



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

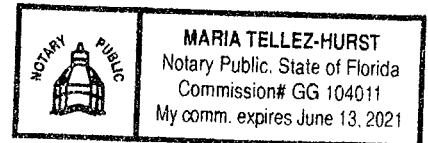
Arrow Investment Group, LLC
 Property Owner(s)
 4512 N. Flagler Drive, Suite 2056
 Street Address
 West Palm Beach, FL 33407
 City State Zip
 (561) 324-4439
 Phone Number
 capitalinvestments@usa.com
 Email Address

Michael Sanchez/Managed Land Entitlements
 Applicant/Representative, Title, Company
 3710 Buckeye Street, Suite 100
 Street Address
 Palm Beach Gardens, FL 33410
 City State Zip
 561-568-8045
 Phone Number
 michael@mylandentitlements.com
 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.

[Signature]
 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
FLDC as identification.



[Signature]
 Signature of Notary

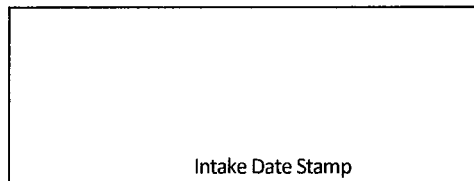
(seal)

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 _____





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	
<input checked="" type="checkbox"/> Site Plan	<input checked="" type="checkbox"/> Conditional Use with New Const.
<input type="checkbox"/> Conceptual Development Plan	<input type="checkbox"/> Major Amendment
	<input type="checkbox"/> Minor Amendment

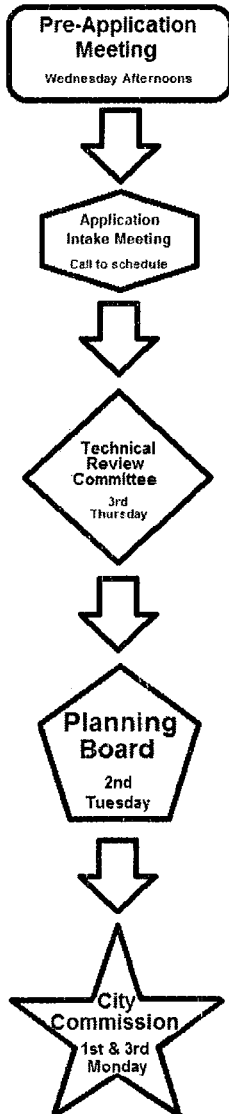
Site Information:

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)



Strategic management of land development design, entitlements and permitting.

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:

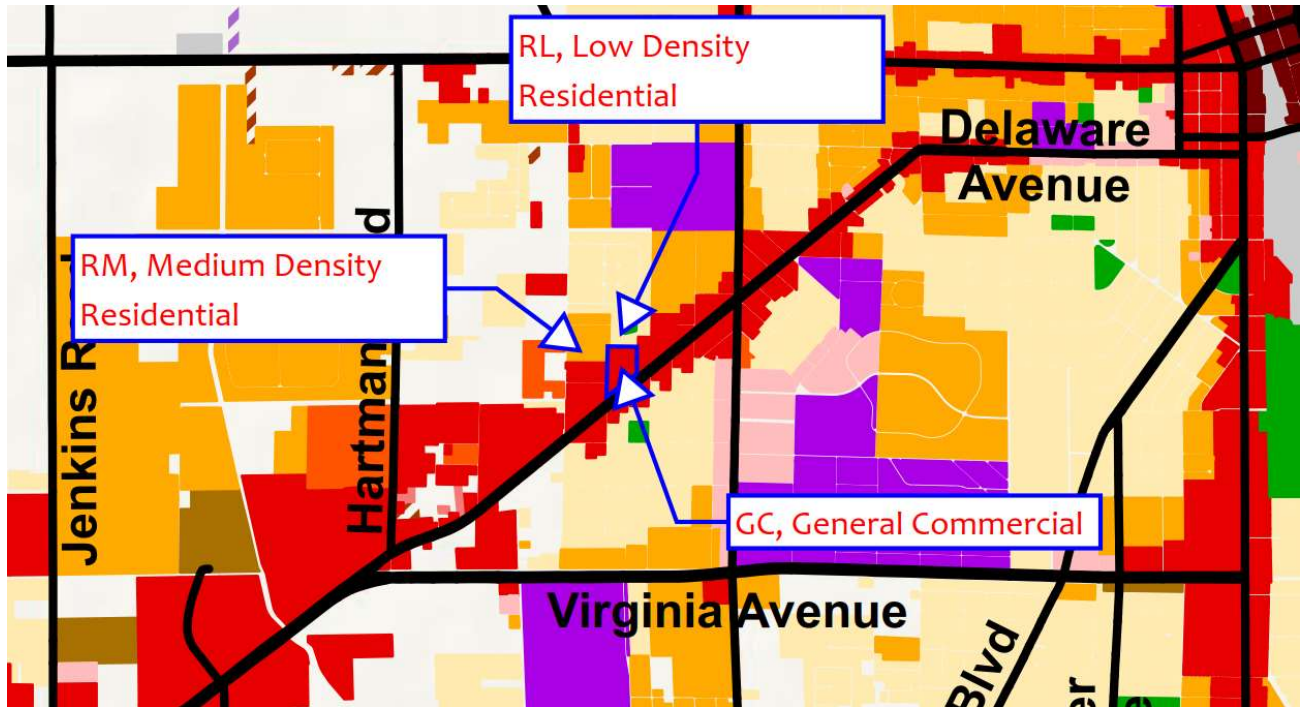
	Current FLU	Current Zoning	Existing Uses
North	RL, Residential Low Density	R2, Single Family Intermediate Residential	Vacant single family
South	GC, General Commercial	C3, General Commercial	Funeral home; grocery store
East	GC, General Commercial	C3, General Commercial	Used car sales; Habitat for Humanity
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:

