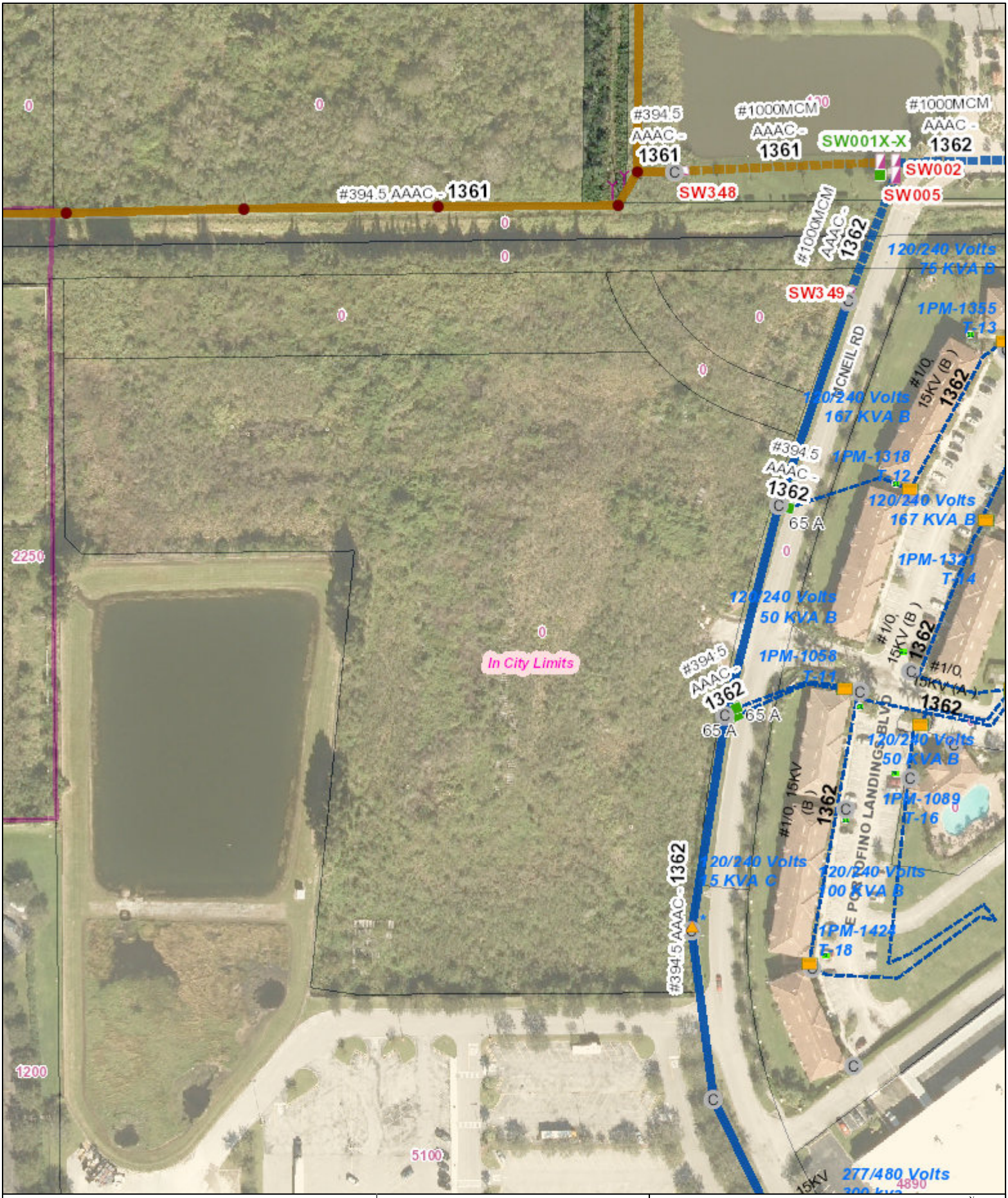
Comments

FPUA W/WW Engineering: Water and sewer services are available to serve this location. A predesign meeting is strongly recommended for this project, because of the following:

- FPUA has a 10' utility easement with an 8" force main through the subject property, which needs to be taken into consideration during site plan development.
- There is a stub out that is approximately 11 feet deep to provide gravity sewer connection
- There is water blow off and valve on the western property line to provide loop water system

The developer will be required to submit 3 complete sets of utility construction plan along with a completed commercial service application to Water and Wastewater Engineering for review at 1701 S 37th Street Fort Pierce Florida. For more information, please contact John Biggs at 772 466 1600 ext. 3474 or click on the following link below:
https://www.fpua.com/Business/StartStopNewServices/DevelopmentServicesResponsibilitiesWWW.aspx

FPUA Electric & Gas Engineering: Approved. Electric service is available to the site (along the west side of McNeil Road). Please provide electric load information for the new services and AutoCAD drawing.
FPUA will need to know the total number of electric services for the propose project. In addition to the proposed 164 services. Such as irrigation, lift station, entrance gates, street lights, etc.
FPUA will need a 10-ft-wide utility easement for the new electric underground distribution lines and equipment's.
Customer will be responsible for all conduits (primary and secondary), transformer pad and secondary conductors.
Customer surveyor to stake all propose electric equipment's and hand hole locations.
For more information and project coordination, please contact Sal Scimeca, Engineering Technician II @ (772)466-1600 Ext. 6957



Legend

- Electric Primary Wire
- Transmission Wire
- Gas Main
- Fiber Optic Cable
- Potable Water Main
- Raw Water Main
- Wastewater Force Main
- WW Gravity Main
- Pole
- Fuse
- Transformers
  - Overhead
  - Pad Mount
- Valves
  - Gas
  - Water
  - Raw Water
  - Waste Water
- Fire Hydrant
- Well
- Lift Station

Disclaimer:

The data contained herein is offered "as is", with no claim or warranty as to its accuracy or completeness. The data is for reference only and should not be considered to be of survey precision. Due to formatting restrictions, the information provided in the map may not be represented in the legend.

811 Know what's below. Call before you dig.

Date: 4/1/2020

FPUA COMMUNITY PROUD

N

1 inch = 160 feet

FPUA Utility Map

Created By:
Name

(772) 466-1600
FAX (772) 461-1938

June 17, 2020

Project: **Blue Sky Communities**
Subject: **Development Application Comments**
To: Brandon Creagan
From: Grant Chambers

1. The applicant has acknowledged the required 10 FT Right-of-Way dedication along Swain road. Please coordinate with the County's Property Acquisitions Department. The contact for the County is JoAnn Riley at 772-462-2825 or rileyj@stlucieco.org .

ST. LUCIE COUNTY FIRE DISTRICT
FIRE PREVENTION BUREAU
Office of the Fire Marshal

Telephone: **(772) 621-3322**
Fax: **(772) 621-3604**

BUREAU OF FIRE PREVENTION

SITE PLAN REVIEW

TO: Site Plan Applicant

SITE PLAN: Site Plan-Blue Sky Apartments

REVIEW DATE: June 17, 2020, June 20, 2019

PLANNER: BRANDON CREAGAN / MARIA LEWICKA

REVIEWED BY: Captain Paul langel

Site Plan Approved: _____

Site Plan Approved with conditions: ___X_____

Site Plan Approval withheld pending written acknowledgement of conditions: _____

Site Plan Rejected: _____

The Following Revisions Are Necessary:

1. **Please submit a completed application for Development/Site Plan Review (St. Lucie County Fire District Development & Site Plan Review Application). This form is available on-line athttp://www.slcfd.com/permits.htm**
2. **Fire District review fees are due at the time of submittal. An abbreviated fee schedule is included on the application form.**
3. **Please provide an electronic copy of the Site Plan (pdf format)**
4. **A separate review and permit is required for Underground Fire Mains connected to standpipes or sprinkler systems.**

ST. LUCIE COUNTY FIRE DISTRICT
FIRE PREVENTION BUREAU
Office of the Fire Marshal

Telephone: **(772) 621-3322**
Fax: **(772) 621-3604**

5. **An approved water supply capable of supplying the required fire flow for fire protection (shall be) is identified to all premises upon which facilities, buildings, or portions of buildings which are to be constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1:18.4. See "Needed NFPA Fire Flow Calculator Spreadsheet".**

6. **Fire hydrants (shall be) are provided for buildings other than detached one-and-two-family dwellings IAW both of the following 1) The maximum distance to a fire hydrant from the closest point in the building shall not exceed 400 feet. 2) The maximum distance between fire hydrants shall not exceed 500 feet. NFPA 1:18.5.3. Please provide fire flow calculations for hydrants.**

7. **Fire department connections shall be located on the street side of buildings and shall be located and arranged so that hose lines can be readily attached to the inlets without interference from any nearby objects, including buildings, fences, landscaping, or other fire department connections. The locations of connections shall be based upon the access requirement s of the fire department.**

8. **The distance allowed between the fire department connection and a fire hydrant shall be no more than one hundred fifty (150) feet as a vehicle travels.**

9. **Security gates must either be manned 24 hour/day or provide an access control key switch on the control panel to allow for Fire Department entry in an emergency. Security gates must maintain a clear width of 12 feet when open and provide a means to open the gates manually upon loss of power.**

[EXTERNAL] RE: Blue Sky Landing - TRC #20-07000004

PB

Paul Bertram <pbertram@cityoffortpierce.com>
To Jerrod Purser

Good morning Jerrod,

Yes, I reviewed everything looks good.

From: Jerrod Purser <Jerrod.Purser@wginc.com>
Sent: Tuesday, July 21, 2020 3:19 PM
To: Paul Bertram <pbertram@cityoffortpierce.com>
Cc: Rick Harman <Rick.Harman@wginc.com>
Subject: RE: Blue Sky Landing - TRC #20-07000004

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Hi Paul,

I haven't heard back on the tree survey/mitigation. Please give me a call, or confirm by email that the tree inventory plans are acceptable.

Thanks.
Jerrod

WGI

Jerrod Purser, PLA
Project Manager
2035 Vista Parkway
West Palm Beach, FL 33411
561.687.2220 | 561.537.4533 (direct)

July 30, 2020

Brandon Creagan
Planning Department
City of Fort Pierce
100 North U.S. 1
Fort Pierce, FL 34950

RE: Blue Sky Landing – Technical Review Project:# 20-07000004

Dear Mr. Creagan:

Below, please find responses to the staff review comments related to the Major Site Plan application for Blue Sky Landing issued on June 17, 2020.

Fort Pierce Planning:

1. Are you providing a water feature for the lake in the rear of the property?

   Response: **As coordinated with the Planning department, no water feature or walking path are proposed at the northwestern lake on the property. Due to safety and security concerns regarding the distance of the lake from the rest of the community, the developer does not want to encourage activity at that location. Instead, the phase line has been adjusted in order to include the walking path around the central lake within Phase 1, further enhancing this lake as an amenity and encouraging use.**

2. It appears that there is a pedestrian access for the dumpster enclosure, can you confirm this. Will trash be thrown away in one central location in each building or will the whole development use the one dumpster enclosure that is denoted on the plans?

   Response: **The site plan has been revised to show a dumpster enclosure for each building in the development. Pedestrian access has been provided for each enclosure.**

3. Provide more benches around the lakes/community, especially the lake in the rear of the property to provide an opportunity for someone who is exercising to sit down?

   Response: **The site plan has been revised to add benches at Building C and Building D, as well as a gazebo adjacent to the tot lot, all overlooking the central lake.**

4. A Landscape Bond will need to be provided at the time of Certificate of Occupancy for each building pursuant to City Code 22-180. The Landscape Bond for the common areas, clubhouse, lakes, & parking areas shall be submitted before the Certificate of Occupancy is issued for the first building in each phase.

   Response: **Acknowledged.**

5. It is noted that the McNeil Road R.O.W. is not in the control of the developer and is owned by the Portofino Landings CDD. Has there been any discussions about putting sidewalks along this R.O.W. to improve pedestrian connectivity in the area?

   Response: **As coordinated with the Planning department, a sidewalk will not be proposed along**

the McNeil Road right-of-way, as this portion is owned by the Portofino Landings CDD. Instead, a striped crosswalk is being provided at our main entry so that our residents can easily reach the existing sidewalk along the east side of McNeil Road.

6. Put stop signs and stop bars at the entrance of the development to mitigate potential traffic conflicts.

   Response: **Acknowledged. The site plan has been revised to add stop signs and stop bars at the entrance.**

7. Consider adding some lighting along the path that goes around the lake in the rear of the property for safety. Is there lighting proposed around the tot lot or the pool? If not, this should also be considered for safety.

   Response: **Acknowledged. The developer does not want to encourage any traffic at night along the rear lake, but will comply with all City of Fort Pierce lighting requirements for the property.**

8. A Tree Survey/Mitigation Plan shall be submitted in accordance with City Code 22- 191 through 22-194. Please coordinate with the City Arborist Paul Bertram. Overall, the landscape Plan looks great.

   Response: **The tree survey/mitigation plan, as well as email confirmation of acceptance from the City arborist, have been provided with the resubmittal.**

9. Review Chapter 15 of the City Code for sign requirements to ensure the proposed signs meet the requirements of the code section as proposed.

   Response: **The preliminary sign detail has been revised to demonstrate the City of Fort Pierce code requirements.**

10. Add a page to the landscape plan that shows the cross section for the landscape buffer.

    Response: **Acknowledged. The landscape plans have been revised to show a cross section for the proposed landscape buffer on sheet LP-3.01.**

11. Provide an additional phasing sheet that is color coded for each phase. This will act as a visual aid.

    Response: **The requested phasing exhibit has been included with the resubmittal.**

12. Provide a map that shows the transit stop that is within ¼ mile of the site that is being utilized to obtain the density bonus pursuant to City Code 22-72.

    Response: **The requested exhibit, showing proximity to the transit stop being utilized to obtain density bonus pursuant to City Code 22-72, has been included with the resubmittal.**

Fort Pierce City Arborist

1. Tree Survey

   Response: **The tree survey/mitigation plan, as well as email confirmation of acceptance from the City arborist, have been provided with the resubmittal.**

2. Site inspection with Landscape Architect to verify condition of trees to be saved and or relocated.

   Response: **The tree survey/mitigation plan has been coordinated with the City arborist per discussion via phone and email coordination.**

3. Substitute Red Maple for Cypress or Coastal Plain Willow around retention area.

   Response: **Acknowledged. The landscape plans have been revised to show the requested substitution.**

4. Good to see the Magnolia and the Live Oak trees at 3.5 "caliber minimum.

   Response: **Acknowledged.**

5. Simpson's Stopper is going to be high maintenance around the retention area. Suggest using a native slow growing species maybe Muhly grass mixed with a Saw Palmetto.

   Response: **Acknowledged. The landscape plans have been revised to show the requested substitution for native species.**

Engineering Department – Recommend Approval of Site Plan

1. Advisory Comment - The boundary and topographic survey was not signed and sealed. At time of Building Permit submittal please provide a signed and sealed survey in accordance with the City of Fort Pierce Code of Ordinances Section 17-27(a)(7).

   Response: **Acknowledged.**

Building Department

1. Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

   Response: **Acknowledged.**

2. Property exists in Special Flood Hazard Area. All Federal and State requirements shall be addressed.

   Response: **Acknowledged.**

3. Flood Development Permit required.

   Response: **Per coordination with Building Department reviewer, Flood Development permit is not required for this property.**

   Additional Comments/Requirements: F.D.E.P. Approval required.

Response: **Per coordination with Building Department reviewer, F.D.E.P. approval is not required for this property.**

Fort Pierce Police Department: Crime Prevention Practicioner

1. No comments at this time.

Response: **Acknowledged.**

Fort Pierce Utilities Authority (FPUA)

1. FPUA W/WW Engineering: Water and sewer services are available to serve this location. A predesign meeting is strongly recommended for this project, because of the following:
   - FPUA has a 10' utility easement with an 8" force main through the subject property, which needs to be taken into consideration during site plan development.
   - There is a stub out that is approximately 11 feet deep to provide gravity sewer connection
   - There is water blow off and valve on the western property line to provide loop water system

   The developer will be required to submit 3 complete sets of utility construction plan along with a completed commercial service application to Water and Wastewater Engineering for review at 1701 S 37th Street Fort Pierce Florida. For more information, please contact John Biggs at 772 466 1600 ext. 3474 or click on the following link below:
   https://www.fpua.com/Business/StartStopNewServices/DevelopmentServicesResponsibilitiesWWW.aspx

   Response: **Acknowledged. A pre-design meeting with FPUA and representative John Biggs was held on July 9th, 2020 to coordinate the above comments.**

2. FPUA Electric & Gas Engineering: Approved. Electric service is available to the site (along the west side of McNeil Road). Please provide electric load information for the new services and AutoCAD drawing.
   FPUA will need to know the total number of electric services for the propose project. In addition to the proposed 164 services. Such as irrigation, lift station, entrance gates, street lights, etc.
   FPUA will need a 10-ft-wide utility easement for the new electric underground distribution lines and equipment's.
   Customer will be responsible for all conduits (primary and secondary), transformer pad and secondary conductors.
   Customer surveyor to stake all propose electric equipment's and hand hole locations.
   For more information and project coordination, please contact Sal Scimeca, Engineering Technician II @ (772)466-1600 Ext. 6957

   Response: **Acknowledged.**

SLC Public Works

1. The applicant has acknowledged the required 10 FT Right-of-Way dedication along Swain road. Please coordinate with the County's Property Acquisitions Department. The

contact for the County is JoAnn Riley at 772-462-2825 or rileyj@stlucieco.org .

Response: **Acknowledged. The applicant has reached out to JoAnn Riley as instructed, with no additional requirements for the 10 ft right-of-way dedication along Swain Road at this time.**

SLC Bureau of Fire Prevention

1. Please submit a completed application for Development/Site Plan Review (St. Lucie County Fire District Development & Site Plan Review Application). This form is available on-line athttp://www.slcfd.com/permits.htm

   Response: **Acknowledged. The application has been included with the resubmittal.**

2. Fire District review fees are due at the time of submittal. An abbreviated fee schedule is included on the application form.

   Response: **Acknowledged. The check for the Fire District review fee was mailed to SLCFD, with receipt confirmed by Wayne Boyer on July 30th, 2020.**

3. Please provide an electronic copy of the Site Plan (pdf format).

   Response: **Acknowledged. An electronic copy of the Site Plan has been included with the resubmittal.**

4. A separate review and permit is required for Underground Fire Mains connected to standpipes or sprinkler systems.

   Response: **Acknowledged. To be addressed at time of building permit as required.**

5. An approved water supply capable of supplying the required fire flow for fire protection (shall be) is identified to all premises upon which facilities, buildings, or portions of buildings which are to be constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1:18.4. See “Needed NFPA Fire Flow Calculator Spreadsheet”.

   Response: **Acknowledged. To be addressed at time of building permit as required.**

6. Fire hydrants (shall be) are provided for buildings other than detached one-and-two- family dwellings IAW both of the following 1) The maximum distance to a fire hydrant from the closest point in the building shall not exceed 400 feet. 2) The maximum distance between fire hydrants shall not exceed 500 feet. NFPA 1:18.5.3. Please provide fire flow calculations for hydrants.

   Response: **Acknowledged. To be addressed at time of building permit as required.**

7. Fire department connections shall be located on the street side of buildings and shall be located and arranged so that hose lines can be readily attached to the inlets without interference from any nearby objects, including buildings, fences, landscaping, or other fire department connections. The locations of connections shall be based upon the access requirement s of the fire department.

   Response: **Acknowledged. To be addressed at time of building permit as required.**

8. The distance allowed between the fire department connection and a fire hydrant shall be no

more than one hundred fifty (150) feet as a vehicle travels.

Response: Acknowledged. To be addressed at time of building permit as required.

9. Security gates must either be manned 24 hour/day or provide an access control key switch on the control panel to allow for Fire Department entry in an emergency. Security gates must maintain a clear width of 12 feet when open and provide a means to open the gates manually upon loss of power.

Response: Acknowledged. To be addressed at time of building permit as required.

If you have any questions or would like to discuss any of the responses or resubmittal documents contained herein, please do not hesitate to contact me. Thank you and we look forward to continuing to work with the City of Fort Pierce on this project.

Sincerely,

WGI



Jerrod Purser, PLA
Project Manager

Planning Board - 2 PM **7. f.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Final Plat - Bent Creek Subdivision (Tract B-2)

LOCATION

Generally located near the northwest corner of Bent Creek Drive and Peterson Road.

RESPONSIBLE STAFF

Vennis Gilmore, Planner
Technical Review Committee

RECOMMENDATION

The Final Plat meets the above standards of the City's land development code and Comprehensive Plan; therefore, Staff recommends **APPROVAL** with the following three (3) Conditions of Approval:

1. Prior to final plat approval the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.
2. Prior to City Commission approval PRM's must be placed and verified by the reviewing surveyor; please contact Northstar Geomatics to schedule an inspection.
3. The applicant will supply two (2) Mylars for appropriate signatures and then the plat is recorded with St. Lucie County Clerk of Courts in accordance with Florida State Statute 177.111.