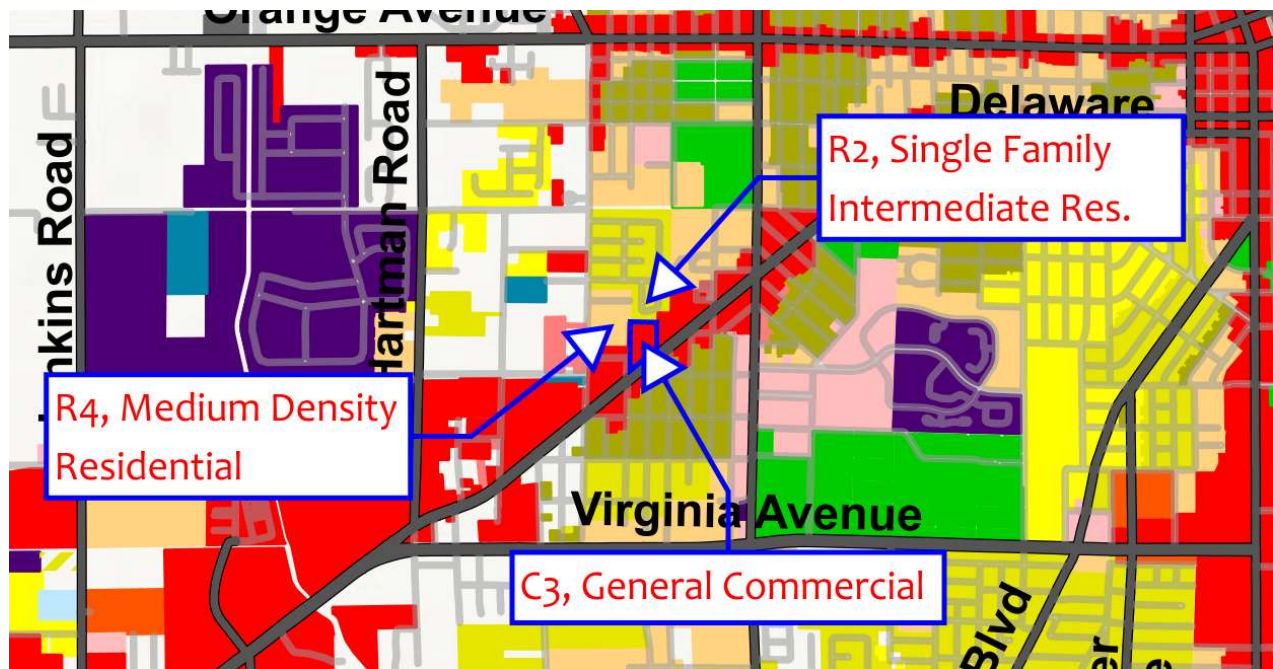


The graphics below identify the Future Land Use and Zoning of the subject property and adjacent properties:

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 amenities.

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.

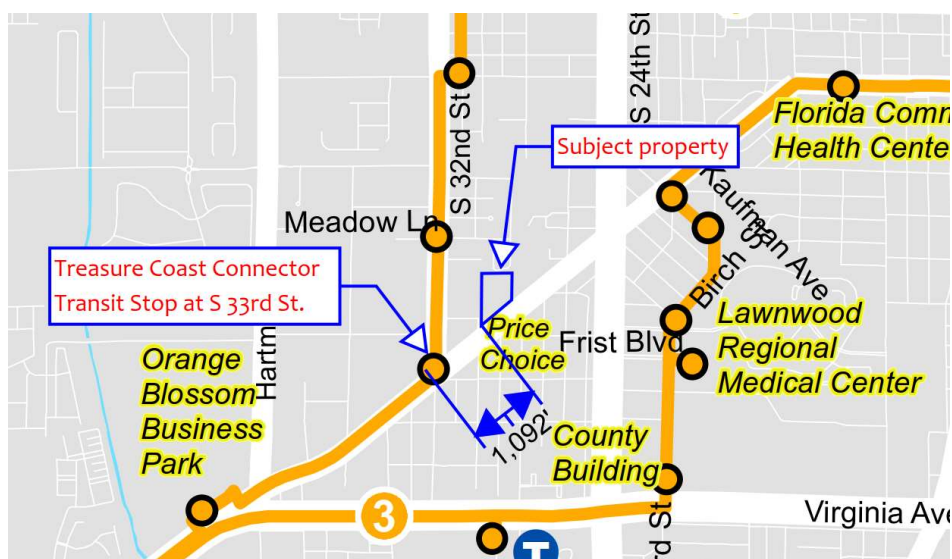
Demonstration of compliance: The proposed Project will be a compact development providing new, high-quality apartment housing for residents of the City which is compatible with the local context and character of the area. The increased residential density in the area will help to support the neighboring 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 Myrtle, 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 Myrtle, 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.



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 acres ("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	6.796 acres	N/A

per FLUE Policy 1.1.5 = 17 du/ac
= 115 units

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)

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 21 day of June, 2020, by MUSTAFA ALNOR who is personally known to me or has produced FDL as identification.

Maria Tellez-Hurst

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: _____	



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	6.796 acres	N/A

per FLUE Policy 1.1.5 = 17 du/ac
 = 115 units

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	N/A		N/A
**Proposed Zoning/FLU	Enrollment	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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 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



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
- 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.

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		K-8	High
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City	Fort Pierce	Fort Pierce	
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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)

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

[Handwritten Signature]

6/24/20

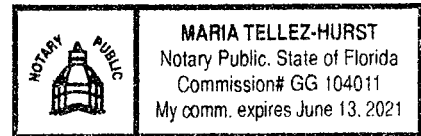
Property Owner's Signature Date

STATE OF FLORIDA)
ST LUCIE COUNTY)

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

[Handwritten Signature: Maria Tellez-Hurst]

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: _____



GENERAL ADDRESS REQUEST

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

Printed Name: Arrow Investment Group, LLC
 by: MUSTINA 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



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



Total Areas

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

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:	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 Assessments 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.
© Copyright 2020 Saint Lucie County Property Appraiser. All rights reserved.

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.

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:

Donna Pfister
Witness Name: Donna Pfister
Jamie Reid
Witness Name: Jamie Reid

Cypress Trust Company, a Florida corporation, as Trustee
By: Roxanne Ertle
Roxanne Ertle, Vice President

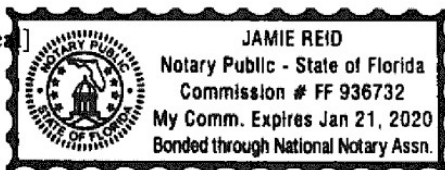
(Corporate Seal)



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
Printed Name: Jamie Reid
My Commission Expires: 01/21/2020

CONCEPTUAL SURFACE WATER MANAGEMENT REPORT AND CALCULATIONS

For

ARIA APARTMENTS

June 2020




Prepared by:

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



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURSIERE, 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



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-site 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:

$$V = 1" \times 6.5 \text{ ac.} \times 1'/12" = 0.54 \text{ ac.-ft.}$$

2.5" x % impervious:

$$\begin{aligned} \text{Site area for water quality} &= 6.5 - 1.39 - 0.36 = 4.75 \text{ ac.} \\ \text{Imp. area for water quality} &= 4.75 - 2.26 - 0.23 = 2.26 \text{ ac.} \\ \% \text{ Impervious} &= 2.26 / 4.75 = 47.58\% \\ 2.5" \times \% \text{ impervious} &= 2.5" \times 0.4758 = 1.19" \\ V &= 1.19" \times (6.5 - 0.36) \text{ ac.} \times 1'/12" = 0.61 \text{ ac.-ft.} \end{aligned}$$

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.

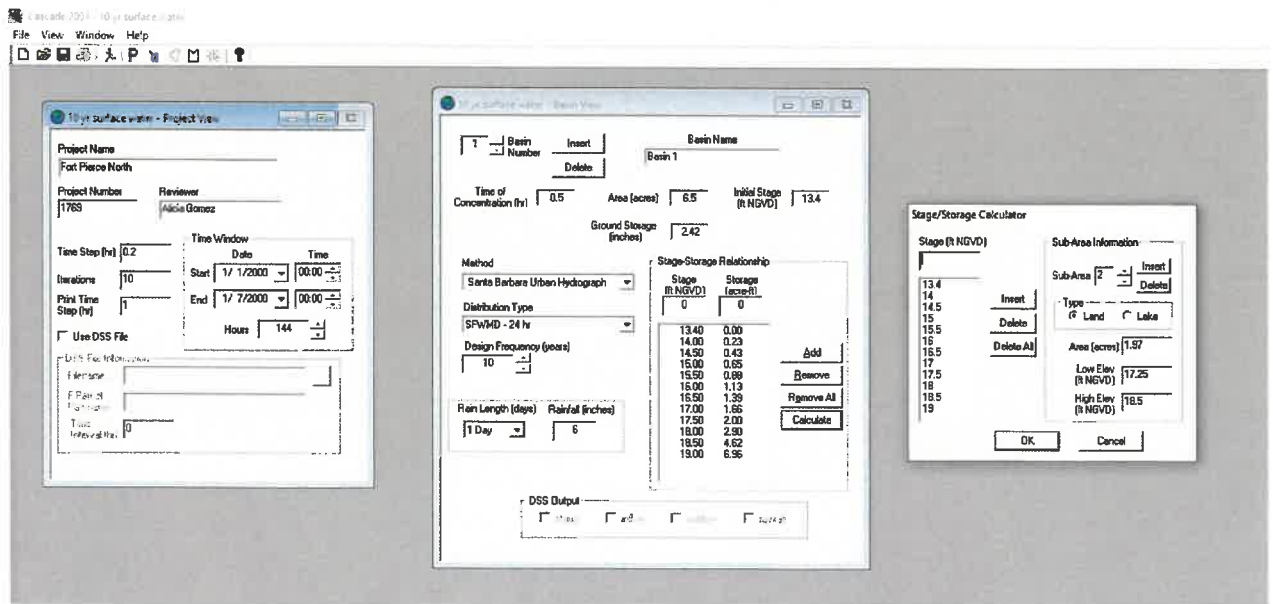
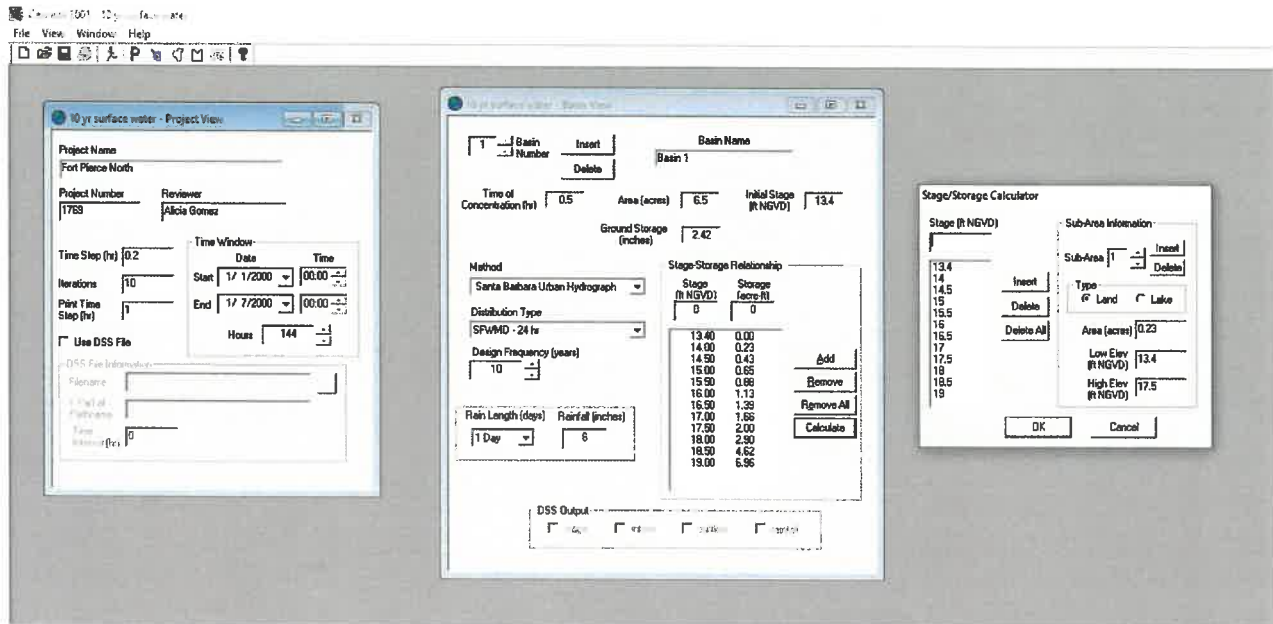
*Based on NSLRWCD criteria which is more restrictive than City of Fort Pierce pre vs. post analysis. NSLRWCD criteria = 2.6" in 24 hours.