Attachments

Staff Report
Application & Supporting Documents
Plat Documents
Conceptual Exhibit
TRC Comments

Form Review

Form Started By: Vennis Gilmore Started On: 08/03/2020 08:26 PM
Final Approval Date: 08/04/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

TO:	Members of the City of Fort Pierce Planning Board
THROUGH:	Jennifer Hofmeister, AICP, LCAM, Planning Director
FROM:	Vennis Gilmore, Planner
RE:	**Application for Subdivision – Final Plat (Bent Creek Subdivision) A PORTION OF A PLANNED UNIT DEVELOPMENT LYING IN SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA, BEING A REPLAT OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.**
BOARD DATE:	August 11, 2020

STAFF REPORT

Owner & Applicant:	Lennar Homes, LLC 8895 North Military Trail, Suite 101-B Palm Beach Gardens, FL 33410
Applicant's Request:	Approval of a Final Plat
Location(s):	A PORTION OF A PLANNED UNIT DEVELOPMENT LYING IN SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA, BEING A REPLAT OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.
Parcel ID:	2407-700-0026-000-2
Future Land Use:	Medium Density Residential (RM)
Current Zoning:	Planned Development (PD)

Surrounding FLU:

North	East	South	West
COM (SLC)	GC/RM (FP)	RM	RM

Surrounding Zoning:

North	East	South	West
CG (SLC)	C-3/PD (FP)	PD	PD

Parcel Acreage: 23.32 Acres more or less

Staff Analysis:

Request

The applicant is requesting the review and approval of a Final Plat to subdivide approximately 23.32 acres of land for the completion of a portion of a Planned Unit Development lying in Section 7, Township 35 south, Range 40 east, City of Fort Pierce, St. Lucie County, Florida, being a replat of Tract "B-2", Bent Creek Master Plat, as recorded in Plat Book 47, Pages 9 through 14, Public Records of St. Lucie county, Florida.

The subject property has a Future Land Use of Medium Density Residential, RM, which intended for parcels that are best suited for multi-family residential uses ranging in density from 6.5 to 12 dwelling units per acre. This designation allows small-lot single-family units and multi-family dwellings including duplexes, condominiums, and townhomes. The proposed project is consistent with the Comprehensive Plan.

The subject property is zoned Planned Development, PD. The surrounding properties to the south and west are zoned PD, except for the parcels to the north zoned CG (St. Lucie County Zoning) and to the east zoned General Commercial, C-3 and Planned Development, PD. The surrounding properties are occupied by single-family homes and vacant land.

The subdivision comprises a total of one (1) parcel with approximately 23.32 acres and will be subdivided into a total of one hundred and twenty-one (121) separate parcels. Each lot will meet the minimum lot width, depth, and area requirements specified by original St. Lucie County Site Plan Approval of the Planned Development. Staff has reviewed the application in accordance with Chapter 121 - Subdivisions of the City Code.

Technical Review Committee

All affected departments have reviewed the proposed Final Plat with regards to the requirements of the City Code. Findings from the review by corresponding departments and the associated responses by the applicant are provided.

Planning Board Standards for Review

The City Planning Board shall consider whether the following standards have been met in its review of the application:

(1) Adequate vehicular access and traffic circulation to each lot in the proposed subdivision.

Currently the proposed roadways (Worlington Lane, Thurso Way, Troon Place, and Abernathy Way) are not paved. Adequate vehicular access and traffic circulation will be determined at the time of Development and Design Review.

(2) That adopted levels of service (LOS) standards in the comprehensive plan are not adversely impacted by the proposed plat. If such standards are negatively affected that appropriate mitigation plans as described in this chapter are also included in the proposed plat.

The City of Fort Pierce Engineering Department and Northstar Geomatics are currently reviewing this plat prior to City Commission to determine that the adopted Level of Service (LOS) standards in the comprehensive plan are not adversely impacted by this proposed plat.

(3) That other applicable comprehensive plan policies are addressed by the proposed plat.

The City of Fort Pierce Engineering Department and Northstar Geomatics are currently reviewing this plat prior to City Commission and will determine that all applicable comprehensive plan policies are addressed by the proposed plat.

Staff Recommendation:
The Final Plat meets the above standards of the City's land development code and Comprehensive Plan; therefore, Staff recommends **APPROVAL** with the following three (3) Conditions of Approval:

1. Prior to final plat approval the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.
2. Prior to City Commission approval PRM's must be placed and verified by the reviewing surveyor; please contact Northstar Geomatics to schedule an inspection.
3. The applicant will supply two (2) Mylars for appropriate signatures and then the plat is recorded with St. Lucie County Clerk of Courts in accordance with Florida State Statute 177.111.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

RECEIVED
OCT 10 2019
CITY OF FORT PIERCE
PLANNING & ZONING

Subdivision

Property address or Location 839 Bent Creek Dr. Fort Pierce, FL 34947

Parcel ID #(s) 2407-700-0026-000-2

Project description Bent Creek Tract B-2

Lennar Homes, Inc
Property Owner(s)
8895 N. Military Trail, Suite 101-B
Street Address
Palm Beach Gardens, FL 33410
City State Zip

Phone Number

Email Address

Applicant/Representative, Title, Company

Street Address

City State Zip

Phone Number

Email Address

Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein.

Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 9 day of OCTOBER, 20 19, by Valerie McChesney who is personally known to me or has produced _____ as identification.

Signature of Notary (seal)

TRUDY MOORE-WALKER
MY COMMISSION EXPIRES
NOVEMBER 18, 2020
#GG 046373
Notary Public Underwriters
NOTARY PUBLIC, STATE OF FLORIDA

INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date _____
Intake Planner _____
Planner Assigned _____
Approved By _____ Date _____
Comments _____

Fees _____ Control # _____ B. Permit # _____

Intake Date Stamp

☐ SUBDIVISION: PRELIMINARY PLAT

Please submit one (1) original and thirteen (13) hard copies and one (1) CD of the following:

- ☐ Preliminary Plat prepared by a surveyor registered in the State of Florida meeting the requirements of Sections 18-5, & 18-10 (a) (1-3) & (c)
- ☐ A copy of the deed
- ☐ Signed and sealed survey
- ☐ Concurrency application, complete
- ☐ Complete, notarized application

☐ SUBDIVISION: INFRASTRUCTURE PLAN REVIEW

Please submit one (1) original and four (4) hard copies and one (1) CD of the following, stamped by a state of Florida registered engineer meeting the requirements of 18-10 (a) (4) :

- ☐ Street construction plans
- ☐ Electric Infrastructure plans
- ☐ Water & Sewer system construction plans
- ☐ Gas Infrastructure plans
- ☐ Stormwater Retention plans
- ☐ Complete, notarized application

☑ SUBDIVISION: FINAL PLAT

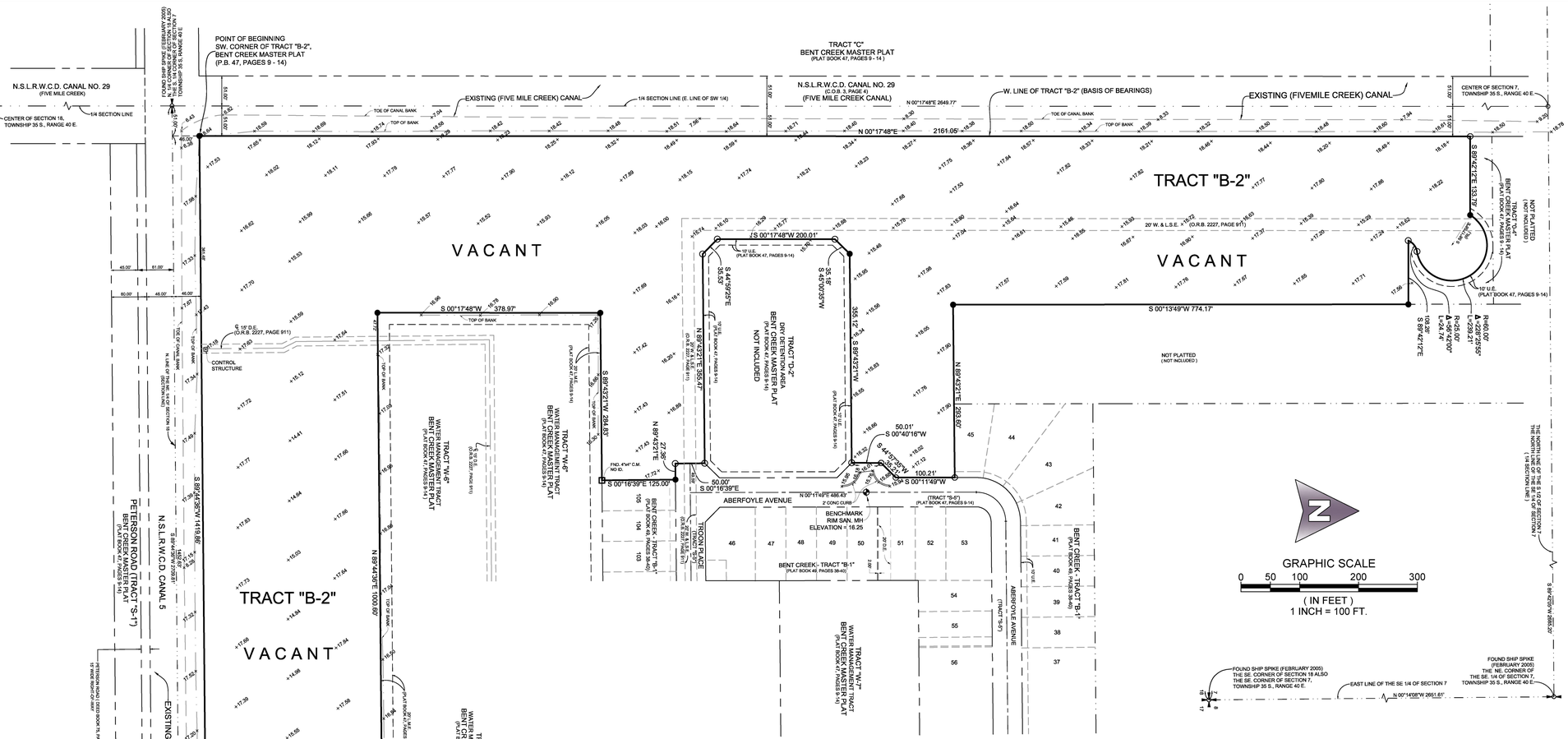
Please submit one (1) original and thirteen (13) hard copies and one (1) CD of the following:

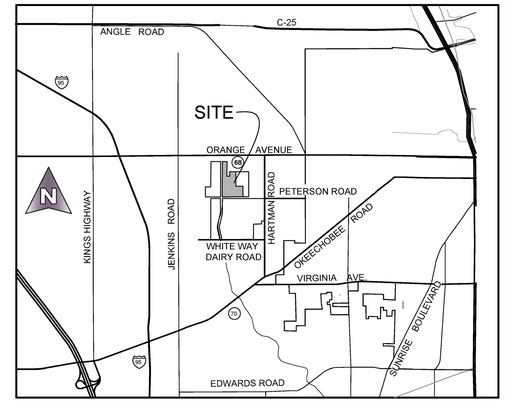
- ☑ A copy of the deed
- ☐ Signed and sealed survey
- ☐ Final Plat stamped by a state of Florida registered surveyor meeting the requirements of 18-5, & 18-10 (b & c):
- ☑ Complete, notarized application

☐ SUBDIVISION: MINOR REPLAT

Please submit one (1) original and thirteen (13) hard copies and one (1) CD of the following:

- ☐ A copy of the deed
- ☐ As-built survey of original parcel stamped by a registered surveyor in the State of Florida
- ☐ Scaled drawing, stamped by a registered surveyor in the State of Florida, of surveyed parcel indicating
  - o proposed lots, including acreage, square footage, & dimensions.
  - o any & all easements, rights-of-way, or similar instruments found on or adjacent to the subject property
- ☐ Complete, notarized application





LOCATION MAP
NOT TO SCALE

LEGEND

R	=	RADIUS
L	=	ARC LENGTH
Δ	=	CURVE CENTRAL ANGLE
R/W	=	RIGHT-OF-WAY
L.M.E.	=	LAKE MAINTENANCE EASEMENT
U.E.	=	UTILITY EASEMENT
D.E.	=	DRAINAGE EASEMENT
W.& L.S.E.	=	WATER AND LIFT STATION EASEMENT
C.O.B.	=	CHANCERY ORDER BOOK
P.B.	=	PLAT BOOK
O.R.B.	=	OFFICIAL RECORD BOOK
C.	=	CALCULATED
M.	=	MEASURED
C.& M.	=	CALCULATED AND MEASURED
I.R.C.	=	IRON ROD AND CAP
I.R.	=	IRON ROD
SAN. MH	=	SANITARY MANHOLE
ID.	=	IDENTIFICATION
C.M.	=	CONCRETE MONUMENT
	=	BENCHMARK
℄	=	CENTERLINE
NGVD 29	=	NATIONAL GEODETIC VERTICAL DATUM OF 1929
	=	FOUND 4"x4" C.M. WITH ALUMINUM DISC STAMPED "PRM LB 2438"
	=	SET 1/2" I.R.C. STAMPED LB 2438
	=	FD. MAG NAIL AND BRASS WASHER STAMPED LB 4396
	=	FD. 1/2" I.R.C. STAMPED LB 4396
	=	FD. 1/2" I.R.C. (NO ID.)
	=	SECTION CORNER (NOT FOUND)
	=	1/4 SECTION CORNER (NOT FOUND)
17.65 x 17.65	=	EXISTING ELEVATIONS (NGVD 29)

LEGAL DESCRIPTION
(TRACT "B-2")

A PARCEL OF LAND BEING ALL OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, INCLUSIVE, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT "B-2"; THENCE NORTH 00°17'48" EAST ALONG THE WEST LINE OF SAID TRACT "B-2", A DISTANCE OF 2161.05 FEET; THENCE SOUTH 89°42'12" EAST, A DISTANCE OF 133.79 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 60.00 FEET AND WHOSE CENTER POINT BEARS SOUTH 58°17'58" EAST, FROM SAID POINT; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 228°25'55", A DISTANCE OF 239.21 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 25.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 56°42'00", A DISTANCE OF 24.74 FEET TO A POINT OF NON-TANGENCY; THENCE SOUTH 89°42'12" EAST, A DISTANCE OF 108.28 FEET (THE PRECEDING FOUR COURSES BEING COINCIDENT WITH THE NORTHERLY BOUNDARIES OF SAID TRACT "B-2") TO A POINT ON THE EAST BOUNDARY OF SAID TRACT "B-2"; THENCE SOUTH 00°13'49" WEST, A DISTANCE OF 774.17 FEET; THENCE NORTH 89°43'21" EAST, A DISTANCE OF 293.60 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF ABERFOYLE AVENUE (TRACT "S-5"), AS SHOWN ON SAID BENT CREEK MASTER PLAT; THENCE SOUTH 00°11'49" WEST, A DISTANCE OF 100.21 FEET; THENCE SOUTH 44°57'35" WEST, A DISTANCE OF 35.21 FEET; THENCE SOUTH 00°40'16" WEST, A DISTANCE OF 50.01 FEET (THE PRECEDING THREE COURSES BEING COINCIDENT WITH SAID WEST RIGHT-OF-WAY LINE OF ABERFOYLE AVENUE) TO A POINT ON THE NORTH LINE OF TRACT "D-2" AS SHOWN ON SAID BENT CREEK MASTER PLAT; THENCE SOUTH 89°43'21" WEST ALONG SAID NORTH LINE OF TRACT "D-2", A DISTANCE OF 355.12 FEET; THENCE SOUTH 45°00'35" WEST ALONG THE NORTHWEST LINE OF SAID TRACT "D-2", A DISTANCE OF 35.18 FEET; THENCE SOUTH 00°17'48" WEST ALONG THE WEST LINE OF SAID TRACT "D-2", A DISTANCE OF 200.01 FEET; THENCE SOUTH 44°59'25" EAST ALONG THE SOUTHWEST LINE OF SAID TRACT "D-2", A DISTANCE OF 35.53 FEET; THENCE NORTH 89°43'21" EAST ALONG THE SOUTH LINE OF SAID TRACT "D-2", A DISTANCE OF 355.47 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF SAID ABERFOYLE AVENUE (TRACT "S-5") AND TROON PLACE (TRACT "S-5"), AS SHOWN ON SAID BENT CREEK MASTER PLAT; THENCE SOUTH 00°16'39" EAST ALONG SAID WEST RIGHT-OF-WAY LINE OF ABERFOYLE AVENUE (TRACT "S-5") AND TROON PLACE (TRACT "S-5"), A DISTANCE OF 50.00 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF SAID ABERFOYLE AVENUE (TRACT "S-5") AND TROON PLACE (TRACT "S-5"); THENCE NORTH 89°43'21" EAST ALONG THE SOUTH LINE OF SAID ABERFOYLE AVENUE (TRACT "S-5") AND TROON PLACE (TRACT "S-5"), A DISTANCE OF 27.36 FEET TO A POINT ON THE WEST LINE OF LOT 105, BENT CREEK - TRACT "B-1" AS RECORDED IN PLAT BOOK 49, PAGES 38 THROUGH 40, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE SOUTH 00°16'39" EAST ALONG SAID WEST LINE OF LOT 105, A DISTANCE OF 125.00 FEET TO A POINT ON THE NORTH LINE OF TRACT "W-6" AS SHOWN ON SAID BENT CREEK MASTER PLAT; THENCE SOUTH 89°43'21" WEST ALONG SAID NORTH LINE OF TRACT "W-6", A DISTANCE OF 284.83 FEET; THENCE SOUTH 00°17'48" WEST ALONG THE WEST LINE OF SAID TRACT "W-6", A DISTANCE OF 378.97 FEET; THENCE NORTH 89°44'36" EAST ALONG THE SOUTH LINE OF SAID TRACT "W-6", A DISTANCE OF 1000.60 FEET TO A POINT ON THE WEST LINE OF LOT 83 AS SHOWN ON SAID PLAT OF BENT CREEK - TRACT "B-1"; THENCE SOUTH 00°02'10" EAST ALONG THE WEST LINE OF SAID LOT 83 AND THE WEST LINE OF LOT 82 AS SHOWN ON SAID PLAT OF BENT CREEK - TRACT "B-1", A DISTANCE OF 125.00 FEET; THENCE NORTH 89°44'36" EAST ALONG THE SOUTH LINE OF SAID LOT 82, A DISTANCE OF 92.21 FEET TO A POINT ON THE WEST LINE OF BENT CREEK DRIVE (TRACT "S-5") AS SHOWN ON SAID PLAT OF BENT CREEK - TRACT "B-1"; THENCE SOUTH 00°15'24" EAST, A DISTANCE OF 50.00 FEET; THENCE SOUTH 45°08'47" EAST, A DISTANCE OF 35.42 FEET; THENCE SOUTH 00°02'10" EAST, A DISTANCE OF 99.90 FEET (THE PRECEDING THREE COURSES BEING COINCIDENT WITH THE WEST RIGHT-OF-WAY LINE OF SAID BENT CREEK DRIVE) TO A POINT ON THE SOUTH LINE OF SAID TRACT "B-2"; THENCE SOUTH 89°44'36" WEST ALONG SAID SOUTH LINE OF TRACT "B-2", A DISTANCE OF 1419.86 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 23.32 ACRES, MORE OR LESS.

SURVEYOR'S NOTES :

1. NO SEARCH OF THE PUBLIC RECORDS WAS MADE BY THIS OFFICE.
2. BEARINGS AS SHOWN HEREON ARE BASED UPON A PLATTED BEARING OF NORTH 00°17'48" EAST ALONG THE WEST LINE OF TRACT "B-2" OF BENT CREEK MASTER PLAT AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, INCLUSIVE, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA AND ALL OTHER BEARINGS ARE RELATIVE THERETO.
3. ELEVATIONS SHOWN HEREON ARE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
4. SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "AE" AND FLOODWAY ZONE "AE" (FIVEMILE CREEK) PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP NUMBER 12111C0178J, MAP REVISED: FEBRUARY 16, 2012.
5. THE BOUNDARY AND TOPOGRAPHIC SURVEY WAS PREPARED IN ACCORDANCE WITH THE STANDARD OF PRACTICE AS ADOPTED BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS BY RULE 5J-17.050-052, FLORIDA ADMINISTRATIVE CODE PURSUANT TO CHAPTER 472-027 FLORIDA STATUTES.
6. ALL BOUNDARY DIMENSIONS ARE PER BENT CREEK MASTER PLAT (P.B. 47, PAGE 9) AND MEASURED UNLESS OTHERWISE SHOWN.

Craig S Pusey

Digitally signed by Craig S Pusey
DN: c=US, o=MICHAEL B SCHORAH AND ASSOCIATES INC, ou=MICHAEL B SCHORAH AND ASSOCIATES INC, cn=Craig S Pusey, 0.9.2342.19200300.100.1.1=A01098 0000001611F6FF27D00003D51
Date: 2019.07.31 08:22:18 -04'00'

CERTIFY TO: LENNAR HOMES, INC.

DATE, LAST FIELD WORK: 7/3/2019

DIGITALLY SIGN / SEALED 7/31/19

SIGNATURE DATE : _____

CRAIG S. PUSEY ,
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5019

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND RAISED SEAL OF THE SURVEYOR ABOVE.

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 Forest Hill Boulevard, Suite 206
West Palm Beach, Florida 33406
Phone (561) 968-0080 Fax. (561) 642-9726

FIELD P.M.	FIELD BOOK ELECT	SCALE 1" = 100'	SHEET NO. 1
CHECKED C.S.P.	PAGE		
DRAWN L.B.	CADD FILE 1749 BDY-TOPO_ B2	DATE JULY, 2019	OF 1

NO	BY	DATE	REVISIONS

BOUNDARY AND TOPOGRAPHIC SURVEY
OF TRACT "B-2"
BENT CREEK MASTER PLAT

LB # 2438

FILE NO. 1749

JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4473600 OR BOOK 4172 PAGE 2704, Recorded 08/24/2018 10:13:39 AM Doc Tax: $59444.00

This instrument prepared by:
Mark Loterstein, Esq.
North American Title Company
760 NW 107 Avenue, Suite 400
Miami, Florida 33172

Our File No. 11657-18-01102

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED (this "Deed") is made as of the 23rd day of August, 2018 between **MS RIALTO BENT CREEK FL, LLC, a Delaware limited liability company**, having its principal office at 700 NW 107th Avenue, 4th Floor, Miami, FL 33172 (the "Grantor"), and **LENNAR HOMES, LLC, a Florida limited liability company**, whose address is 8895 N. Military Trail , Palm Beach Gardens, FL 33410 (the "Grantee").

WITNESSETH, that Grantor, for and in consideration of the sum of Ten Dollars ($10.00), to Grantor in hand paid by Grantee, the receipt whereof is hereby acknowledged, by these presents does grant, bargain and sell to Grantee, and Grantee's heirs, successors and assigns forever, all the right, title, interest, claim and demand that Grantor have or may have in and to the following described real property (the "Property") located and situtate in the County of St Lucie and State of Florida, to wit:

See **Exhibit "A"** attached hereto and made a part hereof

SUBJECT TO:

1. Taxes for the year 2018 and subsequent years.
2. Existing zoning ordinances and other governmental regulations.
3. Covenants, conditions, easements, limitations and restrictions of record, but this shall not operate to reimpose same.

and Grantor does hereby warrant, and will defend, the title to the Property hereby conveyed, subject as aforesaid, against the lawful claims of all persons claiming by, through or under Grantor, but none other.

"Grantor" and "Grantee" are used herein in the singular or the plural, as the context may require.

This Instrument prepared by:
Gerald L. Knight, Esquire
Holland & Knight
One East Broward Blvd., 13th Floor
Fort Lauderdale, Florida 33301

Folio No.:

EDWIN M. FRY, Jr., CLERK OF THE CIRCUIT COURT
SAINT LUCIE COUNTY
FILE # 2612131 04/28/2005 at 01:22 PM
OR BOOK 2227 PAGE 890 - 894 Doc Type: DEED
RECORDING: $44.00
D DOC STAMP COLLECTION: $1400.00

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED made the 31st day of March, 2005, by **LENNAR HOMES, INC., a Florida corporation**, whose post office address is 1013 N. State Road 7, Royal Palm Beach, FL 33411 ("Grantor"), to **SMIGIEL PARTNERS IX LTD., a Florida limited partnership,** whose post office address is P.O. Box 540669, Lake Worth, FL 33467 ("Grantee") (whenever used hereunder the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations):

WITNESSETH, that Grantor, for and in consideration of the sum of Ten ($10.00) Dollars and other valuable considerations to Grantor in hand paid by Grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to Grantee, and Grantee's heirs and assigns forever, the following described land, situate, lying and being in Broward County, Florida, to-wit:

SEE EXHIBIT "A'" ATTACHED HERETO AND MADE A PART HEREOF

SUBJECT TO: All matters on Exhibit "B" attached hereto and made a part hereof, none of which shall be reimposed.

and Grantor hereby covenants with Grantee that, except as noted above, Grantor will warrant and defend the same against the lawful claims of all persons claiming by, through or under Grantor, but against no other.

IN WITNESS WHEREOF, the Grantor has set Grantor's hand and seal the day and year first above written.

Signed, sealed and delivered
in our presence:

Rebecca Greene

Rebecca Greene

Name Printed:

Jennifer Griner

Jennifer Griner

Name Printed:

LENNAR HOMES, INC., a Florida corporation

By: _____

David M. Baselice, Vice President

STATE OF FLORIDA)
) ss.:
COUNTY OF PALM BEACH)

The foregoing instrument was sworn to and acknowledged before me this 31st day of March, 2005, by David M. Baselice, as Vice President of LENNAR HOMES, INC., a Florida corporation, on behalf of the corporation, who is personally known to me or has produced _____ as identification.

Rebecca Greene

Notary Public

Rebecca Greene
My Commission DD363414
Expires December 17 2008

EXHIBIT "A"

(PARCEL "E-1")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7; THENCE SOUTH 89°42'05" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 1342.60 FEET; THENCE SOUTH 00°01'50" WEST, A DISTANCE OF 662.67 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°01'50" WEST, A DISTANCE OF 386.42 FEET; THENCE SOUTH 89°42'05" WEST, A DISTANCE OF 336.87 FEET; THENCE NORTH 00°05'49" EAST, A DISTANCE OF 386.49 FEET; THENCE NORTH 89°42'43" EAST ALONG THE SOUTH LINE OF THE NORTH HALF (N 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 336.42 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

(PARCEL "E-2")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7; THENCE SOUTH 89°42'05" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 1678.25 FEET; THENCE SOUTH 00°05'49" WEST, A DISTANCE OF 662.61 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°05'49" WEST, A DISTANCE OF 386.49 FEET; THENCE SOUTH 89°42'05" WEST, A DISTANCE OF 505.30 FEET; THENCE NORTH 00°11'49" EAST, A DISTANCE OF 386.58 FEET; THENCE NORTH 89°42'43" EAST ALONG THE SOUTH LINE OF THE NORTH HALF (N 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 504.63 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

(PARCEL "E-3")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7; THENCE SOUTH 89°42'05" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 1006.95 FEET; THENCE SOUTH 00°02'10" EAST ALONG THE EAST LINE OF THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 662.72 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°02'10" EAST ALONG SAID LINE, A DISTANCE OF 386.36 FEET; THENCE SOUTH 89°42'05" WEST, A DISTANCE OF 336.86 FEET; THENCE NORTH 00°01'50" EAST ALONG THE WEST LINE OF THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTH EAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 386.42 FEET; THENCE NORTH 89°42'43" EAST ALONG THE SOUTH LINE OF THE NORTH HALF (N 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 336.42 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

EXHIBIT "B"

PERMITTED EXCEPTIONS

1. Taxes for the year 2005 and subsequent years.

2. Access to Parcels 1A, 2A and 3A is not insured.

3. The following matters as shown on the survey prepared by Landmark Surveying & Mapping dated August 27, 2003, under File No. 2605

   a. As to Parcel 1A: 1) Access is not insured: 2) Encroachments of 4' barbwire fence with wood and metal posts; 3) existing well; and 4) farm ditches throughout.

   b. As to Parcel 2A: 1) Access is not insured; 2) encroachments of barbwire fences; and 3) farm ditches throughout.

   c. As to Parcel 3A: 1) Access is not insured; 2) encroachments of barbwire fences; 3) existing well; and 4) farm ditches throughout.

2679035_v1

Instrument prepared by:
ALAN L. GABRIEL, Esq.
KATZ BARRON SQUITERO FAUST
100 NE 3rd Avenue, Suite 280
Fort Lauderdale, Florida 33301

Property Appraiser's Parcel
Identification No: 2407-311-0001-000/7
2407-421-0001-000/5
2407-422-0003-000/2

EDWIN M. FRY, Jr., CLERK OF THE CIRCUIT COURT
SAINT LUCIE COUNTY
FILE # 2612132 04/28/2005 at 01:22 PM
OR BOOK 2227 PAGE 895 - 901 Doc Type: DEED
RECORDING: $61.00
D DOC STAMP COLLECTION: $1400.00

SPECIAL WARRANTY DEED

THIS INDENTURE, made this 7th day of April, 2005, **BETWEEN** SMIGIEL PARTNERS IX, LTD., a Florida limited partnership, whose post office address is: P. O. Box 540669, Lake Worth, Florida 33467, Grantor and LENNAR HOMES, INC., a Florida corporation, whose post office address is: 700 NW 107 Avenue, 4th Floor, Miami, Florida 33172, Grantee.

WITNESSETH, That said Grantor for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged has granted, bargained and sold to the said Grantee, and Grantee's heirs, successors and assigns forever, the following described land, situate, lying and being in St. Lucie County, Florida, to-wit:

SEE EXHIBIT "A" ATTACHED HERETO.

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

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

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

IN WITNESS WHEREOF, Grantor has hereunto set its hand and seal the day and year first above written.

SMIGIEL PARTNERS IX, LTD., a Florida limited partnership

BY: GARY SMIGIEL, LC, a Florida limited liability company, its General Partner

By: _____
GARY SMIGIEL, its sole Manager

Witnesses:

_____
Print Name: Melanie Catalano

_____
Print Name: Mark Mecca

STATE OF FLORIDA :
COUNTY OF PALM BEACH :

I hereby certify that on this 7th day of April, 2005, before me, an officer duly qualified to administer oaths and take acknowledgments, personally appeared GARY SMIGIEL, as sole Manager of GARY SMIGIEL, L.C., a Florida limited liability company, the General Partner of SMIGIEL PARTNERS IX, LTD., a Florida limited partnership, on behalf of the limited liability company and the limited partnership, who is personally known to me or who has produced _____ as identification.

_____
Print Name: _____
My commission expires:

NOTARY PUBLIC STATE OF FLORIDA
Stephanie Winston
Commission # DD381110
Expires January 15 2009
Bonded Troy Fain - Insurance, Inc. 800-385-7019

THIS IS NOT A BOUNDARY SURVEY

LEGAL DESCRIPTION
(PARCEL "A-2")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 7; THENCE NORTH 89°42'05" EAST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 7, A DISTANCE OF 1998.58 FEET; THENCE SOUTH 00°15'12" WEST ALONG THE WEST LINE OF THE EAST HALF (E 1/2) OF THE EAST HALF (E 1/2) OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 7, A DISTANCE OF 406.65 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°15'12" WEST ALONG SAID LINE, A DISTANCE OF 255.50 FEET; THENCE NORTH 89°43'35" EAST, A DISTANCE OF 610.27 FEET; THENCE NORTH 00°17'48" EAST ALONG THE WEST RIGHT-OF-WAY LINE OF NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 29, A DISTANCE OF 255.50 FEET; THENCE SOUTH 89°43'35" WEST, A DISTANCE OF 610.47 FEET TO THE AFORE-MENTIONED POINT OF BEGINNING.

CONTAINING 3.58 ACRES, MORE OR LESS.

SURVEYOR'S NOTES

1. BEARINGS AS DESCRIBED AND SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, HAVING AN ASSUMED BEARING OF NORTH 89°42'05" EAST. ALL OTHER BEARINGS ARE RELATIVE THERETO.

2. NO SEARCH OF THE PUBLIC RECORDS WAS PERFORMED BY THIS OFFICE.

3. THE INFORMATION SHOWN HEREON IS ONLY A GRAPHIC SKETCH OF THE DESCRIPTION PROVIDED AND DOES NOT REPRESENT A BOUNDARY SURVEY. NO FIELD WORK, VISUAL FIELD ASSESSMENT OR BOUNDARY CORNER PLACEMENT HAS BEEN PROVIDED IN CONNECTION WITH THE SKETCH AND DESCRIPTION DEPICTED HEREON.

UNLESS THIS DOCUMENT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, THIS DRAWING MAP, SKETCH OR PLAT IS FOR INFORMATION PURPOSES ONLY AND IS NOT VALID.

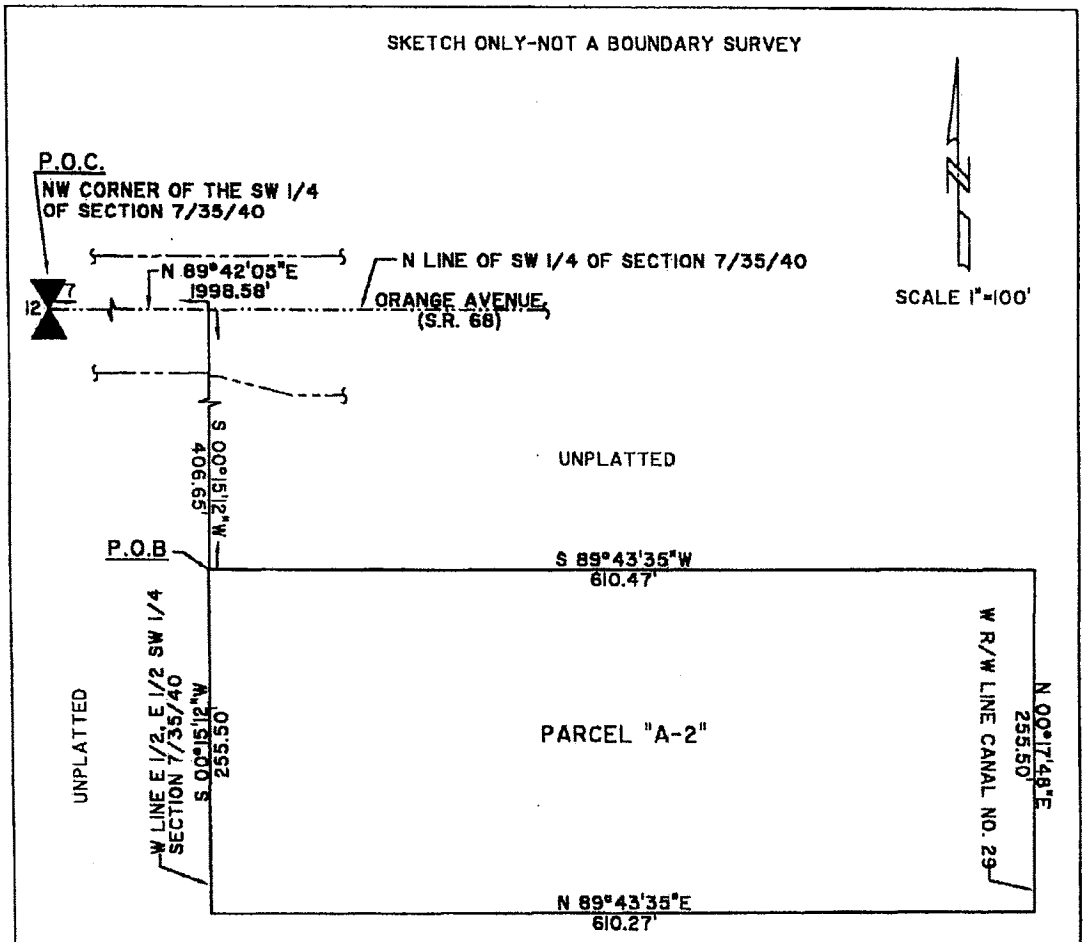
DATE: 3/2/04

CRAIG S. PUSEY
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5019

REV. DIMENSIONING 3/2/04 K.D.R.

Landmark Surveying & Mapping Inc.
1850 FOREST HILL BOULEVARD, SUITE 100
WEST PALM BEACH, FL 33406
PHONE : (561) 433-5405
LB #4398

FIELD: N/A	DRAWN: KDR	SCALE: N/A	DESCRIPTION AND SKETCH OF
BOOK: N/A	DATE: 1/19/04	PROJ. FILE 2605	PARCEL "A-2"
PAGE: N/A	CHECKED: CSP	CADDFILE 2605_SEC	(SMIGIEL TO LENNAR)
		SHEET NO 1 OF 2	JOB NO. 2605



Landmark Surveying & Mapping Inc. 1850 FOREST HILL BOULEVARD, SUITE 100 WEST PALM BEACH, FL 33406 PHONE : (561) 433-5405 LB #4398			DESCRIPTION AND SKETCH OF PARCEL "A-2" (SMIGIEL TO LENNAR)
FIELD: N/A	DRAWN: KDR	SCALE: 1"=100'	
BOOK: N/A	DATE: 1/19/04	PROJ. FILE 2805	
PAGE: N/A	CHECKED: CSP	CADDFILE 2805_SEC	SHEET NO. 2 OF 2 JOB NO. 2805

THIS IS NOT A BOUNDARY SURVEY

LEGAL DESCRIPTION
(PARCEL "B-2")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7; THENCE SOUTH 89°42'05" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 2634.20' FEET; THENCE SOUTH 00°17'48" WEST ALONG A PORTION OF THE EAST RIGHT-OF-WAY LINE OF THE NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 29, A DISTANCE OF 405.91 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°17'48" WEST ALONG SAID LINE, A DISTANCE OF 256.55 FEET; THENCE NORTH 89°42'43" EAST, A DISTANCE OF 285.42 FEET; THENCE NORTH 00°13'49" EAST, A DISTANCE OF 256.55 FEET; THENCE SOUTH 89°42'43" WEST, A DISTANCE OF 285.12 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

CONTAINING 1.68 ACRES, MORE OR LESS.

SURVEYOR'S NOTES

1. BEARINGS AS DESCRIBED AND SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, HAVING AN ASSUMED BEARING OF SOUTH 89°42'05" WEST. ALL OTHER BEARINGS ARE RELATIVE THERETO.

2. NO SEARCH OF THE PUBLIC RECORDS WAS PERFORMED BY THIS OFFICE.

3. THE INFORMATION SHOWN HEREON IS ONLY A GRAPHIC SKETCH OF THE DESCRIPTION PROVIDED AND DOES NOT REPRESENT A BOUNDARY SURVEY. NO FIELD WORK, VISUAL FIELD ASSESSMENT OR BOUNDARY CORNER PLACEMENT HAS BEEN PROVIDED IN CONNECTION WITH THE SKETCH AND DESCRIPTION DEPICTED HEREON.

UNLESS THIS DOCUMENT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, THIS DRAWING MAP, SKETCH OR PLAT IS FOR INFORMATION PURPOSES ONLY AND IS NOT VALID.

DATE: 1/20/04

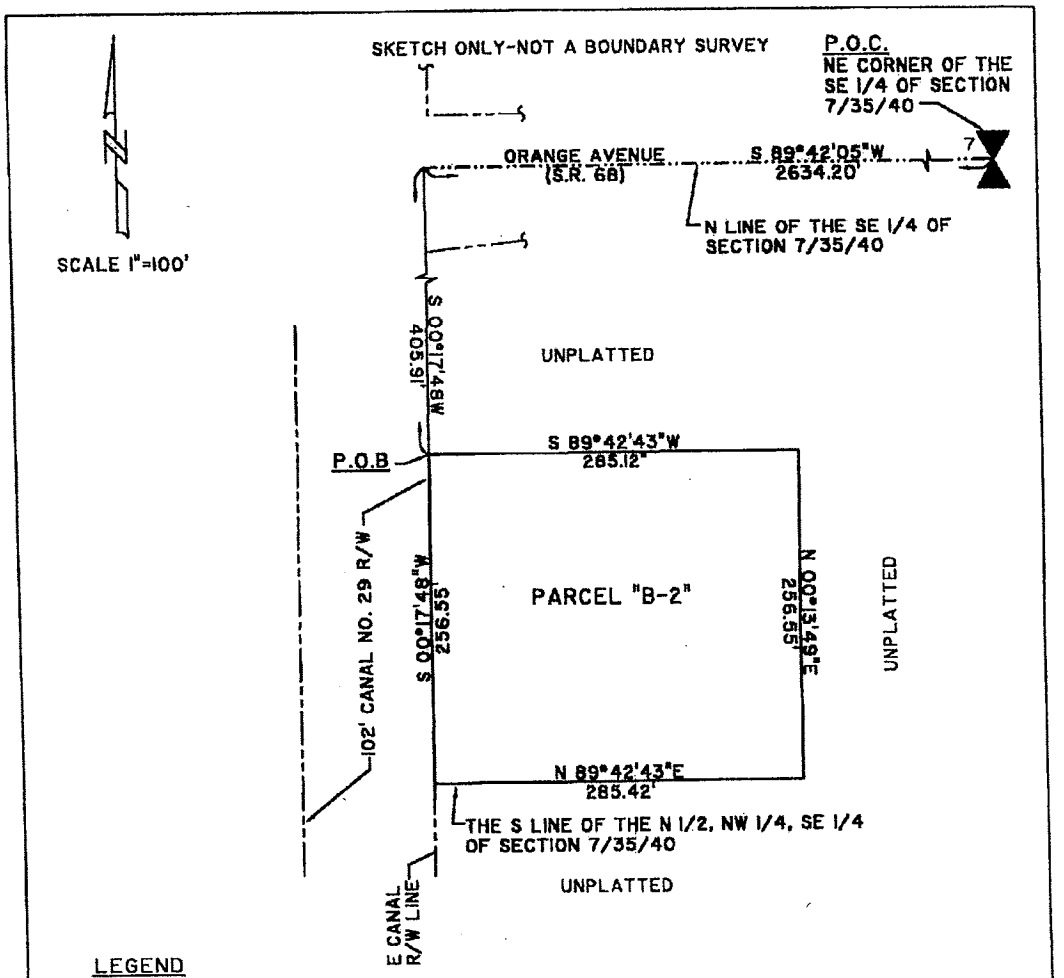
CRAIG S. PUSEY
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5019

Landmark Surveying & Mapping Inc.
1850 FOREST HILL BOULEVARD, SUITE 100
WEST PALM BEACH, FL 33406
PHONE : (561) 433-5405
LB #4386

FIELD:	N/A	DRAWN:	KDR	SCALE:	N/A
BOOK:	N/A	DATE:	1/19/04	PROJ. FILE	2805
PAGE:	N/A	CHECKED:	CSP	CADDFILE	2805_SEC

DESCRIPTION AND SKETCH OF
PARCEL "B-2"
(SMIGIEL TO LENNAR)

SHEET NO. 1 OF 2 | JOB NO. 2805



LEGEND

P.O.C. = POINT OF COMMENCEMENT
P.O.B. = POINT OF BEGINNING
N = NORTH
S = SOUTH
E = EAST
W = WEST
NE = NORTHEAST
NW = NORTHWEST
SW = SOUTHWEST
SE = SOUTHEAST
R/W = RIGHT-OF-WAY

Landmark Surveying & Mapping Inc.
1550 FOREST HILL BOULEVARD, SUITE 100
WEST PALM BEACH, FL 33406
PHONE : (561) 433-5405
LB #4388

FIELD: N/A	DRAWN: KDR	SCALE: 1"=100'	
BOOK: N/A	DATE: 1/19/04	PROJ. FILE 2605	
PAGE: N/A	CHECKED: CSP	CADDFILE 2605 SEC	SHEET NO. 2 OF 2

DESCRIPTION AND SKETCH OF
PARCEL "B-2"
(SMIGIEL TO LENNAR)

JOB NO 2605

THIS IS NOT A BOUNDARY SURVEY

LEGAL DESCRIPTION
(PARCEL "C-2")

A PARCEL OF LAND LYING IN A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7; THENCE SOUTH 89°42'05" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 1342.60 FEET; THENCE SOUTH 00°01'50" WEST ALONG THE WEST LINE OF THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 7, A DISTANCE OF 1049.09 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°01'50" WEST ALONG SAID LINE, A DISTANCE OF 276.24 FEET; THENCE SOUTH 89°43'21" WEST, A DISTANCE OF 337.19 FEET; THENCE NORTH 00°05'49" EAST, A DISTANCE OF 276.12 FEET; THENCE NORTH 89°42'05" EAST, A DISTANCE OF 336.87 FEET TO THE AFOREMENTIONED POINT OF BEGINNING.