SUMMARY OF CONCEPTUAL DESIGN CRITERIA:

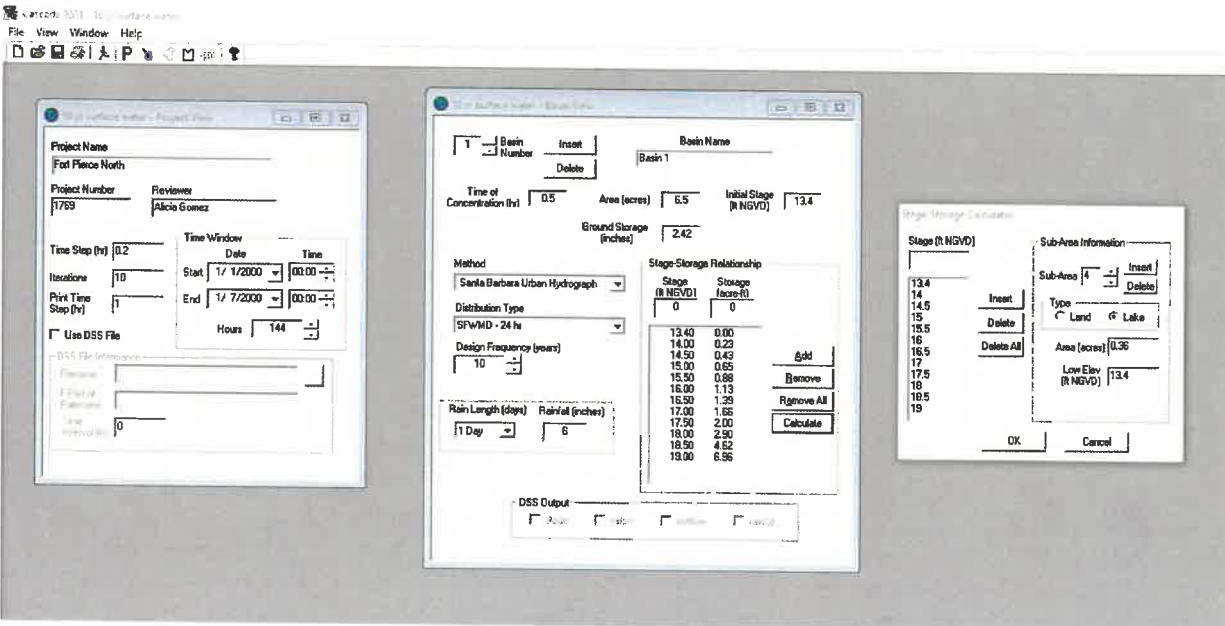
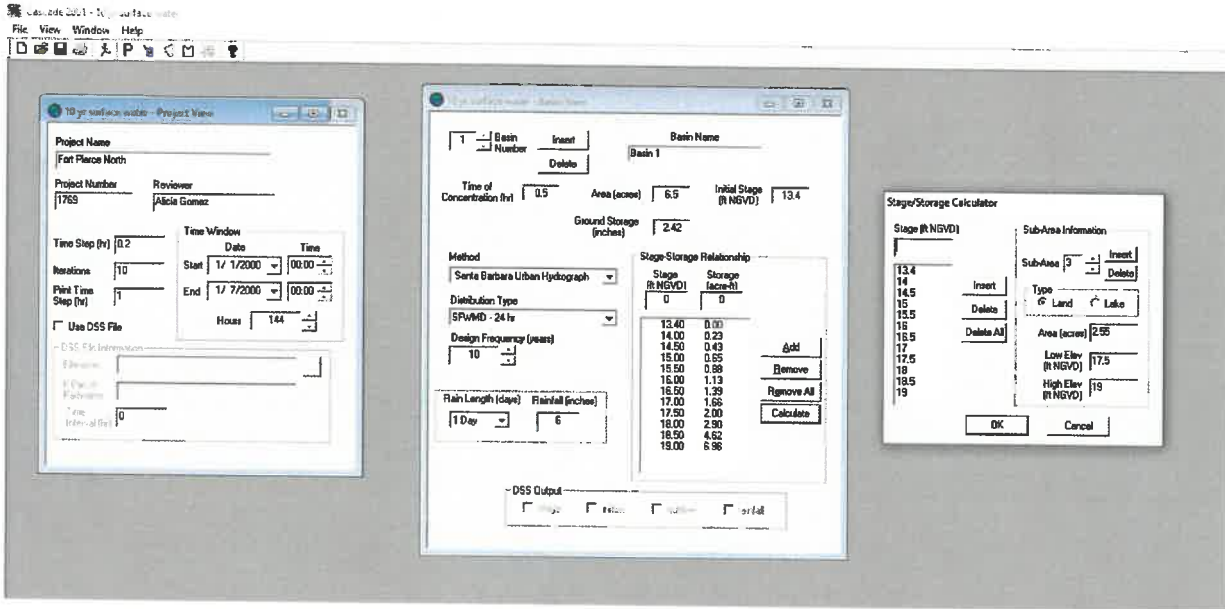
100 year -3 day Rainfall	12.23 inches
100 year - 3 day Flood Elevation	18.58' NAVD (zero discharge)
Minimum Finished Floor Elevation	19.50' NAVD
25 year - 3 day Rainfall	9.5 inches
25 year - 3 day Flood Elevation	17.76' NAVD
Minimum Perimeter Elevation	17.90' NAVD
Weir Elevation	17.90' NAVD
10 year -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



Arrow Fort Pierce North Residential Conceptual Surface Water Management Report and Calculations Page 6



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

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

$$L = 135.86 \text{ feet}$$

*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  Structure  Structure  Initial  Final  Residual
        Runoff  Inflow    Outflow    Storage  Storage
  =====
  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: Offsitel

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: Offsitel

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   Structure   Structure   Initial   Final   Residual
        Runoff  Inflow     Outflow     Storage  Storage
=====
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   Structure   Structure   Initial   Final   Residual
         Runoff  Inflow     Outflow     Storage  Storage
=====
  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