CONTAINING 2.14 ACRES, MORE OR LESS.

SURVEYOR'S NOTES

1. BEARINGS AS DESCRIBED AND SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA, HAVING AN ASSUMED BEARING OF SOUTH 89°42'05" WEST. ALL OTHER BEARINGS ARE RELATIVE THERETO.

2. NO SEARCH OF THE PUBLIC RECORDS WAS PERFORMED BY THIS OFFICE.

3. THE INFORMATION SHOWN HEREON IS ONLY A GRAPHIC SKETCH OF THE DESCRIPTION PROVIDED AND DOES NOT REPRESENT A BOUNDARY SURVEY. NO FIELD WORK, VISUAL FIELD ASSESSMENT OR BOUNDARY CORNER PLACEMENT HAS BEEN PROVIDED IN CONNECTION WITH THE SKETCH AND DESCRIPTION DEPICTED HEREON.

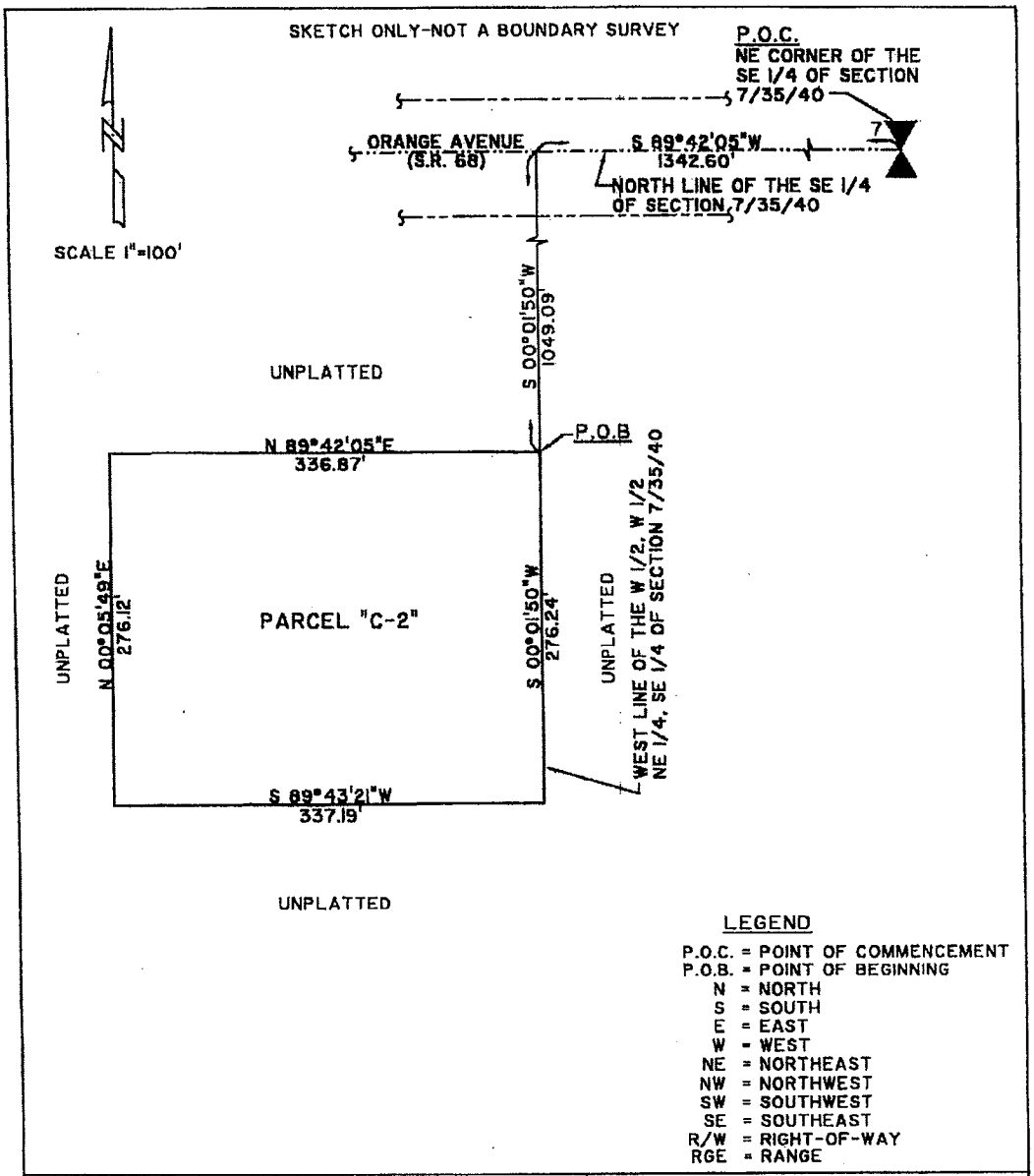
UNLESS THIS DOCUMENT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, THIS DRAWING MAP, SKETCH OR PLAT IS FOR INFORMATION PURPOSES ONLY AND IS NOT VALID.

DATE: 1/20/04

CRAIG S. PUSEY
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5019

Landmark Surveying & Mapping Inc.
1850 FOREST HILL BOULEVARD, SUITE 100
WEST PALM BEACH, FL 33406
PHONE : (561) 433-3405
LB #4305

FIELD:	N/A	DRAWN: KDR	SCALE: N/A	DESCRIPTION AND SKETCH OF	
BOOK:	N/A	DATE: 1/19/04	PROJ. FILE 2805	PARCEL "C-2" (SMIGIEL TO LENNAR)	
PAGE:	N/A	CHECKED: CSP	CADDFILE 2805_SEC	SHEET NO 1 OF 2	JOB NO 2805



Landmark Surveying & Mapping Inc.
1850 FOREST HILL BOULEVARD, SUITE 100
WEST PALM BEACH, FL 33406
PHONE : (561) 433-5405
LB #4388

FIELD:	N/A	DRAWN:	KDR	SCALE:	1"=100'
BOOK:	N/A	DATE:	1/19/04	PROJ. FILE	2805
PAGE:	N/A	CHECKED:	CSP	CADDFILE	2805_SEC

DESCRIPTION AND SKETCH OF

PARCEL "C-2"
(SMIGIEL TO LENNAR)

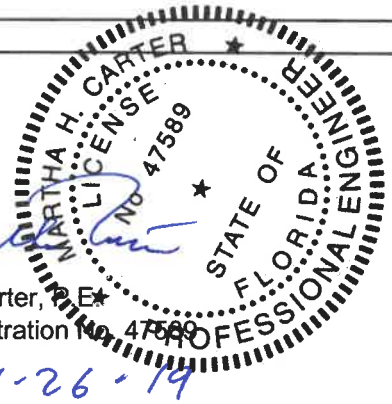
SHEET NO. 2 OF 2 | JOB NO. 2805

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY: MHC
SHEET NO: 1 OF 5
REVISED:

SUBJECT: OPINION OF COST - SUMMARY

ITEM	TOTAL
WATER	$179,130.00
SANITARY	$327,496.00
PAVING	$437,168.75
DRAINAGE	$483,860.00
LANDSCAPE	$74,371.65
IRRIGATION	$40,000.00
TOTAL	$1,542,026.40



Martha H. Carter, P.E.
Florida Registration No. 47589

Date: 11-26-19

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PUD PARCEL B-2**
JOB NO.: **1749**
BY: AMG **DATE:** **11/26/2019**
CHECKED BY MHC
SHEET NO: **2 OF 5**
REVISED:

SUBJECT: OPINION OF COST - WATER

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
8" PVC C-900 DR 18 Water Main	4,160	L.F.	$24.00	**$99,840.00**
8" Gate Valve	7	EACH	$1,600.00	**$11,200.00**
Fire Hydrant Assembly including 6" Gate Valve	4	EACH	$3,500.00	**$14,000.00**
Sample Point	7	EACH	$450.00	**$3,150.00**
Remove Plug and Connect to Existing Water Main	3	EACH	$1,000.00	**$3,000.00**
Single Service	7	EACH	$670.00	**$4,690.00**
Double Service	57	EACH	$750.00	**$42,750.00**
Plug with 2" Blowoff	1	EACH	$500.00	**$500.00**
Bends, fittings and OSHA trench safety are included in the Unit Prices for the pipe.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PUD PARCEL B-2**
JOB NO.: **1749**
BY: AMG **DATE:** **11/26/2019**
CHECKED BY: MHC
SHEET NO: **3 OF 5**
REVISED:

SUBJECT: OPINION OF COST - SANITARY

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
8" P.V.C. SDR 26 0' - 6' cut	1,952	L.F.	$30.00	**$58,560.00**
8" P.V.C. SDR 26 6' - 8' cut	949	L.F.	$32.00	**$30,368.00**
8" P.V.C. SDR 26 8' - 10' cut	536	L.F.	$36.00	**$19,296.00**
8" P.V.C. SDR 26 10' - 12' cut	218	L.F.	$40.00	**$8,720.00**
8" P.V.C. C-900 DR18 10' - 12' cut	292	L.F.	$43.00	**$12,556.00**
8" P.V.C. C-900 DR 18 12' - 14' cut	106	L.F.	$66.00	**$6,996.00**
4' Diameter Manhole 0' - 6' cut	11	EACH	$3,800.00	**$41,800.00**
4' Diameter Manhole 6' - 8' cut	2	EACH	$5,200.00	**$10,400.00**
4' Diameter Manhole 8' - 10' cut	1	EACH	$7,000.00	**$7,000.00**
4' Diameter Manhole 10' - 12' cut	1	EACH	$8,700.00	**$8,700.00**
Double Service w/cleanout	50	EACH	$2,000.00	**$100,000.00**
Single Service w/cleanout	21	EACH	$1,100.00	**$23,100.00**
OSHA trench safety is included in the Unit Prices for the pipe.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PUD PARCEL B-2**
JOB NO.: **1749**
BY: AMG **DATE:** **11/26/2019**
CHECKED BY: **MHC**
SHEET NO: **4 OF 5**
REVISED:

SUBJECT: OPINION OF COST - PAVING

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
3/4" Type S-III Asphaltic Concrete (First LIft)	10,130	S.Y.	$5.00	**$50,650.00**
3/4" Type S-III Asphaltic Concrete (Final LIft)	10,130	S.Y.	$5.00	**$50,650.00**
12" Thick Baserock	10,130	S.Y.	$15.00	**$151,950.00**
12" Thick Stabilized Subgrade (LBR 40) w/Tensar BX-110	12,910	S.Y.	$3.00	**$38,730.00**
Valley Gutter with 30" x 4" Thick Baserock Curb Pad	8,325	L.F.	$13.00	**$108,225.00**
Header Curb	20	L.F.	$12.00	**$240.00**
Stop/Street Sign and 24" White Stop Bar	7	EACH	$400.00	**$2,800.00**
Remove / Relocate Existing Case 2 Signs	9	EACH	$200.00	**$1,800.00**
4" Thick Concrete Walk (Common Areas Only)	590	S.Y.	$28.00	**$16,520.00**
Handicap Ramp with Detectable Warning	2	EACH	$500.00	**$1,000.00**
2' Strip of Sod Along Back of Curb	8,345	L.F.	$1.75	**$14,603.75**
Sidewalks adjacent to dwelling units to be constructed with home construction.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PUD PARCEL B-2**
JOB NO.: **1749**
BY: AMG **DATE:** **11/26/2019**
CHECKED BY MHC
SHEET NO: **5 OF 5**
REVISED:

SUBJECT: OPINION OF COST - DRAINAGE

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
15" RCP	1,169	L.F.	$30.00	**$35,070.00**
18" RCP	394	L.F.	$38.00	**$14,972.00**
24" RCP	898	L.F.	$50.00	**$44,900.00**
30" RCP	445	L.F.	$60.00	**$26,700.00**
36" RCP	770	L.F.	$80.00	**$61,600.00**
42" RCP	186	L.F.	$100.00	**$18,600.00**
Type PC Inlet - 4' Diameter	1	EACH	$3,800.00	**$3,800.00**
Type PC Inlet - 5' Diameter	5	EACH	$4,600.00	**$23,000.00**
Type PC Inlet - 6' Diameter	1	EACH	$5,000.00	**$5,000.00**
Type PV Inlet - 4' Diameter	18	EACH	$3,800.00	**$68,400.00**
Type PV Inlet - 5' Diameter	6	EACH	$4,600.00	**$27,600.00**
Type C Inlet	3	EACH	$2,930.00	**$8,790.00**
Concrete Collar	3	EACH	$3,500.00	**$10,500.00**
Regrade and Sod Lake Bank at Outfall Location	3	EACH	$5,000.00	**$15,000.00**
12" PVC	2,882	L.F.	$24.00	**$69,168.00**
Yard Drain	28	EACH	$1,500.00	**$42,000.00**
24" CALP	20	L.F.	$118.00	**$2,360.00**
30" CALP	20	L.F.	$145.00	**$2,900.00**
42" CALP	20	L.F.	$175.00	**$3,500.00**
OSHA trench safety is included in the Unit Prices for the pipe.				
			TOTAL	**$483,860.00**

lucido&associates

Bent Creek (Phase B2) - Estimate of Probable Landscape Material & Installation Cost

11/24/2019

Street Trees

TREES	Botanical	Common	Specs	Quantity	Unit Cost	Total
UD	Ulmus parvifolia 'Drake'	Drake Elm	CG, 14' HT x 7' SPR, 3' CT, SP	84	$800.00	$67,200.00
					Total:	$67,200.00

Detention Littorals 2 & 2A

SHRUBS	Botanical	Common	Specs	Quantity	Unit Cost	Total
NYO	Nymphaea odorata	Fragrant Waterlily	24"root, BR, clean, free of weeds	1603	$1.35	$2,164.05
SAG	Sagittaria spp.	Arrowhead	24"root, BR, clean, free of weeds	1254	$1.95	$2,445.30
POC	Pontederia cordata	Pickerelweed	24"root, BR, clean, free of weeds	1168	$1.35	$1,576.80
ELI	Eleocharis interstincta	Spikerush	BR, clean, free of weeds	730	$1.35	$985.50
					Total:	$7,171.65

Irrigation Allowance

Irrigation System	$ 40,000.00
TOTAL:	**$114,371.65**

Lucido & Associates 701 East Ocean Boulevard Stuart, Florida 34994
tel: 772.220.2100 fax: 772.223.0220 web: www.lucidodesign.com

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PETERSON ROAD
JOB NO.: 1756
BY: AMG DATE: 6/16/2020
CHECKED BY: MHC
SHEET NO: 1 OF 5
REVISED:

SUBJECT: OPINION OF COST - SUMMARY

ITEM	TOTAL
WATER	$98,286.00
PAVING AND GRADING	$649,145.00
DRAINAGE	$207,680.00
BRIDGE	$1,584,897.90
TOTAL	$2,540,008.90

Martha H. Carter, P.E.
Florida Registration No. 47589

Date:

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PETERSON ROAD**
JOB NO.: **1756**
BY: AMG **DATE:** **6/16/2020**
CHECKED BY **MHC**
SHEET NO: **2 OF 5**
REVISED:

SUBJECT: OPINION OF COST - WATER

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
12" D.I.P. Water Main	173	L.F.	$60.00	**$10,380.00**
12" PVC C-900 DR 18 Water Main	1,857	L.F.	$30.00	**$55,710.00**
8" PVC C-900 DR 18 Water Main	154	L.F.	$24.00	**$3,696.00**
8" Gate Valve	2	EACH	$1,600.00	**$3,200.00**
12" Gate Valve	3	EACH	$2,000.00	**$6,000.00**
Fire Hydrant Assembly including 6" Gate Valve	4	EACH	$3,500.00	**$14,000.00**
Sample Point	4	EACH	$450.00	**$1,800.00**
Remove Plug and Connect to Existing Water Main	2	EACH	$1,000.00	**$2,000.00**
Temporary Blowoff	1	EACH	$500.00	**$500.00**
Permanent Blowoff	1	EACH	$1,000.00	**$1,000.00**
Bends, fittings and OSHA trench safety are included in the Unit Prices for the pipe.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PETERSON ROAD**
JOB NO.: **1756**
BY: AMG **DATE:** **6/16/2020**
CHECKED BY: MHC
SHEET NO: **3 OF 5**
REVISED:

SUBJECT: OPINION OF COST - PAVING AND GRADING

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1 1/4" Type S-I Asphaltic Concrete (First LIft)	6,374	S.Y.	$6.50	**$41,431.00**
3/4" Type S-III Asphaltic Concrete (Final LIft)	6,374	S.Y.	$5.00	**$31,870.00**
12" Thick Baserock	7,667	S.Y.	$15.00	**$115,005.00**
36" Thick Stab. Subgrade (LBR 40) w/Tensar BX-1100	8,880	S.Y.	$12.00	**$106,560.00**
Miscellaneous Signs	35	EACH	$400.00	**$14,000.00**
Striping and RPMs	1	L.S.	$10,000.00	**$10,000.00**
4" Thick Concrete Walk	2,222	S.Y.	$40.00	**$88,880.00**
6" Thick Concrete Walk w/6"x 6" W1.4xW1.4 W.W.M.	89	S.Y.	$54.00	**$4,806.00**
Paver Brick on 1" Sand Bed	1,293	S.Y.	$110.00	**$142,230.00**
Type F Curb and Gutter w/4" Thick Baserock Curb Pad	3,776	L.F.	$12.50	**$47,200.00**
Type E Curb and Gutter w/4" Thick Baserock Curb Pad	536	L.F.	$13.00	**$6,968.00**
Handicap Ramps	8	EACH	$600.00	**$4,800.00**
Remove Case II Reflector Signs	5	EACH	$100.00	**$500.00**
Final Grading	1	L.S.	$10,000.00	**$10,000.00**
Bahia Sod	9,930	S.Y.	$1.50	**$14,895.00**
NPDES Compliance (Silt Fence, Turbidity Barriers, etc.)	1	L.S.	$10,000.00	**$10,000.00**
			TOTAL	**$649,145.00**

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PETERSON ROAD**
JOB NO.: **1756**
BY: AMG **DATE:** **6/16/2020**
CHECKED BY **MHC**
SHEET NO: **4 OF 5**
REVISED:

SUBJECT: OPINION OF COST - DRAINAGE

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
15" RCP	34	L.F.	$32.00	**$1,088.00**
18" RCP	1,150	L.F.	$39.00	**$44,850.00**
24" RCP	462	L.F.	$51.00	**$23,562.00**
84" RCP	110	L.F.	$300.00	**$33,000.00**
18" CALP	40	L.F.	$62.00	**$2,480.00**
24" CALP	20	L.F.	$70.00	**$1,400.00**
Type C Inlet - Construct on 84" RCP	1	EACH	$3,500.00	**$3,500.00**
Type PC Inlet - 4' Diameter	1	EACH	$3,800.00	**$3,800.00**
Type PG Inlet - 4' Diameter	11	EACH	$3,800.00	**$41,800.00**
Type PG Inlet - 5' Diameter	1	EACH	$4,600.00	**$4,600.00**
Concrete Collar	3	EACH	$3,500.00	**$10,500.00**
Regrade and Sod Lake Bank at Outfall Location	3	EACH	$2,000.00	**$6,000.00**
Straight Concrete Headwall (84")	1	EACH	$9,000.00	**$9,000.00**
Remove Existing Headwall and Connect to 84" RCP	1	EACH	$2,500.00	**$2,500.00**
Petraflex Slope Protection	245	S.Y.	$80.00	**$19,600.00**
OSHA trench safety is included in the Unit Prices for the pipe.				
			TOTAL	**$207,680.00**

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: **BENT CREEK PETERSON ROAD**
JOB NO.: **1756**
BY: AMG **DATE:** **6/16/2020**
CHECKED BY **MHC**
SHEET NO: **5 OF 5**
REVISED:

SUBJECT: OPINION OF COST - BRIDGE

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
Prestressed Deck w/Neoprene Pads and Post Tensioning	670	L.F.	$445.00	**$298,150.00**
Class II Concrete Closure Pours Between Deck Units	21	C.Y.	$775.00	**$16,275.00**
Closure Pour Reinforcing Steel	1,315	L.B.	$0.95	**$1,249.25**
Conc.Traffic Railing Barrier (32" Vertical Shape) incl. reinf.	260	L.F.	$165.00	**$42,900.00**
Aluminum Pedestrian Bullet Barrier Railing	140	L.F.	$75.00	**$10,500.00**
Class II Concrete for Pile Caps	127	C.Y.	$2,025.00	**$257,175.00**
Reinforcing Steel for Pile Caps	18,894	L.B.	$1.00	**$18,894.00**
Test Pile - 18" Square Prestressed Concrete Pile	140	L.F.	$178.00	**$24,920.00**
Production Pile - 18" Square Prestressed Concrete Pile	2,170	L.F.	$115.00	**$249,550.00**
Production Pile - 14" Square Prestressed Concrete Pile	490	L.F.	$88.00	**$43,120.00**
Class II Sidewalk and Curb Concrete	66	C.Y.	$675.00	**$44,550.00**
Reinforcing Steel for Sidewalk and Curb	3,247	L.B.	$0.95	**$3,084.65**
Slope Protection including shaping and filter fabric	8,800	S.F.	$25.00	**$220,000.00**
Guardrail with end treatments	250	L.F.	$189.00	**$47,250.00**
Approach Slab with reinforcing	2	EACH	$45,000.00	**$90,000.00**
Bridge Expansion Joints	2	EACH	$4,900.00	**$9,800.00**
Precast Conc. Sheet Piling w/filter fabric and post grouting	364	L.F.	$570.00	**$207,480.00**
			TOTAL	**$1,584,897.90**

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Lennar Homes, Inc.
8895 North Military Trail, Suite 101-B
Palm Beach Gardens, FL. 33410
Re: Final Plat – Bent Creek – Subdivision of Tract B-2

Dear Lennar Homes, Inc.,

The following are comments from the Planning Department's review of the application for a Final Plat in the PD, Planned Development Zone (Please Provide a Written Response and any revisions to all responsible Departments by August 26th to be placed on the September 10th Planning Board Agenda):

1) The Developer/Applicant is required to enter into an agreement with the City of Fort Pierce and post the appropriate bond regarding the completion of the outstanding site work.