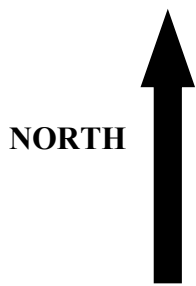
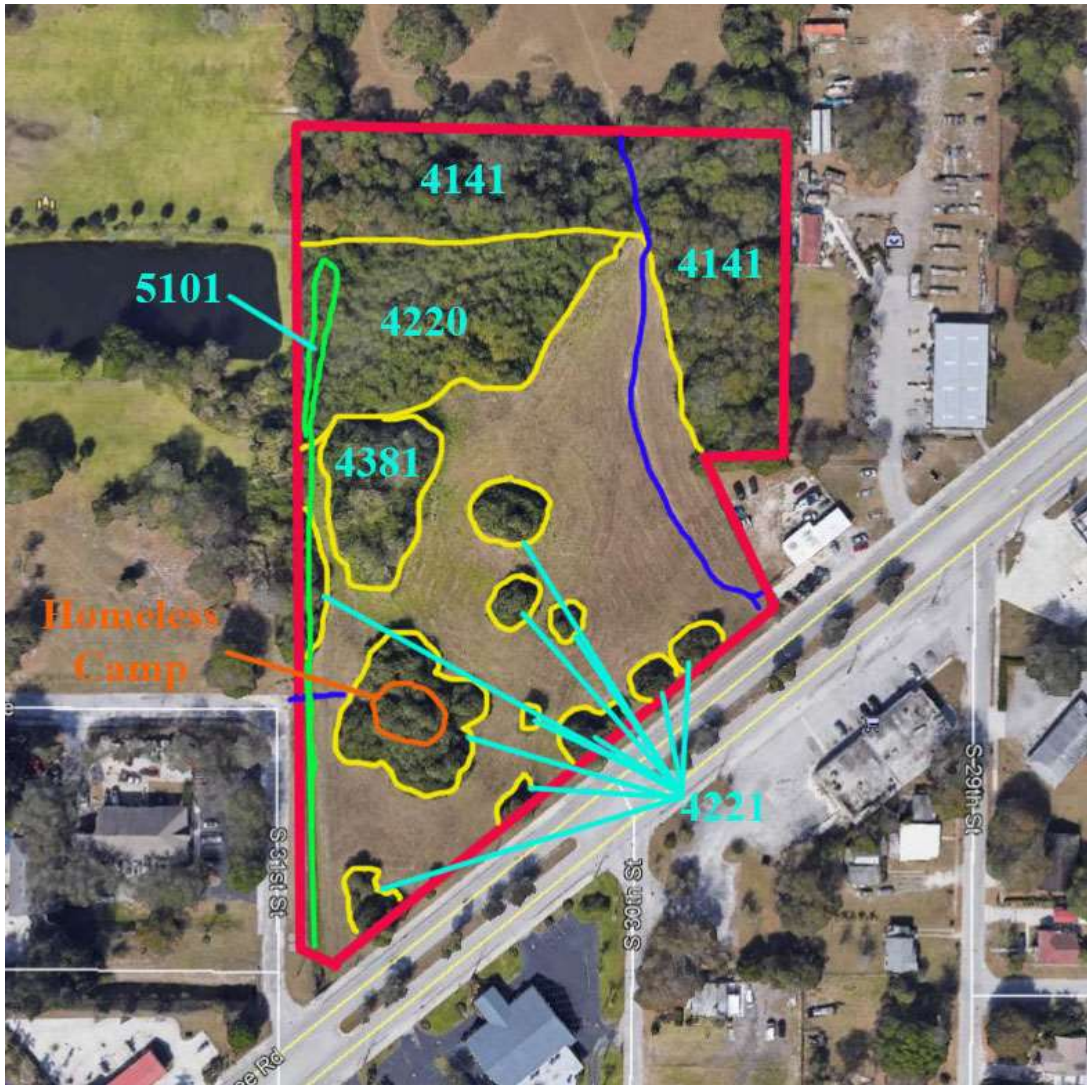
units. Copies of Google 2016 aerial photographs of the parcel were obtained and reviewed to determine potential location of environmental features.

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.



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

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**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 artimisiifolia*), 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.

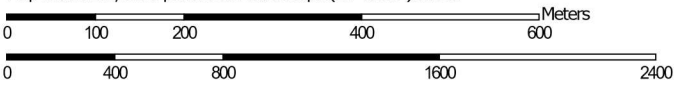
U. S. Department of Agriculture, Soil Conservation Service. 2014. NRCS Web Soil Survey, Custom Soil Resource Report for St Lucie County

Attachment A
Area Soils Map

Soil Map—St. Lucie County, Florida
(6.87 Acre Parcel)



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














































Feet

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

MAP INFORMATION

Area of Interest (AOI)		Interest (AOI) 1:24,000.		Spoil Area
Area of		Stony Spot		
Soils		Very Stony Spot		
Soil		Wet Spot		
Soil		Map Unit Polygons		
Soil		Map Unit Lines		
Soil		Other		
Special		Map Unit Points		
Blowout		Line Features		Special Point
Borrow		Water Features		
Clay		Streams and		
Closed		Pit		
Gravel		Measurements		
Landfill		Transportation		
Lava Flow		Spot		
Marsh		Source of Map:		
Mine		Rails		
Perennial Water		Web Soil Survey		
Rock		Depression		
Sandy		Pit		
The orthophoto		Gravelly Spot		
Severely Eroded Spot		Major Roads		
Sinkhole		Local Roads		
Shifting of map unit boundaries may be evident. Slide or Slip				
Sodic Spot				

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 the
 contrasting soils that could have been shown
 scale.

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

Natural Resources Conservation Service

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

area. A projection that preserves area, such as the

accurate calculations of distance or area are required

Aerial Photography This product is generated

NRCS certified data as of the version date(s) listed

Soil Survey Area: St. Lucie County

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

23, 2019

or other base map on which

compiled and digitized probably differs from the
 displayed on these maps. As a result, some minor

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



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

Scenario	Maximum Intensity	Acreage	Max
Existing Future Land Use <i>General Commercial (GC)</i>	1.0 FAR	6.796	296,034 SF
Proposed Future Land Use <i>Medium Density Res (RM)</i>	17 DU per Acre	6.796	115 DU

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
<u>Existing Future Land Use</u>								
Commercial	296.034 KSF	12,576	99	26	73	126	77	49
	<i>Subtotal</i>	12,576	99	26	73	126	77	49
<u>Pass-By</u>								
Commercial	34%	4,276	34	9	25	43	26	17
	<i>Net External Trips</i>	8,300	65	17	48	83	51	32
<u>Proposed Future Land Use</u>								
Multifamily Residential (Mid-Rise)	115 DU	625	39	10	29	51	31	20
	<i>Net External Trips</i>	625	39	10	29	51	31	20
<i>Existing Future Land Use - Proposed Future Land Use</i>		(7,675)	(26)	(7)	(19)	(32)	(20)	(12)
Trip generation was calculated using the following data:								
Daily Trip Generation								
Commercial	[ITE 820]	=	$\ln(T) = 0.68\ln(X) + 5.57 \text{ trips}/1,000 \text{ SF}$					
Multifamily Residential (Mid-Rise)	[ITE 221]	=	$T = 5.45(X) - 1.75 \text{ trips}/DU$					
AM Peak Hour Trip Generation								
Commercial	[ITE 820]	=	$T = 0.50(X) + 151.78 \text{ trips}/1,000 \text{ SF} (62\% \text{ in}, 38\% \text{ out})$					
Multifamily Residential (Mid-Rise)	[ITE 221]	=	$\ln(T) = 0.98\ln(X) - 0.98 \text{ trips}/DU (26\% \text{ in}, 74\% \text{ out})$					
PM Peak Hour Trip Generation								
Commercial	[ITE 820]	=	$\ln(T) = 0.74 \ln(X) + 2.89 \text{ trips}/1,000 \text{ SF} (48\% \text{ in}, 52\% \text{ out})$					
Multifamily Residential (Mid-Rise)	[ITE 221]	=	$\ln(T) = 0.96\ln(X) - 0.63 \text{ trips}/DU (61\% \text{ in}, 39\% \text{ out})$					



LEGEND



Project Site

FIGURE 1
SITE LOCATION
ARROW FP NORTH RESIDENTIAL
Kimley»Horn

SITE INFORMATION

Property Identification

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



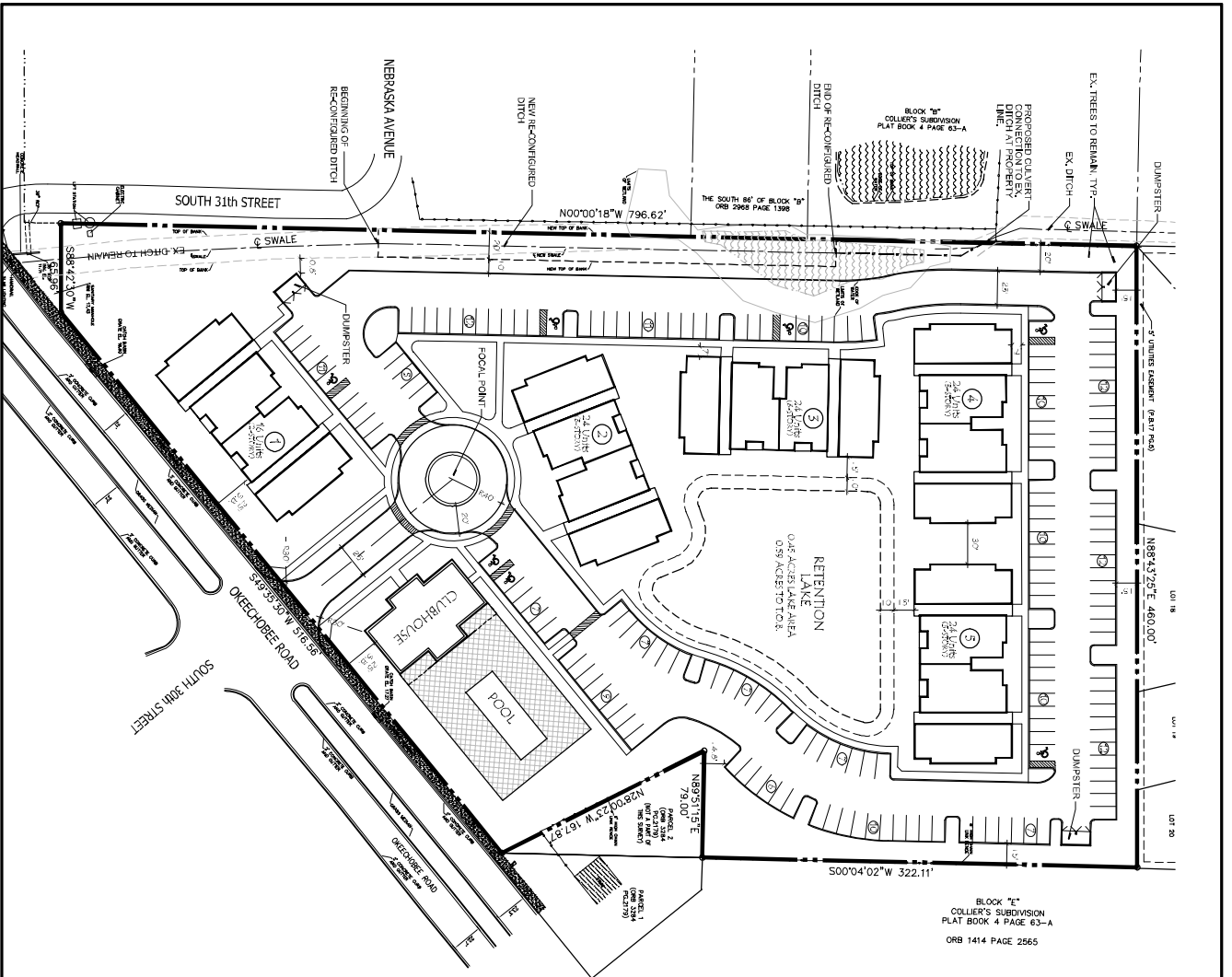
Image
or
Sketch
unavailable
for display

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
------	-----	-------	----------



BLOCK "E"
COLLIER'S SUBDIVISION
PLAT BOOK 4 PAGE 63-A
ORB 1414 PAGE 2565

APPLICATION DATA:

NAME OF APPLICATOR: ARROW FP NORTH RESIDENTIAL
 PARKING ID: 241-700-02000145
 SITE ADDRESS: 150 GENERAL COMMERCIAL (GC)
 200 Avenue of the Cities, Suite 200
 West Palm Beach, Florida 33411
 EXISTING ZONING DESIGNATION: GENERAL COMMERCIAL (GC)
 PROPOSED ZONING DESIGNATION: MEDIUM DENSITY RESIDENTIAL (M-1)
 EXISTING USE: VACANT
 PROPOSED USE: MULTI-FAMILY RESIDENTIAL (112 UNITS)
 PROPOSED DENSITY: +16.48 D.U./S PER ACRE
 PROJECT UTILITIES DESIGN ROOMS FOR PROJECT TO TRANSFER STOP (4.5 D.U./S/ACRE)
 AND FOR INDEPENDENT DESIGN (+2 D.U./S/ACRE)

SITE DATA:

GROSS SITE AREA: 206,012.97 SF. (4.746 ACRES)
 OPEN SPACE REQUIRED: 118,408.19 SF. (2.656 ACRES)
 PERMITTED FLOOR AREA: 108,604.78 SF. (2.456 ACRES)
 TOTAL FLOOR AREA: 133,126.58 SF. (3.053 ACRES)
 TOTAL OPEN SPACE AREA: 133,126.58 SF. (3.053 ACRES)

PARKING DATA:

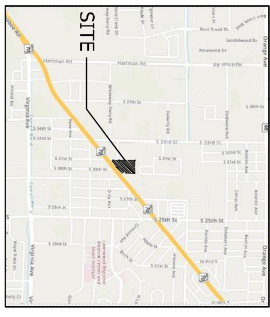
USE	UNITS	PARKING RATE	REQUIRED PARKING
MULTI-FAMILY RESIDENTIAL	112 UNITS	1.50/UNIT	168 SPACES
			TOTAL PARKING PROVIDED: 175 SPACES
			HANDICAP SPACES REQUIRED: 6 SPACES
			HANDICAP SPACES PROVIDED: 7 SPACES



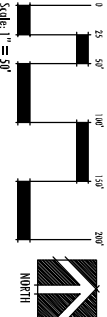
PROJECT TEAM

OWNER: Arrow Management Group, LLC
 4012 North Palm Beach Blvd., Suite 2000
 West Palm Beach, Florida 33411
 ARCHITECT: Litterick Landscape Architecture
 200 Avenue of the Cities, Suite 200
 West Palm Beach, Florida 33411
 CONTACT: Scott Litterick (561-832-0000)
 CIVIL ENGINEER/SUPERVISOR: Michael S. Singer & Associates, Inc.
 1000 S. Dixie Highway, Suite 100
 West Palm Beach, Florida 33411
 CONTACT: Michael Singer (561-832-0000)
 DEVELOPMENT MANAGEMENT: C. J. Berman
 3701 Sandstone Street, Suite 100
 Palm Beach Gardens, Florida 33409
 CONTACT: C. J. Berman (561-832-0000)
 LANDSCAPE ARCHITECT: Litterick Landscape Architecture
 200 Avenue of the Cities, Suite 200
 West Palm Beach, Florida 33411
 CONTACT: Scott Litterick (561-832-0000)
 SURVEYOR: Brown & Root, Inc.
 1000 S. Dixie Highway, Suite 100
 West Palm Beach, Florida 33411
 CONTACT: John P. Brown (561-832-0000)

LOCATION MAP



Site Plan



Arrow FP North Residential
 Ft. Pierce, Florida

Litterick Landscape Architecture
 200 Avenue of the Cities, Suite 200
 West Palm Beach, Florida 33411
 Phone: 561-832-0000
 Email: info@litterick.com
 Website: www.litterick.com

Scale: 1" = 30'-0"
 Date: 3/13/2018
 Sheet: 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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Appendix A: Project Site Data

Appendix B: St Lucie County Traffic Data

Appendix C: Growth Rate Calculations

Appendix D: Turning Movement Counts

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Appendix F: Volume Development Worksheet

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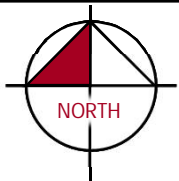
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Introduction

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*.



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
<u>Proposed</u>								
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:

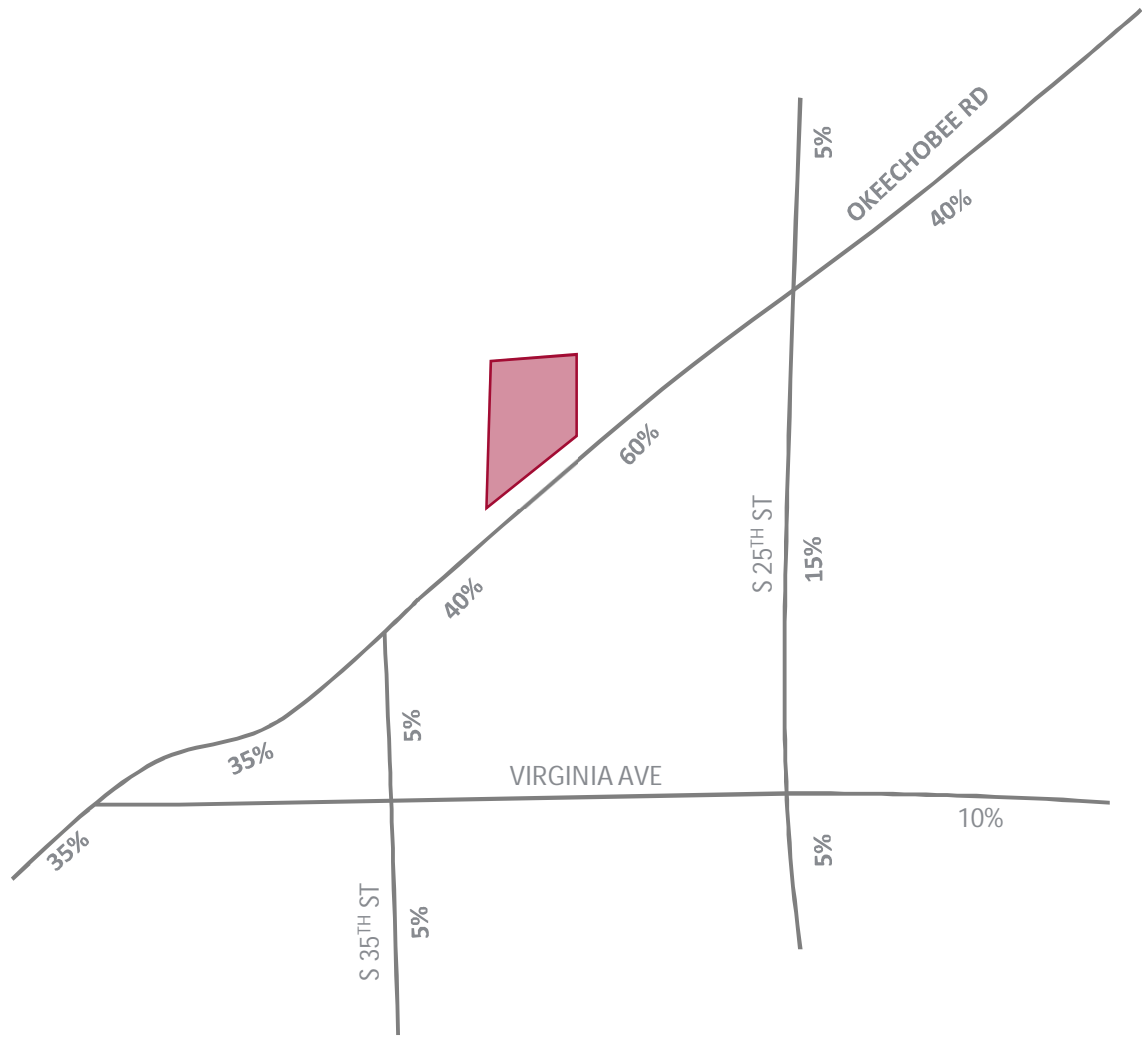
NORTH	5 percent
SOUTH	10 percent
WEST	35 percent
EAST	40 percent