If deemed necessary, please provide a written response to each comment in order to expedite the review of any subsequent submittals. Please contact me should you have any questions regarding the project at (772) 467-3741 or by e-mail: vgilmore@citypierce.com.

Sincerely,

Vennis Gilmore
Planner

THE SUNRISE CITY
FORT PIERCE
Florida
ENGINEERING
DEPARTMENT

TO : Vennis Gilmore, Planner

FROM : John R. Andrews, P.E., City Engineer

RE : Bent Creek Tract B-2 Final Plat
TRC No. 19-41000002

DATE : August 15, 2019

This is to advise you that we have completed the review of the following documents as received by this office on August 2, 2019:

- [x] Final Plat Application
- [ ] Test Reports & Related Documents
- [ ] Record Drawings
- [ ] Clearances from all applicable Local, State and Federal Agencies
- [ ] P/D Drawings
- [ ] Certificate of Completion
- [ ] Permits from applicable Local, State & Federal Agencies

Based on our reviews and appropriate site final inspection, we

- [ ] Recommend
- [x] Do Not Recommend

- [x] Final Plat Approval
- [ ] Building Permit
- [ ] C/O

Developer, Owner, Engineer, Contractor and other members of the Development Team must be aware, the above recommendation is based only on the construction requirements of the engineering plans and other engineering documentation approved by this department. The Development Team shall be responsible for the compliance with other City department requirements and all approved documents, as well as Local, State and Federal regulations. The development requirements for this project may necessitate additional construction requirements that are not subject to this department's review for approval.

- [x] See attached for engineering comments

100 NORTH US 1, FORT PIERCE, FLORIDA 34950 ▪ CITYOFFORTPIERCE.COM ▪ TEL: 772.467.3000 ▪ FAX: 772.460.6847

ENGINEERING COMMENTS:

1. On Sheet 1 of 5, under the "Dedication and Reservation" there is reference to this submittal being a replat of Tract B-2; however, the title of the plat identifies the plat as "Bent Creek Tract B-2" and does not indicate that the plat is a replat. Please verify whether this submittal is a replat and if so revise the plat title accordingly.
2. On Sheet 1 of 5, under the "Planning and Zoning Approval" heading to reference City of Fort Pierce as opposed to St. Lucie County (two places) and include the applicable section number of the land development code.
3. Prior to this department's recommendation of Final Plat approval, the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 18-12.
4. Future comments may be forthcoming upon the completion of the review by the City's reviewing surveyor, Northstar Geomatics. Please remit payment of the attached invoice directly to Northstar in order to initiate review.

JRA/TST/tst

100 NORTH US 1, FORT PIERCE, FLORIDA 34950 ▪ CITYOFFORTPIERCE.COM ▪ TEL: 772.467.3000 ▪ FAX: 772.460.6847

NORTHSTAR GEOMATICS

SURVEYING/MAPPING
GEOGRAPHIC INFORMATION SYSTEMS
ASSET INVENTORY

P.O. Box 2371
Stuart, FL 34995

Invoice

Date	Invoice #
8/2/2019	6398

Bill To:
LENNAR Homes, LLC 8895 N Military Trail Suite 101-B Palm Beach Gardens, Fl. 33410

NS Project Number	P.O. Number:	Terms
19-042		Due on Receipt

Item	Description	Hours/Qty	Rate	Amount
Lump Sum	BENT CREEK TRACT B-2 PLAT REVIEW AND FIELD PRM INSPECTION		1,200.00	1,200.00

Total	$1,200.00
Payments/Credits	$0.00
Balance Due	$1,200.00

Phone #	Fax:
772-781-6400	772-781-6462

THE SUNRISE CITY
FORT PIERCE
BUILDING DEPARTMENT Florida

BUILDING DEPARTMENT
TECHNICAL REVIEW COMMITTEE (TRC)
COMMENT FORM

Meeting Date: 8.15.19
Property Address: Final Plat – Subdivision of Tract B-2
Property Name: Bent Creek
Planner: Vennis Gilmore

Please be advised that the project may trigger the requirements indicated below:

☑ 1. Building Official or his representative has no comment at the time of this meeting, but reserves submission of comments upon completion of the official plan review.

☐ 2. Pre-construction meeting with the City's Building Department is requested.

☐ 3. Any construction will need to meet the requirements of the Florida Building Code 6th Edition.

☐ 4. Means of egress is required.

☐ 5. Means of ingress is required.

☐ 6. Must meet the following Accessibility requirements:

- ☐ Accessible route
- ☐ Handicapped parking spaces
- ☐ Means of egress

☐ 7. Change of Use required

- ☐ to include a signed and sealed Life Safety Plan
- ☐ to include a signed and sealed detailed comprehensive building plan.

☐ 8. Property exists in Special Flood Hazard Area. All Federal and State requirements shall be addressed.

☐ 9. Flood Development Permit required.

☐ 10. Building Permit required.

☐ 11. Signed and sealed construction drawings required.

☐ 12. Will need to meet the Fire Code.

☐ 13. Sprinkler system is required.

☐ 14. Smoke alarm system is required.

☐ 15. Other

Additional Comments/Requirements:

Building Official's or Representative's Signature _____ Date: 8/9/19

Fort Pierce Utilities Authority
Water/Wastewater Engineering
1701 South 37th Street
Fort Pierce, FL 34947
772.466.1600 x3473

Technical Review Committee meeting

August 15, 2019

TECHNICAL REVIEW PROJECT # 19-41000002 (Final Plat)

Final Plat – Bent Creek – Subdivision of Tract B-2

Comments

FPUA W/WW Engineering: Approved - Water and Wastewater Engineering has no objection to the final plat this subdivision.

FPUA Electric & Gas Engineering: The property is not in the FPUA electric service area. Located in FPL service area

NORTHSTAR GEOMATICS

SURVEYING/MAPPING • GIS • ASSET INVENTORY

July 26, 2020

Tracy Telle, Assistant City Engineer
City of Fort Pierce Engineering
100 North US 1
Ft. Pierce, FL 34954

RE: **Bent Creek- "Tract B-2" Plat -- Review #2** NS Project 19-042

Dear Ms. Telle:

I have reviewed the above referenced plat for conformance with Florida Statutes Chapter 177, Part 1. My review of this plat does not include verifying accuracy of legal descriptions, plat geometry, surveyor's opinion of plat boundary or mathematical calculations or acreages.

1. PRM's must be placed and verified by reviewing surveyor prior to City Commission approval. Platting surveyor or designee must be present at inspection. Please notify reviewing surveyor for PRM inspection scheduling.

Prepared By:

Gregory S. Fleming
Florida Surveyor and Mapper No. 4350

P.O. Box 2371, Stuart, Florida, 34995 Phone 772-781-6400 Fax 772-781-6462

THE SUNRISE CITY
FORT PIERCE
Florida
ENGINEERING
DEPARTMENT

TO : Vennis Gilmore, Planner

FROM : John R. Andrews, P.E., City Engineer

RE : Bent Creek Tract B-2 Final Plat
TRC No. 19-41000002

DATE : July 28, 2020

RECEIVED
JUL 30 2020
CITY OF FORT PIERCE
PLANNING & ZONING

This is to advise you that we have completed the review of the following documents as received by this office on July 09, 2020:

- [x] Final Plat Application
- [ ] Test Reports & Related Documents
- [ ] Record Drawings
- [ ] Clearances from all applicable Local, State and Federal Agencies
- [ ] P/D Drawings
- [ ] Certificate of Completion
- [ ] Permits from applicable Local, State & Federal Agencies

Based on our reviews and appropriate site final inspection, we

- [ ] Recommend w/ conditions
- [x] Do Not Recommend

- [x] Final Plat Approval
- [ ] Building Permit
- [ ] C/O

Developer, Owner, Engineer, Contractor and other members of the Development Team must be aware, the above recommendation is based only on the construction requirements of the engineering plans and other engineering documentation approved by this department. The Development Team shall be responsible for the compliance with other City department requirements and all approved documents, as well as Local, State and Federal regulations. The development requirements for this project may necessitate additional construction requirements that are not subject to this department's review for approval.

- [x] See attached for engineering conditions of approval

Q:\ENGINEERING\Site Development Projects\B\Bent Creek\Plat\Tract B-2\Submittal No. 3 - 070920\Plat Comments - 072820.docx

ENGINEERING COMMENTS:

1. Prior to final plat approval the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.
2. Prior to City Commission approval PRM's must be placed and verified by the reviewing surveyor; please contact Northstar Geomatics to schedule an inspection.

JRA/TST/vb

100 NORTH US 1, FORT PIERCE, FLORIDA 34950 ▪ CITYOFFORTPIERCE.COM ▪ TEL: 772.467.3000 ▪ FAX: 772.460.6847

NORTHSTAR GEOMATICS

SURVEYING/MAPPING • GIS • ASSET INVENTORY

July 26, 2020

City of Fort Pierce
JUL 27 2020
Engineering Dept.

Tracy Telle, Assistant City Engineer
City of Fort Pierce Engineering
100 North US 1
Ft. Pierce, FL 34954

RE: **Bent Creek- "Tract B-2" Plat -- Review #2** NS Project 19-042

Dear Ms. Telle:

I have reviewed the above referenced plat for conformance with Florida Statutes Chapter 177, Part 1. My review of this plat does not include verifying accuracy of legal descriptions, plat geometry, surveyor's opinion of plat boundary or mathematical calculations or acreages.

1. PRM's must be placed and verified by reviewing surveyor prior to City Commission approval. Platting surveyor or designee must be present at inspection. Please notify reviewing surveyor for PRM inspection scheduling.

Prepared By:

Gregory S. Fleming
Florida Surveyor and Mapper No. 4350

P.O. Box 2371, Stuart, Florida, 34995 Phone 772-781-6400 Fax 772-781-6462

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

Subject: Bent Creek Final Plat – Tract B-2 – TRC Comments as of 8.4.20

City of Fort Pierce Planning Department

1. Prior to final plat approval the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.
2. Prior to City Commission approval PRM's must be placed and verified by the reviewing surveyor; please contact Northstar Geomatics to schedule an inspection.
3. The applicant will supply two (2) Mylars for appropriate signatures and then the plat is recorded with St. Lucie County Clerk of Courts in accordance with Florida State Statute 177.111.

Fort Pierce Engineering Department

Do Not Recommend Final Plat Approval.

1. Prior to final plat approval the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.
2. Prior to City Commission approval PRM's must be placed and verified by the reviewing surveyor; please contact Northstar Geomatics to schedule an inspection.

Fort Pierce Utility Authority

FPUA W/WW Engineering: Approved - The Water and Wastewater Engineering Department has been working with the Engineers for the project on the utility plans for this parcel.

FPUA Electric & Gas Engineering: Outside FPUA Electric service area

Fort Pierce Building Department

No Comments

Fort Pierce Police Department

No Comments

City of Fort Pierce Arborist

No Comments

St. Lucie County Planning Department

No Comments

St. Lucie County PW/Engineering

1. No Comments

City Clerk Office

No Comments

St Lucie County Fire District

Site Plan Approved with Conditions:

1. A separate review and permit is required for Underground Fire Mains connected to standpipes or sprinkler systems.
2. An approved water supply capable of supplying the required fire flow for fire protection (shall be) is identified to all premises upon which facilities, buildings, or portions of buildings which are to be constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1:18.4. See "Needed NFPA Fire Flow Calculator Spreadsheet".
3. Fire Hydrants (shall be) are provided for detached one- and two-family dwellings IAW both of the following: 1) The maximum distance to a fire hydrant from the closet point on the building shall not exceed 600 feet. 2) The maximum distance between fire hydrants shall not exceed 800 feet. NFPA 1:18.5.2.
4. Security gates must either be manned 24 hour/day or provide an access control key switch on the control panel to allow for Fire Department entry in an emergency. Security gates must maintain a clear width of 12 feet when open and provide a means to open the gates manually upon loss of power.
5. The minimum acceptable cul-de-sac radius is 50 feet to the edge of pavement.
6. Per NFPA 1114 Chapter 9, Section 1.3. Prior to the final occupancy of any building, the permitted water supply for fire protection, including fire hydrants and fire suppression systems, shall be installed, tested, and acceptable to the AHJ (SLCFD).
7. Be advised: Dimensions of largest vehicle are as follows: 38 tons or 77k lbs, 47.5 ft. total length, 21.5 ft. wheel base, 10.5 ft. total width, 41.5 degree turning radius.

Lieutenant Wayne Boyer, M.S., FO, C.F.E.I.
Water Supply Officer
Community Risk Reduction Bureau
St. Lucie County Fire District
Office: 772-621-3322 Mobile: 772-631-8877
Email: WBoyer@slcfd.org

Code Enforcement

No Comments

School Board of St. Lucie County

No Comments

Florida Department of Transportation

No Comments

BENT CREEK - TRACT "B-2"

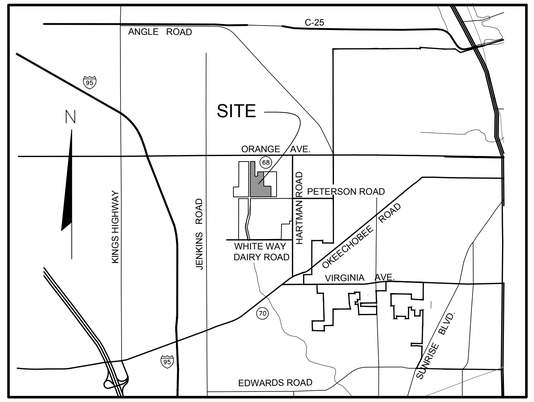
A PORTION OF A PLANNED UNIT DEVELOPMENT

LYING IN SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA, BEING A REPLAT OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

SHEET 1 OF 5

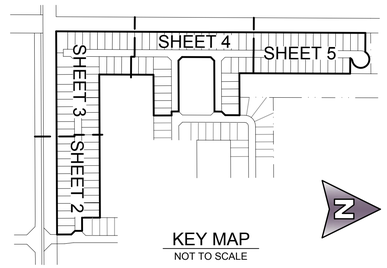
PLAT BOOK _____, PAGE _____

DOCKET NO. _____



LOCATION MAP

NOT TO SCALE



KEY MAP

NOT TO SCALE

DEDICATION AND RESERVATION

KNOW ALL MEN BY THESE PRESENTS THAT LENNAR HOMES, INC., A FLORIDA CORPORATION, OWNER OF THE LAND SHOWN HEREON AS BENT CREEK - TRACT "B-2", BEING A REPLAT OF TRACT "B-2", BENT CREEK MASTER PLAT, A PLANNED UNIT DEVELOPMENT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA AND LYING IN A PORTION OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

ALL OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 23.32 ACRES MORE OR LESS.

HAVE CAUSED THE SAME TO BE SURVEYED AND PLATTED AS SHOWN HEREON AND DO HEREBY DEDICATE AS FOLLOWS:

1. EASEMENTS

UTILITY EASEMENTS - THE UTILITY EASEMENTS, AS SHOWN HEREON, ARE HEREBY DEDICATED IN PERPETUITY FOR THE CONSTRUCTION AND MAINTENANCE OF UTILITY FACILITIES, INCLUDING CABLE TELEVISIONS SYSTEMS. THE INSTALLATION OF CABLE TELEVISION SYSTEMS SHALL NOT INTERFERE WITH THE CONSTRUCTION AND MAINTENANCE OF OTHER UTILITIES.

ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.

DRAINAGE EASEMENTS - THE DRAINAGE EASEMENTS, AS SHOWN HEREON, ARE HEREBY DEDICATED IN PERPETUITY FOR DRAINAGE PURPOSES TO THE BENT CREEK MASTER HOMEOWNERS ASSOCIATION, INC., ITS SUCCESSORS AND ASSIGNS, AND ARE THE PERPETUAL MAINTENANCE OBLIGATION OF SAID ASSOCIATION, WITHOUT RECOURSE TO THE CITY OF FORT PIERCE, FLORIDA.

ALL TRACTS FOR PRIVATE STREET PURPOSES, AND DRIVEWAY/PARKING TRACTS, AS SHOWN HEREON, ARE HEREBY SUBJECT TO AN OVERLYING NON-EXCLUSIVE EASEMENT DEDICATED IN PERPETUITY TO THE PUBLIC FOR THE INSTALLATION, OPERATION, MAINTENANCE, REPAIR, EXPANSION AND REPLACEMENT OF UTILITIES, BOTH PUBLIC AND PRIVATE, INCLUDING, BUT NOT LIMITED TO POTABLE WATER PIPELINES, RAW WATER PIPELINES, WASTEWATER PIPELINES, RECLAIMED WATER PIPELINES, ELECTRIC POWER LINES, TELECOMMUNICATION LINES, CABLE TELEVISION LINES, GAS LINES, AND RELATED APPURTENANCES. NO BUILDINGS, STRUCTURES, IMPROVEMENTS, TREES, WALLS OR FENCES SHALL BE INSTALLED WITHIN THESE TRACTS WITHOUT PRIOR WRITTEN APPROVAL OF THE FORT PIERCE UTILITIES AUTHORITY, ITS SUCCESSORS AND ASSIGNS.

2. STREETS

THE PRIVATE STREETS AS SHOWN HEREON, DENOTED AS TRACT "S-7", ARE HEREBY DEDICATED TO THE BENT CREEK MASTER HOMEOWNERS ASSOCIATION, INC., ITS SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF PROVIDING INGRESS-EGRESS, AND ARE THE PERPETUAL MAINTENANCE OBLIGATION OF SAID ASSOCIATION WITHOUT RECOURSE TO THE CITY OF FORT PIERCE, FLORIDA. SAID STREETS MAY ALSO BE USED FOR CONSTRUCTION AND MAINTENANCE OF UTILITIES INCLUDING WATER, SEWER, IRRIGATION, AND DRAINAGE LINES AND STRUCTURES. ALL PUBLIC AUTHORITIES SHALL HAVE THE RIGHT TO USE THE STREETS IN THE COURSE OF PERFORMING THEIR RESPECTIVE DUTIES.

IN WITNESS WHEREOF, THE UNDERSIGNED CORPORATION HAS CAUSED THIS CERTIFICATION TO BE EXECUTED IN ITS NAME, AND ITS CORPORATE SEAL TO BE HEREUNTO AFFIXED BY ITS VICE PRESIDENT AND AUTHORIZED AGENT, THIS _____ DAY OF _____, 2019.

BY: LENNAR HOMES, LLC,
A FLORIDA LIMITED LIABILITY COMPANY
ADDRESS: 8136 OKEECHOBEE BOULEVARD
WEST PALM BEACH, FLORIDA 33415
(PHONE NO. 561-433-4700)

ATTEST: _____
JEFFREY ALEXANDER,
AUTHORIZED AGENT

BY: _____
MICHAEL MEYERS,
VICE PRESIDENT

LENNAR HOMES, LLC

LENNAR HOMES LLC
NOTARY

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF PALM BEACH

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED MICHAEL MEYERS, VICE PRESIDENT AND JEFFREY ALEXANDER, AUTHORIZED AGENT OF LENNAR HOMES, INC., A FLORIDA CORPORATION, TO ME KNOWN TO BE THE INDIVIDUALS DESCRIBED IN AND WHO EXECUTED THE FOREGOING CERTIFICATE OF DEDICATION AND THEY DULY ACKNOWLEDGED BEFORE ME THAT THEY EXECUTED SAME, AS SUCH OFFICERS FOR AND IN BEHALF OF SAID CORPORATION.

WITNESS MY HAND AND OFFICIAL SEAL AT ROYAL PALM BEACH, PALM BEACH COUNTY, FLORIDA, THIS _____ DAY OF _____, 2019.

_____ _____
NOTARY PUBLIC, STATE OF FLORIDA AT LARGE PRINTED NAME

MY COMMISSION EXPIRES: _____

COMMISSION NO. _____

ACCEPTANCE OF DEDICATIONS OR RESERVATIONS

STATE OF FLORIDA
COUNTY OF ST. LUCIE

THE BENT CREEK MASTER HOMEOWNERS ASSOCIATION, INC., HEREBY ACCEPTS THE DEDICATIONS OR RESERVATIONS TO SAID ASSOCIATION AS STATED AND SHOWN HEREON, AND HEREBY ACCEPTS ITS MAINTENANCE OBLIGATIONS FOR SAME AS STATED HEREON. DATED THIS _____ DAY OF _____, 2019.

BENT CREEK MASTER HOMEOWNERS
ASSOCIATION. INC.,
A FLORIDA CORPORATION,
NOT FOR PROFIT

_____
WITNESS

BY: _____
SIMONE FOREMAN, PRESIDENT

_____
PRINTED NAME

_____
WITNESS

_____
PRINTED NAME

ACKNOWLEDGMENT

STATE OF FLORIDA
COUNTY OF ST. LUCIE

BEFORE ME PERSONALLY APPEARED SIMONE FOREMAN WHO IS PERSONALLY KNOWN TO ME, AND WHO EXECUTED THE FOREGOING INSTRUMENT AS PRESIDENT OF BENT CREEK MASTER HOMEOWNERS ASSOCIATION, INC., A NOT FOR PROFIT CORPORATION, AND SEVERALLY ACKNOWLEDGED TO AND BEFORE ME THAT SHE EXECUTED SUCH INSTRUMENT AS SUCH OFFICER OF SAID CORPORATION, AND THAT THE SEAL AFFIXED TO THE FOREGOING INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION AND THAT IT WAS AFFIXED TO SAID INSTRUMENT BY DUE AND REGULAR CORPORATE AUTHORITY, AND THAT SAID INSTRUMENT IS THE FREE ACT AND DEED OF SAID CORPORATION.

WITNESS MY HAND AND OFFICIAL SEAL THIS _____ DAY OF _____, 2019.

MY COMMISSION EXPIRES: _____ _____
NOTARY PUBLIC

COMMISSION NO. _____ _____
PRINTED NAME

TITLE CERTIFICATION

STATE OF FLORIDA
COUNTY OF PALM BEACH

WE NORTH AMERICAN TITLE CO. A TITLE INSURANCE COMPANY AS DULY LICENSED IN THE STATE OF FLORIDA, DO HEREBY CERTIFY THAT WE HAVE EXAMINED THE TITLE TO THE HEREON DESCRIBED PROPERTY; THAT WE FIND THE TITLE TO THE PROPERTY IS VESTED TO LENNAR HOMES, INC., A FLORIDA CORPORATION; THAT THE CURRENT TAXES HAVE BEEN PAID; THAT THERE ARE NO MORTGAGES AND THAT THERE ARE ENCUMBRANCES OF RECORD BUT THOSE ENCUMBRANCES DO NOT PROHIBIT THE CREATION OF THE SUBDIVISION DEPICTED BY THIS PLAT.

DATED: _____ _____
AMBARINA PEREZ, VICE PRESIDENT

BENT CREEK MASTER
HOMEOWNERS
ASSOCIATION, INC.

BENT CREEK MASTER
HOMEOWNERS
ASSOCIATION, INC.
NOTARY

SURVEYOR REVIEW CERTIFICATE

IT IS HEREBY CERTIFIED THAT THE UNDERSIGNED PROFESSIONAL SURVEYOR AND MAPPER, DULY LICENSED IN THE STATE OF FLORIDA HAS REVIEWED THIS PLAT FOR CONFORMITY WITH THE REGULATIONS OF CHAPTER 177, STATUTES.

THIS _____ DAY OF _____, 2019.

_____
GREGORY S. FLEMING
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA CERTIFICATE NO. 4350

PLANNING AND ZONING APPROVAL

IT IS HEREBY CERTIFIED THAT THIS PLAT MEETS THE MINIMUM LOT DIMENSION REQUIREMENTS OF THE P.U.D. ZONING DISTRICT, AS SET FORTH IN SECTION 18-9 OF THE CITY OF FORT PIERCE LAND DEVELOPMENT CODE.

THIS _____ DAY OF _____, 2019.

BY: _____
REBECA GUERRA
DIRECTOR OF PLANNING (INTERIM)
PLANNING AND DEVELOPMENT SERVICES
CITY OF FORT PIERCE, FLORIDA

CITY ATTORNEY

IT IS HEREBY CERTIFIED THAT THE FORGOING PLAT IS APPROVED AS TO FORM AND LEGAL SUFFICIENCY.

THIS _____ DAY OF _____, 2019.

BY: _____

PRINTED NAME: PETE SWEENEY
CITY ATTORNEY
CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA

CITY COMMISSION CERTIFICATE

STATE OF FLORIDA
COUNTY OF ST. LUCIE

PURSUANT TO THE PROVISIONS OF THE FORT PIERCE CITY COMMISSION THIS PLAT WAS GIVEN FINAL APPROVAL BY THE CITY COMMISSION AT A MEETING HELD ON _____, 2019.

FORT PIERCE CITY COMMISSION

BY: _____
LINDA COX
CITY CLERK

CLERK OF THE CIRCUIT COURT

STATE OF FLORIDA
COUNTY OF ST. LUCIE

I, JOSEPH E. SMITH, CLERK OF THE CIRCUIT COURT OF ST. LUCIE COUNTY, FLORIDA, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN EXAMINED AND THAT IT COMPLIES IN FORM WITH ALL THE REQUIREMENTS OF THE LAWS OF FLORIDA PERTAINING TO MAPS AND PLATS, AND THAT THIS PLAT HAS BEEN FILED OF RECORD IN PLAT BOOK ____ , PAGES _____ , OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, THIS _____ DAY OF _____ , 2019

_____ BY: _____
JOSEPH E. SMITH
CLERK OF THE CIRCUIT COURT
ST. LUCIE COUNTY, FLORIDA

AREA TABULATION

TRACT "S-7"	4.913 ACRES
LOTS 106 - 226	18.410 ACRES
TOTAL AREA	23.323 ACRES

CITY OF FORT PIERCE
CLERK

PROFESSIONAL SURVEYOR
AND MAPPER

SURVEYOR'S NOTES:

1. BUILDING SETBACK LINES SHALL BE REQUIRED BY ORDINANCES OF CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA.

2. THERE SHALL BE NO BUILDING OR ANY HABITABLE STRUCTURE PLACED ON DRAINAGE EASEMENTS OR UTILITY EASEMENTS.

3. THERE SHALL BE NO TREES OR SHRUBS PLACED ON UTILITY EASEMENTS WHICH ARE PROVIDED FOR WATER AND SEWER USE OR UPON DRAINAGE EASEMENTS.

4. LANDSCAPING ON OTHER UTILITY EASEMENTS SHALL BE ALLOWED ONLY AFTER CONSENT OF ALL UTILITY COMPANIES OCCUPYING SAME.

5. IN THOSE CASES WHERE EASEMENTS OF DIFFERENT TYPES CROSS OR OVERLAP, DRAINAGE EASEMENTS SHALL HAVE FIRST PRIORITY, UTILITY EASEMENTS SHALL HAVE SECOND PRIORITY AND ALL OTHER EASEMENTS SHALL BE SUBORDINATE TO THESE WITH THEIR PRIORITIES BEING DETERMINED BY THE USE OF RIGHTS GRANTED.

6.

P.C.P.	=	PERMANENT CONTROL POINT
P.R.M.	=	PERMANENT REFERENCE MONUMENT
C.M.	=	CONCRETE MONUMENT
O.R.B.	=	OFFICIAL RECORD BOOK
℄	=	CENTERLINE
U.E.	=	UTILITY EASEMENT
D.E.	=	DRAINAGE EASEMENT
R	=	RADIUS
L	=	ARC LENGTH
Δ	=	CURVE CENTRAL ANGLE
■	=	SET 1/2"x18" IRON ROD AND 2" DIAMETER ALUMINUM DISK, STAMPED "SCHORAH AND ASSOCIATES PRM LB # 2438"
□	=	FOUND 4"x 4" C.M. (NO IDENTIFICATION)
▣	=	SET MAG NAIL AND 1-1/4" BRASS WASHER STAMPED "PRM LB 2438"
●	=	SET 1/2"X18" IRON ROD WITH CAP STAMPED "PCP LB 2438"
L.M.E.	=	LAKE MAINTENANCE EASEMENT
L.M.A.E.	=	LAKE MAINTENANCE ACCESS EASEMENT
C.L.	=	CHORD LENGTH
C.B.	=	CHORD BEARING
L.S.E.	=	LIFT STATION EASEMENT
OA	=	OVERALL
RL	=	RADIAL LINE
A.E.	=	ACCESS EASEMENT
C.O.B.	=	CHANCERY ORDER BOOK
N.S.L.R.W.C.D.	=	NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT

7. ALL BEARINGS SHOWN HEREON ARE ASSUMED TO BE NON-RADIAL UNLESS OTHERWISE NOTED AS RADIAL (RL).

8. BEARINGS AS SHOWN HEREON ARE BASED UPON AN ASSUMED BEARING OF NORTH 89°42'05" EAST, ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, ST. LUCIE COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY MADE UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION AND THAT SAID SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT PERMANENT REFERENCE MONUMENTS HAVE BEEN SET AND THAT PERMANENT CONTROL POINTS AND MONUMENTS WILL BE SET UNDER THE GUARANTEES POSTED WITH THE CITY COUNCIL OF CITY OF FORT PIERCE FOR THE REQUIRED IMPROVEMENTS, AND FURTHER, THAT THE PLAT COMPLIES WITH ALL THE SURVEY REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AS AMENDED, AND IN ACCORDANCE WITH THE SURVEYING STANDARDS CONTAINED WITHIN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, SET FORTH BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS PURSUANT TO SECTION 472.027, FLORIDA STATUTES, AND ORDINANCES OF THE CITY OF FORT PIERCE, FLORIDA.

DATE: _____

_____
CRAIG S. PUSEY,
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA CERTIFICATE NO. 5019
MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD. SUITE 206
WEST PALM BEACH, FLORIDA 33406
LICENSED BUSINESS NUMBER 2438

NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

THIS INSTRUMENT WAS PREPARED BY LESLIE C. BISPOTT, P.S.M. UNDER THE SUPERVISION OF CRAIG S. PUSEY, P.S.M. OF MICHAEL B. SCHORAH AND ASSOCIATES, INC., 1850 FOREST HILL BOULEVARD., SUITE 206, WEST PALM BEACH, FLORIDA, 33406.

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FLORIDA 33406
EB# 2438 TEL. (561) 968-0080 FAX. (561) 642-9726 LB# 2438

BENT CREEK - TRACT "B-2"

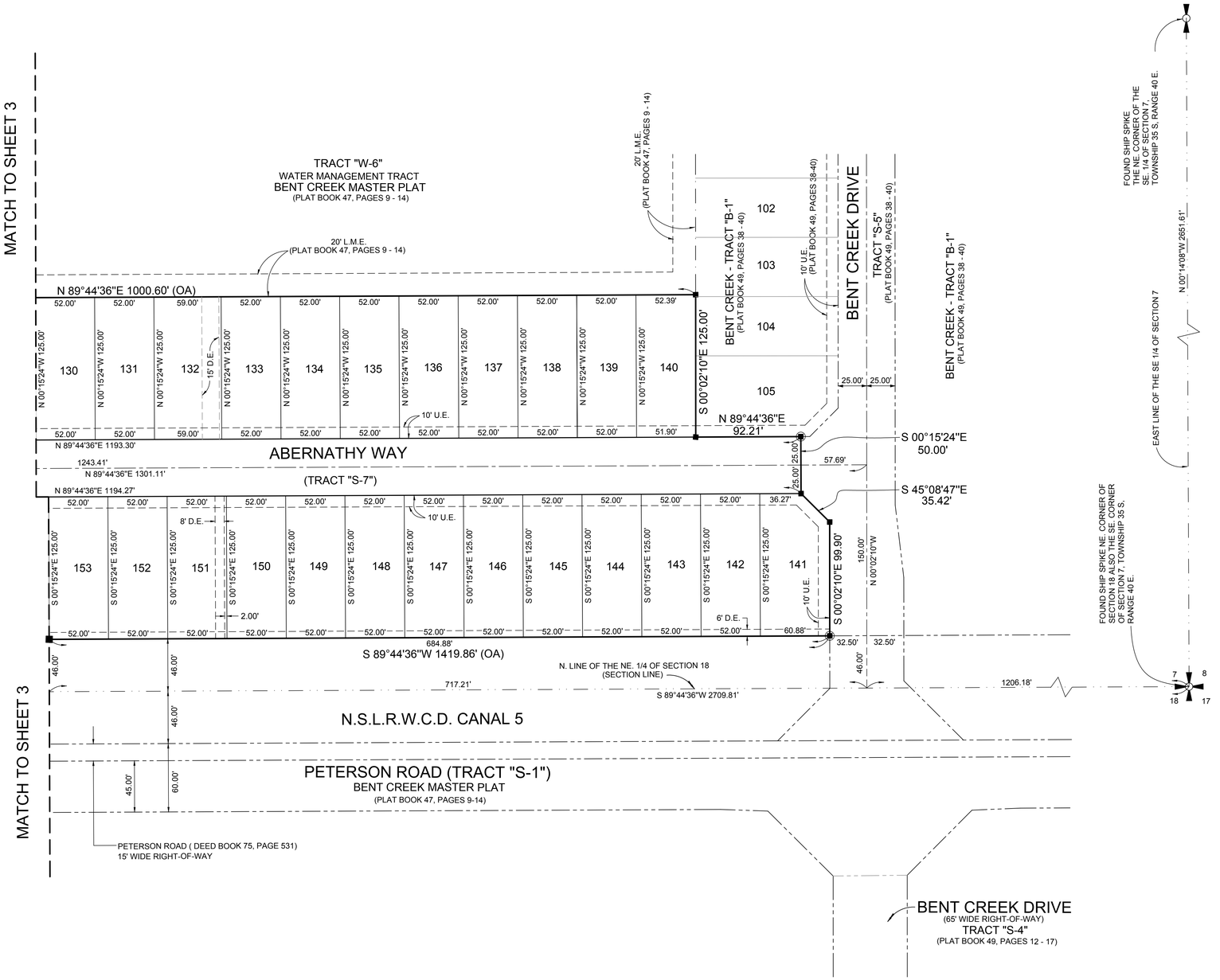
BENT CREEK - TRACT "B-2"

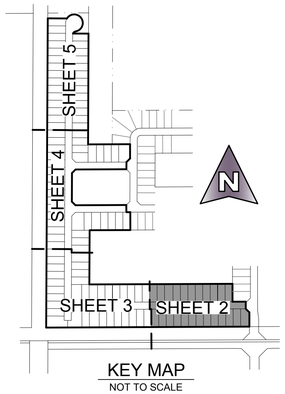
PLAT BOOK _____, PAGE _____

A PORTION OF A PLANNED UNIT DEVELOPMENT

LYING IN SECTION 7, TOWNSHIP 35 SOUTH, RANGE 40 EAST, CITY OF FORT PIERCE, ST. LUCIE COUNTY, FLORIDA, BEING A REPLAT OF TRACT "B-2", BENT CREEK MASTER PLAT, AS RECORDED IN PLAT BOOK 47, PAGES 9 THROUGH 14, PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

SHEET 2 OF 5





KEY MAP
NOT TO SCALE

N

GRAPHIC SCALE
0 25 50 100 150
(IN FEET)
1" = 50'

SHEET 2 OF 5

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FLORIDA 33406
EB# 2438 TEL. (561) 968-0080 FAX. (561) 642-9726 LB# 2438

BENT CREEK - TRACT "B-2"

P:\1749 BENT CREEK B-2\SURVEY\CAD\PLATS\1749 BENT CREEK B-2 PLAT\1749 PLAT_B2.dwg, 9/25/2019 11:48:50 AM, Leslie

BENT CREEK - TRACT "B-2"

PLAT BOOK _____, PAGE _____

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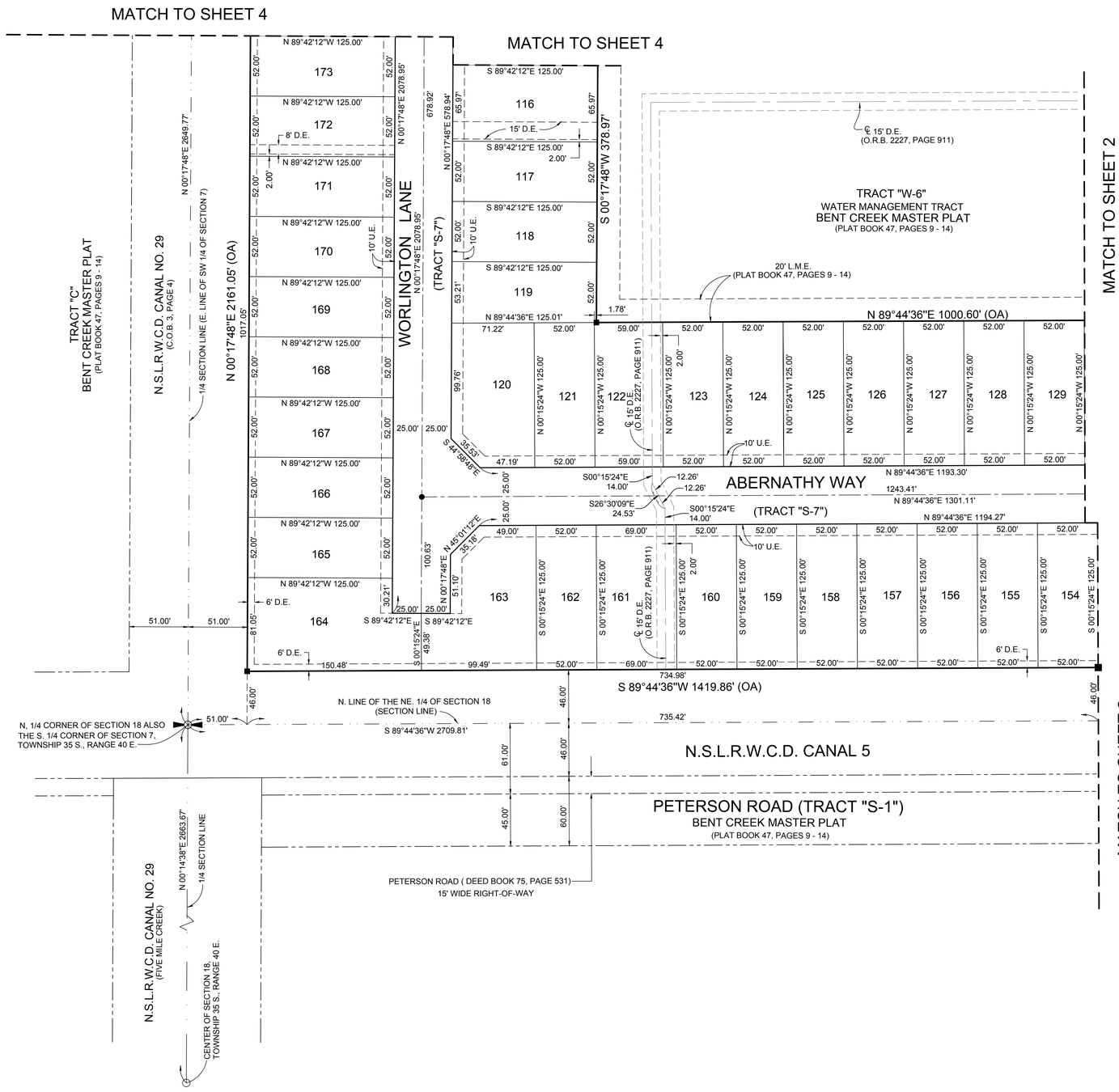
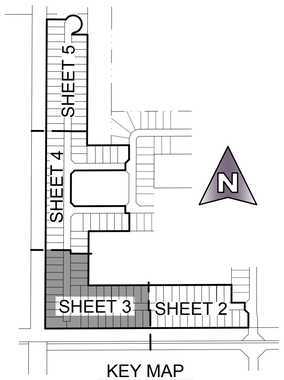
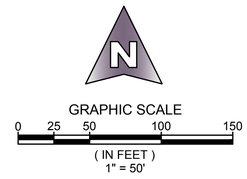
SHEET 3 OF 5







SHEET 3 OF 5

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BENT CREEK - TRACT "B-2"

PLAT BOOK _____, PAGE _____

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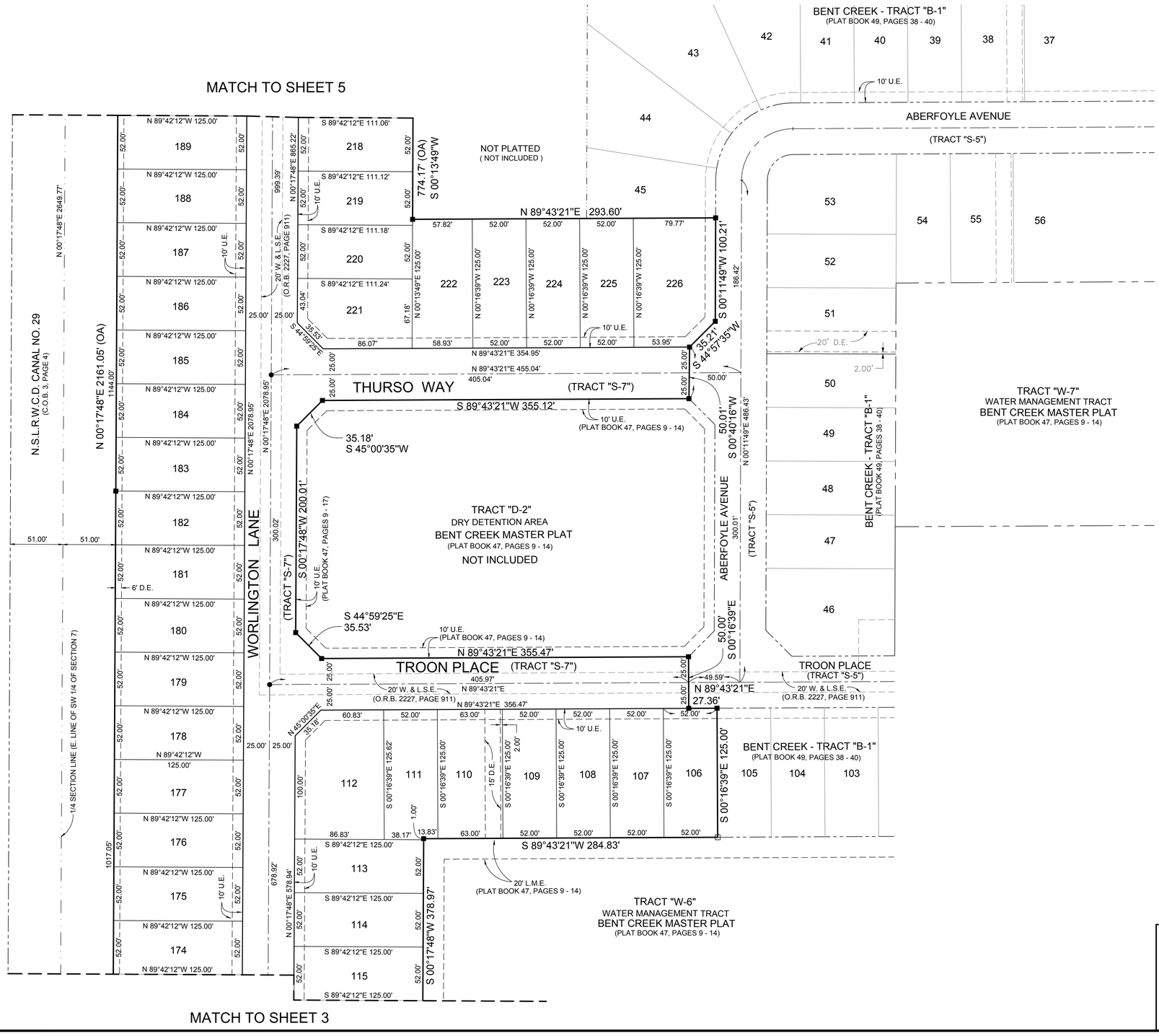
SHEET 4 OF 5



SHEET 4 OF 5

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EB# 2438 TEL. (561) 968-0080 FAX. (561) 642-9726 LB# 2438

BENT CREEK - TRACT "B-2"

P:\1749 BENT CREEK B-2\SURVEY\CAD\PLATS\1749 BENT CREEK B-2 PLAT\1749 PLAT_B2.dwg, 9/25/2019 11:49:00 AM, Leslie

BENT CREEK - TRACT "B-2"

PLAT BOOK _____, PAGE _____

A PORTION OF A PLANNED UNIT DEVELOPMENT

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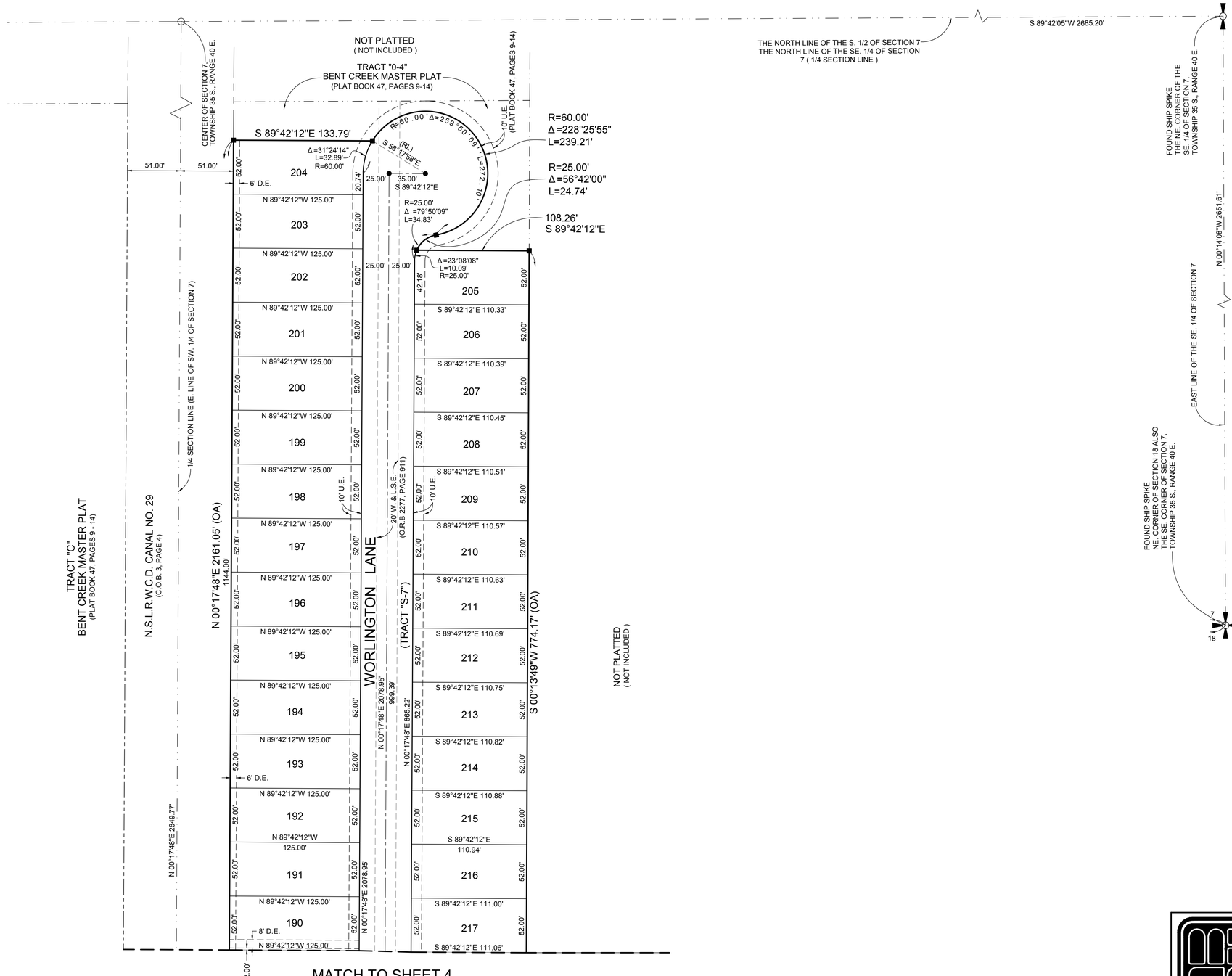
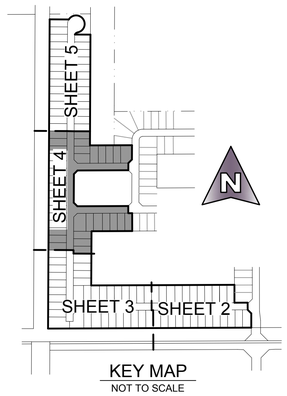
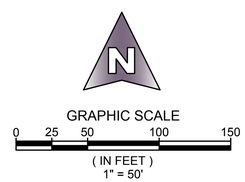
SHEET 5 OF 5







SHEET 5 OF 5

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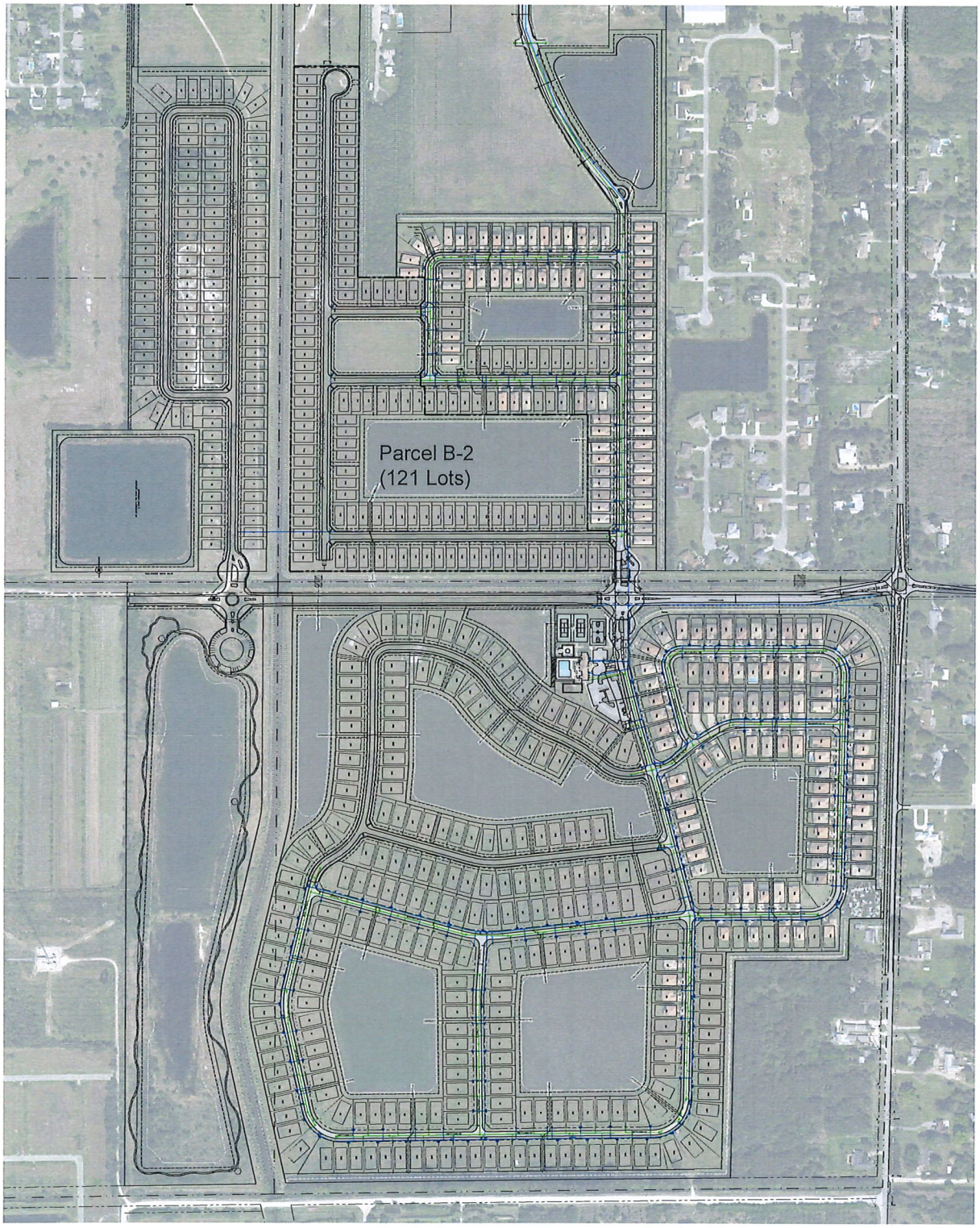
WEST PALM BEACH, FLORIDA 33406
EB# 2438 TEL. (561) 968-0080 FAX. (561) 642-9726 LB# 2438

BENT CREEK - TRACT "B-2"

P:\1749 BENT CREEK B-2\SURVEY\CAD\PLATS\1749 BENT CREEK B-2 PLAT\1749 PLAT_B2.dwg, 9/25/2013 11:49:05 AM, Leslie

lucido & associates
701 E Ocean Blvd, Stuart, Florida 34994 (772) 220-2100 Fax (772) 223-0220



This plan is conceptual and is subject to further review and revisions.

This plan has not been completely reviewed for compliance with all jurisdictional codes and requirements which may require additional plan revisions.

All boundary, existing facilities and/or structures shown on this plan are approximate and may be subject to change upon a formal survey, which also may result in revisions to the proposed portions of this plan.

Scale: 1" = 200'

0 100' 200' 400'

NORTH

Date: 08.11.2020

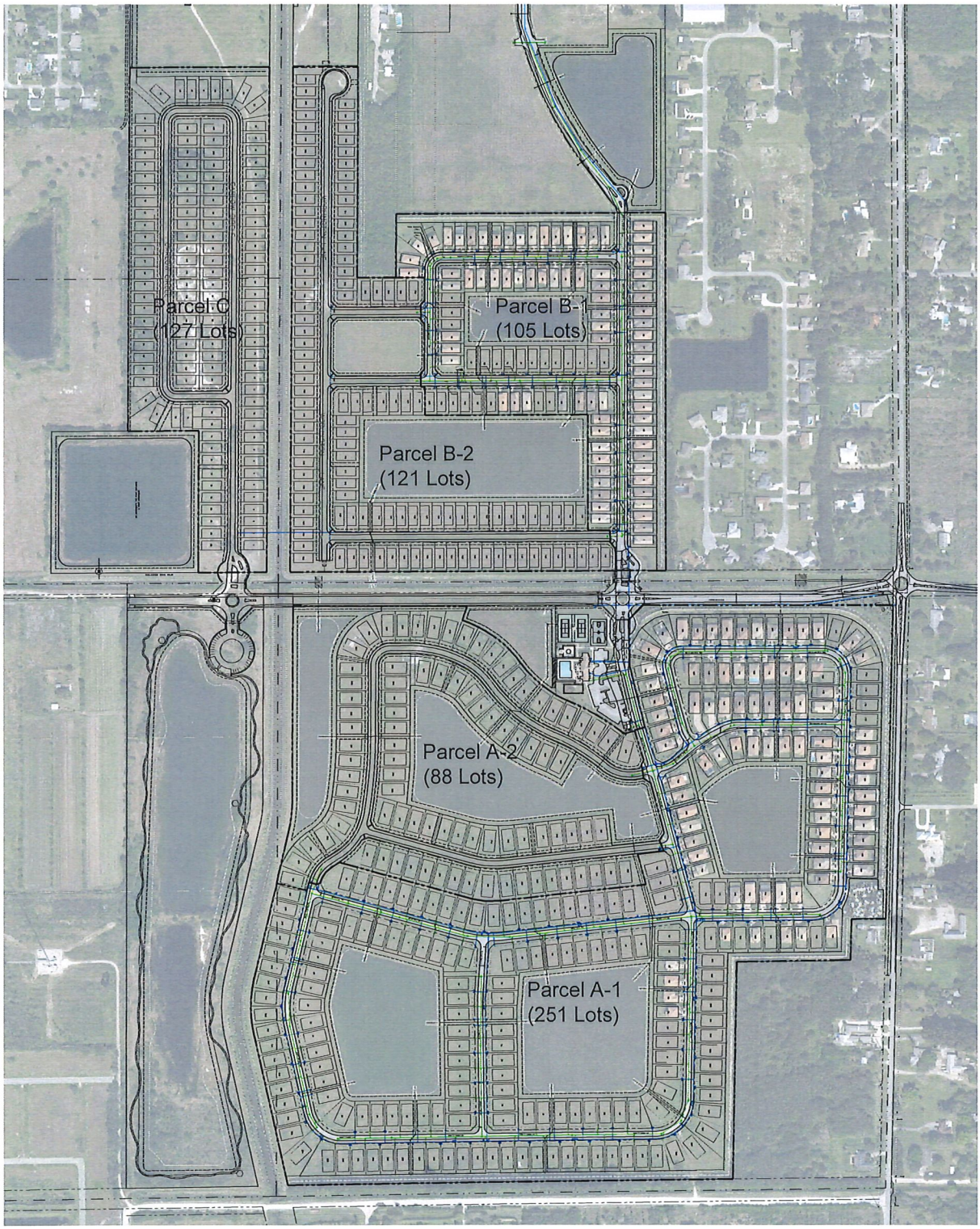
LENNAR

Bent Creek

Fort Pierce

Parcel B-2 Exhibit

lucido & associates
701 E Ocean Blvd, Stuart, Florida 34994 (772) 220-2100, Fax (772) 220-2035



Legend

Parcel A-1	251 Lots
Parcel A-2	88 Lots
Parcel B-1	105 Lots
Parcel B-2	121 Lots
Parcel C	127 Lots
Total	692 Lots

This plan is conceptual and is subject to further review and revisions.

This plan has not been completely reviewed for compliance with all jurisdictional codes and requirements which may require additional plan revisions.

All boundary, existing facilities and/or structures shown on this plan are approximate and may be subject to change upon a formal survey, which also may result in revisions to the proposed portions of this plan.

Scale: 1" = 200'

0 100' 200' 400'

NORTH

Date: 08.11.2020

LENNAR

Bent Creek

Fort Pierce

Parcel Exhibit

THE SUNRISE CITY
FORT PIERCE
Florida
ENGINEERING
DEPARTMENT

TO : Vennis Gilmore, Planner

FROM : John R. Andrews, P.E., City Engineer

RE : Bent Creek Tract B-2 Final Plat
TRC No. 19-41000002

DATE : August 7, 2020

RECEIVED
AUG 07 2020
CITY OF FORT PIERCE
PLANNING & ZONING

This is to advise you that we have completed the review of the following documents as received by this office on August 7, 2020:

- [x] Final Plat Application
- [ ] Test Reports & Related Documents
- [ ] Record Drawings
- [ ] Clearances from all applicable Local, State and Federal Agencies
- [ ] Engineer's Cost Estimate
- [ ] Certificate of Completion
- [ ] Permits from applicable Local, State & Federal Agencies

Based on our reviews and appropriate site final inspection, we

- [x] Recommend w/ conditions
- [ ] Do Not Recommend

- [x] Final Plat Approval
- [ ] Building Permit
- [ ] C/O

Developer, Owner, Engineer, Contractor and other members of the Development Team must be aware, the above recommendation is based only on the construction requirements of the engineering plans and other engineering documentation approved by this department. The Development Team shall be responsible for the compliance with other City department requirements and all approved documents, as well as Local, State and Federal regulations. The development requirements for this project may necessitate additional construction requirements that are not subject to this department's review for approval.

- [x] See attached for engineering advisory comment

Q:\ENGINEERING\Site Development Projects\B\Bent Creek\Plat\Tract B-2\Submittal No. 4 - 080720\Plat Approval with Condition - 072820.docx

ENGINEERING ADVISORY COMMENT:

1. Prior to final plat execution, the appropriate bonding mechanism must be in place ensuring construction completion of all outstanding infrastructure (sidewalks, roadways, drainage, utilities, curb, striping, etc.); for specific information please refer to the City of Fort Pierce Code of Ordinances Section 121-12.

JRA/TST/tst

100 NORTH US 1, FORT PIERCE, FLORIDA 34950 ▪ CITYOFFORTPIERCE.COM ▪ TEL: 772.467.3000 ▪ FAX: 772.460.6847

PRM INSPECTION

Tracy Telle

From: Greg Fleming <gregf@nsgeo.com>
Sent: Friday, August 07, 2020 9:47 AM
To: Tracy Telle
Subject: Bent Creek Plat B-2

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Tracy,
The PRM inspection for this plat was successfully completed. All of my previous comments have been addressed.
I"m not able to access my desk computer to send you a formal review letter until Monday.
Thanks
Greg

--
Gregory S. Fleming, PSM
President
NorthStar Geomatics, Inc.
ph. 772.781.6400 ext 101
cell 772-485-1415
www.nsgeo.com

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY: MHC
SHEET NO: 1 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - SUMMARY

ITEM		TOTAL
GENERAL CONDITIONS	- APPROVED FP ENG. (ATTACHED EMAIL)	$253,500.00
WATER	- APPROVED FPUA (ATTACHED EMAIL)	$179,130.00
SANITARY	- APPROVED FPUA (ATTACHED EMAIL)	$327,496.00
PAVING	- APPROVED FP ENG. (EMAIL)	$786,123.75
DRAINAGE	- APPROVED FP ENG. (EMAIL)	$576,830.00
LANDSCAPE	- APPROVED PAUL BETRAM (EMAIL)	$74,371.65
IRRIGATION	- APPROVED PAUL BETRAM (EMAIL)	$40,000.00
	TOTAL	$2,237,451.40

MARTHA H. CARTER
LICENSE
No. 47589
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MARTHA H. CARTER, P.E. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Martha H Carter

Digitally signed by Martha H Carter
Date: 2020.08.06 14:37:24 -04'00'

Martha H. Carter, P.E.
Florida Registration No. 47589

Date:

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY MHC
SHEET NO: 2 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - GENERAL CONDITIONS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
Mobilization	1	L.S.	$120,000.00	**$120,000.00**
Clearing and Grubbing	1	L.S.	$10,000.00	**$10,000.00**
Erosion and Sediment Control	1	L.S.	$3,500.00	**$3,500.00**
Survey Layout and As-Builts	1	L.S.	$55,000.00	**$55,000.00**
CEI Services	1	L.S.	$40,000.00	**$40,000.00**
Materials Testing	1	L.S.	$25,000.00	**$25,000.00**

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY MHC
SHEET NO: 3 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - WATER

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
8" PVC C-900 DR 18 Water Main	4,160	L.F.	$24.00	**$99,840.00**
8" Gate Valve	7	EACH	$1,600.00	**$11,200.00**
Fire Hydrant Assembly including 6" Gate Valve	4	EACH	$3,500.00	**$14,000.00**
Sample Point	7	EACH	$450.00	**$3,150.00**
Remove Plug and Connect to Existing Water Main	3	EACH	$1,000.00	**$3,000.00**
Single Service	7	EACH	$670.00	**$4,690.00**
Double Service	57	EACH	$750.00	**$42,750.00**
Plug with 2" Blowoff	1	EACH	$500.00	**$500.00**
Bends, fittings and OSHA trench safety are included in the Unit Prices for the pipe.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY: MHC
SHEET NO: 4 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - SANITARY

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
8" P.V.C. SDR 26 0' - 6' cut	1,952	L.F.	$30.00	**$58,560.00**
8" P.V.C. SDR 26 6' - 8' cut	949	L.F.	$32.00	**$30,368.00**
8" P.V.C. SDR 26 8' - 10' cut	536	L.F.	$36.00	**$19,296.00**
8" P.V.C. SDR 26 10' - 12' cut	218	L.F.	$40.00	**$8,720.00**
8" P.V.C. C-900 DR18 10' - 12' cut	292	L.F.	$43.00	**$12,556.00**
8" P.V.C. C-900 DR 18 12' - 14' cut	106	L.F.	$66.00	**$6,996.00**
4' Diameter Manhole 0' - 6' cut	11	EACH	$3,800.00	**$41,800.00**
4' Diameter Manhole 6' - 8' cut	2	EACH	$5,200.00	**$10,400.00**
4' Diameter Manhole 8' - 10' cut	1	EACH	$7,000.00	**$7,000.00**
4' Diameter Manhole 10' - 12' cut	1	EACH	$8,700.00	**$8,700.00**
Double Service w/cleanout	50	EACH	$2,000.00	**$100,000.00**
Single Service w/cleanout	21	EACH	$1,100.00	**$23,100.00**
OSHA trench safety is included in the Unit Prices for the pipe.				

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY: MHC
SHEET NO: 5 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - PAVING

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
3/4" Type S-III Asphaltic Concrete (First Llft)	10,130	S.Y.	$5.00	**$50,650.00**
3/4" Type S-III Asphaltic Concrete (Final Llft)	10,130	S.Y.	$5.00	**$50,650.00**
12" Thick Baserock	10,130	S.Y.	$20.00	**$202,600.00**
12" Thick Stabilized Subgrade (LBR 40) w/Tensar BX-11	12,910	S.Y.	$6.00	**$77,460.00**
Valley Gutter with 30" x 4" Thick Baserock Curb Pad	8,325	L.F.	$22.00	**$183,150.00**
Header Curb	20	L.F.	$28.00	**$560.00**
Stop/Street Sign and 24" White Stop Bar	7	EACH	$400.00	**$2,800.00**
Remove / Relocate Existing Case 2 Signs	9	EACH	$200.00	**$1,800.00**
4" Thick Concrete Walk	3,707	S.Y.	$50.00	**$185,350.00**
Handicap Ramp with Detectable Warning	6	EACH	$2,750.00	**$16,500.00**
2' Strip of Sod Along Back of Curb	8,345	L.F.	$1.75	**$14,603.75**

MICHAEL B. SCHORAH & ASSOCIATES, INC.
1850 FOREST HILL BLVD., SUITE 206
WEST PALM BEACH, FL 33406
(561) 968-0080
EB#2438

PROJECT: BENT CREEK PUD PARCEL B-2
JOB NO.: 1749
BY: AMG DATE: 11/26/2019
CHECKED BY MHC
SHEET NO: 6 OF 6
REVISED: 8/6/2020

SUBJECT: OPINION OF COST - DRAINAGE

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
15" RCP	1,169	L.F.	$45.00	**$52,605.00**
18" RCP	396	L.F.	$64.00	**$25,344.00**
24" RCP	901	L.F.	$76.00	**$68,476.00**
30" RCP	430	L.F.	$86.00	**$36,980.00**
36" RCP	770	L.F.	$106.00	**$81,620.00**
42" RCP	182	L.F.	$126.00	**$22,932.00**
Type PC Inlet - 4' Diameter	1	EACH	$3,800.00	**$3,800.00**
Type PC Inlet - 5' Diameter	5	EACH	$4,600.00	**$23,000.00**
Type PC Inlet - 6' Diameter	1	EACH	$5,000.00	**$5,000.00**
Type PV Inlet - 4' Diameter	18	EACH	$3,800.00	**$68,400.00**
Type PV Inlet - 5' Diameter	6	EACH	$4,600.00	**$27,600.00**
Type C Inlet	3	EACH	$2,930.00	**$8,790.00**
Concrete Collar	3	EACH	$3,500.00	**$10,500.00**
Regrade and Sod Lake Bank at Outfall Location	3	EACH	$5,000.00	**$15,000.00**
12" PVC	2,882	L.F.	$24.00	**$69,168.00**
Yard Drain	28	EACH	$1,500.00	**$42,000.00**
24" CALP	30	L.F.	$118.00	**$3,540.00**
30" CALP	35	L.F.	$145.00	**$5,075.00**
42" CALP	40	L.F.	$175.00	**$7,000.00**
OSHA trench safety is included in the Unit Prices for the pipe.				
			TOTAL	$576,830.00

FP ENG. APPROVAL

Tracy Telle

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Thursday, August 06, 2020 4:25 PM
To: Tracy Telle; Vennis Gilmore
Cc: John Andrews; Linda Cox
Subject: RE: Bent Creek B-2 Engineer's Cost Estimate

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Tracy,

Thank you. I believe with your approval, all cost estimates for on-site are now approved, as we received approval from Mr. Bertram on the LA costs and approval from FPUA on the water/wastewater. Lennar will not transition to getting the bond in form for submittal to the City.

We're continuing to address the County's comments, which I believe you (Tracy) were copied on. Once we have the County's approval, Lennar will then transition into getting that bond in place and submitted to the City and County for approval.

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: Tracy Telle <ttelle@cityoffortpierce.com>
Sent: Thursday, August 6, 2020 4:15 PM
To: Vennis Gilmore <vgilmore@cityoffortpierce.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Brian Nolan <BNolan@lucidodesign.com>
Subject: FW: Bent Creek B-2 Engineer's Cost Estimate

The Engineer's Opinion of Cost for the on-site grading, paving and drainage items (sheets 2, 5, and 6) has been approved by this department. Please note that the final plat will not be recorded until the proper bonding mechanism is in place and confirmation of an approved PRM inspection has been issued by Northstar Geomatics.

Tracy S. Telle | Assistant City Engineer | City of Fort Pierce
Engineering Department
Phone: 772.467.3776 Fax: 772.460.6847 100 North U.S. 1, Fort Pierce, FL 34950

Website | Facebook | Survey

THE SUNRISE CITY
FORT PIERCE
Florida

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Thursday, August 06, 2020 3:35 PM
To: Tracy Telle <ttelle@cityoffortpierce.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: RE: Bent Creek B-2 Engineer's Cost Estimate

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Tracy,

See attached revised cost estimate bumping mobilization to 6% of const. cost, up to $120,000 from $30,000.

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: Tracy Telle <ttelle@cityoffortpierce.com>
Sent: Thursday, August 6, 2020 2:39 PM
To: Brian Nolan <BNolan@lucidodesign.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: RE: Bent Creek B-2 Engineer's Cost Estimate

Yes

Tracy S. Telle | Assistant City Engineer | City of Fort Pierce
Engineering Department
Phone: 772.467.3776 Fax: 772.460.6847 100 North U.S. 1, Fort Pierce, FL 34950

Website | Facebook | Survey

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Thursday, August 06, 2020 2:02 PM
To: Tracy Telle <ttelle@cityoffortpierce.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: RE: Bent Creek B-2 Engineer's Cost Estimate

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Thank you, Tracy. By certified, do you mean signed and sealed?

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: Tracy Telle <ttelle@cityoffortpierce.com>
Sent: Thursday, August 6, 2020 1:32 PM
To: Brian Nolan <BNolan@lucidodesign.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: FW: Bent Creek B-2 Engineer's Cost Estimate

Brian,

The mobilization cost seems a little low compared to recent City projects. Will you please have the engineer update the mobilization lump sum price of $30,000 to $150,000 and send a certified copy back to us for final approval?

Thank you,

Tracy S. Telle | Assistant City Engineer | City of Fort Pierce
Engineering Department
Phone: 772.467.3776 Fax: 772.460.6847 100 North U.S. 1, Fort Pierce, FL 34950

Website | Facebook | Survey

THE SUNRISE CITY
FORT PIERCE
Florida

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Thursday, August 06, 2020 11:05 AM
To: Tracy Telle <ttelle@cityoffortpierce.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: RE: Bent Creek B-2 Engineer's Cost Estimate

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Good morning Tracy,

Attached for your review is the revised on-site cost estimate, as revised per your comments. I also attached your marked-up estimate for reference.

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: Tracy Telle <ttelle@cityoffortpierce.com>
Sent: Wednesday, August 5, 2020 5:04 PM
To: Brian Nolan <BNolan@lucidodesign.com>
Cc: John Andrews <jandrews@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Subject: Bent Creek B-2 Engineer's Cost Estimate

Brian,

We have reviewed the quantities and the unit prices and offer the attached requested revisions. The unit prices are based on current City contract prices for roadway work.

Let me know if you have any questions.

Tracy S. Telle | Assistant City Engineer | City of Fort Pierce
Engineering Department
Phone: 772.467.3776 Fax: 772.460.6847 100 North U.S. 1, Fort Pierce, FL 34950

Website | Facebook | Survey



FPUA'S APPROVAL

Tracy Telle

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Wednesday, August 05, 2020 8:24 AM
To: James Carnes; Vennis Gilmore
Cc: Tracy Telle; Jennifer Hofmeister; Linda Cox; mlac@schorah.com
Subject: RE: Bent Creek - B-2 Plat

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Thank you, sir!

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: James Carnes <jcarnes@fpua.com>
Sent: Wednesday, August 5, 2020 7:36 AM
To: Brian Nolan <BNolan@lucidodesign.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Cc: Tracy Telle <ttelle@cityoffortpierce.com>; Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; mlac@schorah.com
Subject: RE: Bent Creek - B-2 Plat

The water and sewer portion of the provided costs looks appropriate.

FPUA COMMUNITY PROUD

JAMES CARNES III, P.E.
Supervising Engineer
W/WW Engineering Department
Fort Pierce Utilities Authority
1701 S. 37th Street,
Fort Pierce, FL 34984
772.466.1600 Ext. 3472
772.468.2414 Fax

From: Brian Nolan [mailto:BNolan@lucidodesign.com]
Sent: Tuesday, August 4, 2020 4:06 PM
To: James Carnes <jcarnes@fpua.com>; Vennis Gilmore <vgilmore@cityoffortpierce.com>
Cc: Tracy Telle <ttelle@cityoffortpierce.com>; Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; mlac@schorah.com
Subject: Bent Creek - B-2 Plat

CAUTION: This email originated from outside of FPUA. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon James,

We're needing to prepare the required bond and surety to accompany the Final Plat for Bent Creek – Tract B-2. Can you please review the attached Engineer's Estimate for on-site water and sewer and provide me with any comments/corrections you have? Please do not hesitate to contact either myself of Mike LaCoursiere.

Vennis, can you please coordinate with Paul Bertram or other applicable parties to provide a review of the Landscape Architect's Estimate for the proposed street trees and littoral plantings?

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

Please note: Florida has a very broad public records law. Most written communications to or from Fort Pierce Utilities Authority employees regarding government business are public records, available to the public and media upon request. Your e-mail communications may be subject to public disclosure.

(For additional information, go to https://www.fpua.com/Information/PrivacyInformation.aspx)

PAUL BERTRAM'S APPROVAL

Tracy Telle

From: Brian Nolan <BNolan@lucidodesign.com>
Sent: Wednesday, August 05, 2020 11:59 AM
To: Vennis Gilmore
Cc: Jennifer Hofmeister; Alicia Rosenthal; Linda Cox; Tracy Telle; John Andrews; mlac@schorah.com; Paul Bertram
Subject: RE: Bent Creek - B-2 Plat

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Very kind words, Paul; thank you! On that, and in following up with the Mayor's comments at the Commission hearing the other night...Going back many months, we began discussions with the previous Director of Planning to incorporate appropriate street tree species and planting locations, in consideration of the 50' ROW, utility locations, driveway locations, etc. I'd like to meet with you to review the street tree plans and tree list that we prepared for the existing sections of Bent Creek. We need to address this prior to the the second reading of the CDD, so please let me know when you're available to meet and discuss options.

Respectfully,

Brian Nolan, AICP, ASLA
Senior Landscape Architect
Lucido & Associates

lucido&associates
701 SE Ocean Blvd. Stuart, Florida 34994
tel: 772.220.2100
fax: 772.223.0220
web: www.lucidodesign.com
email: bnolan@lucidodesign.com

From: Vennis Gilmore <vgilmore@cityoffortpierce.com>
Sent: Wednesday, August 5, 2020 11:40 AM
To: Brian Nolan <BNolan@lucidodesign.com>
Cc: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>; Alicia Rosenthal <arosenthal@cityoffortpierce.com>; Linda Cox <lcox@cityoffortpierce.com>; Tracy Telle <ttelle@cityoffortpierce.com>; John Andrews <jandrews@cityoffortpierce.com>; mlac@schorah.com; Paul Bertram <pbertram@cityoffortpierce.com>
Subject: FW: Bent Creek - B-2 Plat

Good Morning Brian,

Please see the forwarded email of Paul's review of the Landscape Architect's Estimate. Let me know if you need anything else.

Best Regards,
Vennis Gilmore

Vennis Gilmore | Planner | City of Fort Pierce
Planning Department
Phone: 772.467.3741Fax: 772.466-5808100 North U.S. 1 Fort Pierce, FL 34950

Website | Facebook | Survey

THE SUNRISE CITY
FORT PIERCE
Florida

From: Paul Bertram <pbertram@cityoffortpierce.com>
Sent: Wednesday, August 05, 2020 5:06 AM
To: Vennis Gilmore <vgilmore@cityoffortpierce.com>
Cc: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>; Rebeca Guerra <rguerra@cityoffortpierce.com>; Alicia Rosenthal <arosenthal@cityoffortpierce.com>
Subject: RE: Bent Creek - B-2 Plat

Good morning Mr. Gilmore,

Please see my comments regarding the plant species list for the above subject plan.

1. Drake Elm; Beautiful tree, size and price of the tree's sound correct. With the bark color and the tree's appearance it will be a nice tree for the area. Elm Tree's should not be planted too close to sidewalks or foundations, roots are shallow and can cause issues with concrete and sewer pipes. The tree also will require that it be staked correctly and additional time with the stakes in place to insure proper stability of the tree.
2. Shrubs; Great selection of flowering aquatic plant material, should create a fantastic display of color around the wetlands.

I think it's a breath of fresh air to see a new selection of plant material introduced to the area.

From: Vennis Gilmore <vgilmore@cityoffortpierce.com>
Sent: Tuesday, August 4, 2020 5:07 PM
To: Paul Bertram <pbertram@cityoffortpierce.com>
Cc: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>; Alicia Rosenthal <arosenthal@cityoffortpierce.com>; Maria Lewicka <mlewicka@cityoffortpierce.com>
Subject: FW: Bent Creek - B-2 Plat

Hi Paul,

Please see the attached Cost Estimate packet for the Bent Creek Tract B-2 Plat. One of the cost estimates is for landscaping. Please review and provide comments to the Planning Department as soon as possible. We will be having our staff meeting this Thursday instead of
Tomorrow. Maybe we can discuss this on Thursday.

Best Regards,
Vennis Gilmore

Planning Board - 2 PM **7. g.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Updated Board Procedures

LOCATION

RESPONSIBLE STAFF

RECOMMENDATION

Attachments

Amended Planning Board Procedures

Form Review

Form Started By: Alicia Rosenthal Started On: 07/16/2020 01:01 PM

Final Approval Date: 08/04/2020

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

CITY OF FORT PIERCE PLANNING BOARD PROCEDURES

1. The City of Fort Pierce Planning Board will meet the second Tuesday in each month at 2:00 PM in the Fort Pierce City Hall Commission Chambers.

2. Additional meetings may be held at any time upon the call of the chairman or upon request of the Mayor-Commission, following at least twenty-four (24) hours' notice to each member of the Board.

3. The Board at its first regular meeting in September of each year shall elect a chair and vice-chair.

4. The duties and powers of the officers of the Planning Board shall be as follows:

   Chairman:
   a. Preside at all meetings of the Board.
   b. Call special meetings of the Board in accordance with these procedures.
   c. Sign documents of the Board.
   d. See that all actions of the Board are properly taken.

   Vice-Chairman:
   During the absence, disability, or disqualification of the chairman, the vice-chairman shall exercise or perform all the duties and be subject to all the responsibilities of the chairman.

5. A majority of the members of the Board entitled to vote shall constitute a quorum for the transaction of business. All recommendations from the Board for either approval or disapproval of any agenda item shall be by a majority vote of the members of the Board entitled to vote.

6. Robert's Rules of Order are hereby adopted for the government of the Board in all cases not otherwise provided for in these procedures.

7. Procedures may be amended at any meeting by a vote of the majority of the entire membership of the Board, provided five days' notice has been given to each member of the Board.

8. The following order will normally be observed; however, it may be rearranged by the chairman for individual items if necessary for the expeditious conduct of the business:

   a. Pledge of Allegiance
   b. Roll Call
   c. Consideration of Absences
   d. Approval of Minutes
   e. Hearing of the Local Planning Agency - Comprehensive Plan Amendments
   f. Annexations
   g. Ordinance Amendments
   h. Re-zonings
   i. Conditional Uses

j. Site Plans
k. Comments from the Public
l. Director's Report
m. Board Comments

9. Procedures for discussion. The following procedure will normally be observed:

    a. Committee and staff presents report and makes recommendation
    b. The Board may ask questions regarding the committee or staff report.
    c. Proponents of the agenda item make presentation.
    d. Opponents make presentation.
    e. Applicant makes rebuttal of any point not previously covered.
    f. Board asks any questions it may have of the proponents, opponents, or staff and then take a vote.

10. Deadline for consideration of non-agenda items:

    No non-agenda item shall be taken after 5:00 pm, except that the chairman may waive this rule at his discretion.

11. Designation of voting order:

    Voting to be by verbal vote; and the order of voting is to be rotated each vote, except that the chairman shall vote last.

12. Each memberof the Planning Board who has knowledge of the fact that he/she will not be able to attend a scheduled meeting of the Planning Board shall notify the Planning Department at City Hall at the earliest possible opportunity, and in any event, prior to 12:00 pm the day before the meeting. An explanation for the absence shall be provided. The Planning Director shall notify the chairman of the Board in the event that projected absences will produce the lack of a quorum. In case of absences, the alternate will be the first to fill absence. If a quorum is not met, then ex officio members will be contacted to fill absences. Upon their selection by the Chairman, alternate and ex officio members will have full voting privileges and count toward quorum requirements as long as the total sum of the resident appointees and participating alternate and ex officio members does not exceed seven (7).

13. The chairman shall be an ex-officio member of all committees, with voice but no vote.

14. In the event any office of the Board becomes vacant before the September meeting, a special election to fill the vacancy shall be held at the next meeting following the date the office became vacant, with the term of such office to end at the time of the September meeting.

15. Any decision or recommendation of the Planning Board may be rescinded or reconsidered at or during the same meeting the decision was taken or the recommendation was made. If, for good cause, the Board wishes thereafter to reconsider or rescind a measure, it may at any time recommends to the City Commission that it be given leave to reconsider as appropriate any earlier recommendation.

Adopted 8/11/2020

Planning Board - 2 PM **7. h.**

Meeting Date: 08/11/2020

Information

REQUESTED ACTION

Short Term Rental Recommendations

LOCATION

RESPONSIBLE STAFF

RECOMMENDATION

Form Review

Form Started By: Alicia Rosenthal Started On: 07/16/2020 01:01 PM

Final Approval Date: 07/16/2020