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.



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

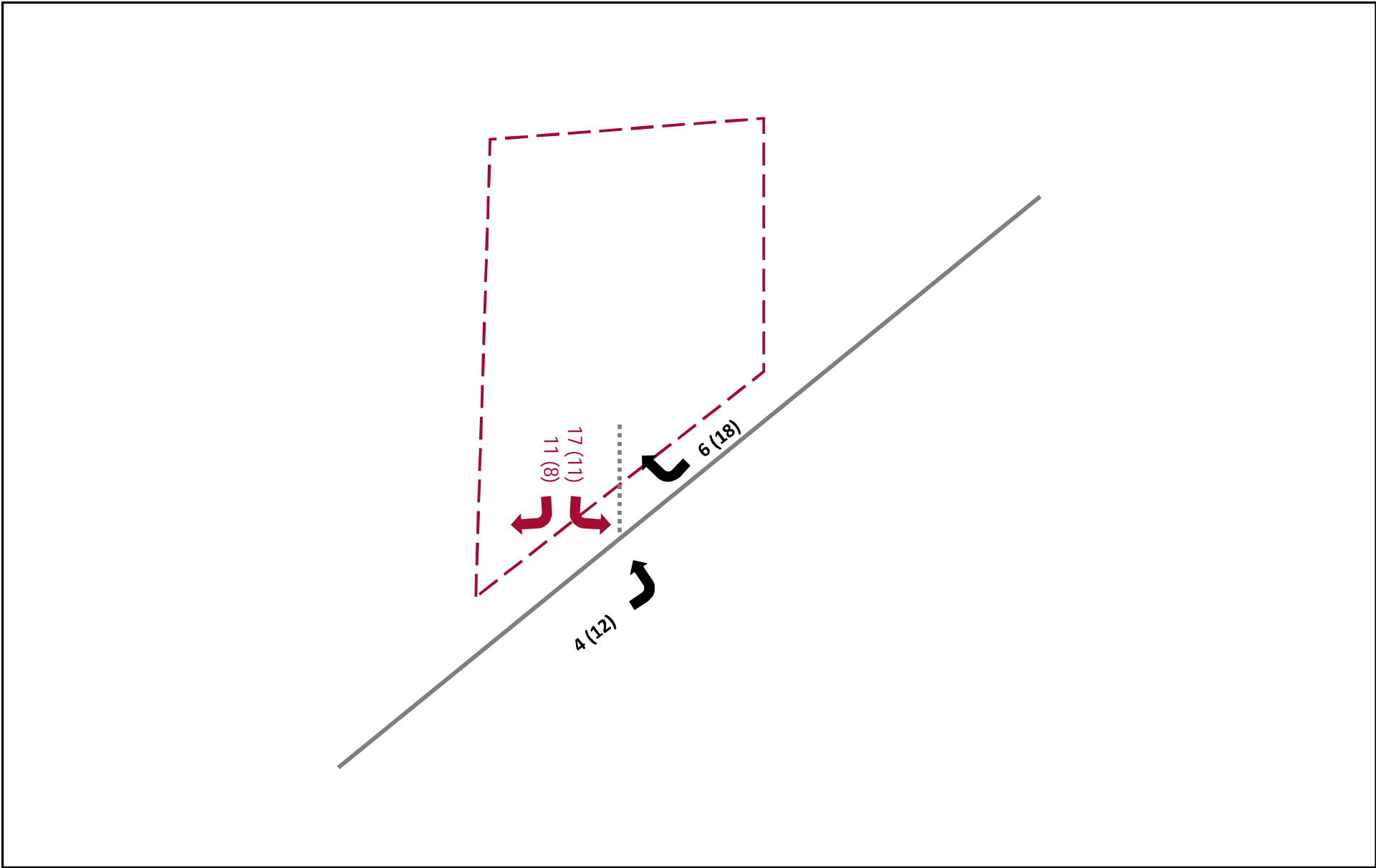
Movement	EBL	WBL	NBL	SBL
Provided Storage	225	200	225	200
Existing Scenario				
AM Peak Hour	108	84	80	33
PM Peak Hour	184	154	145	43
Background Scenario				
AM Peak Hour	125	97	102	37
PM Peak Hour	266	199	182	48
Future Total Scenario				
AM Peak Hour	126	97	109	37
PM Peak Hour	186	141	149	47

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.



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

Property Identification

Site Address: OKEECHOBEE RD Use Type: 1000 Parcel ID: 2417-504-0020-001-6 Jurisdiction: Fort Pierce Account #: 26668 Map ID: 24/17N Sec/Town/Range: 17/35S/40E 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
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Appendix B: St Lucie County Traffic Data



**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	VIRGINIA 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.

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 LYNNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNNGATE 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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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

Start Time	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				Int. Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
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

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S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

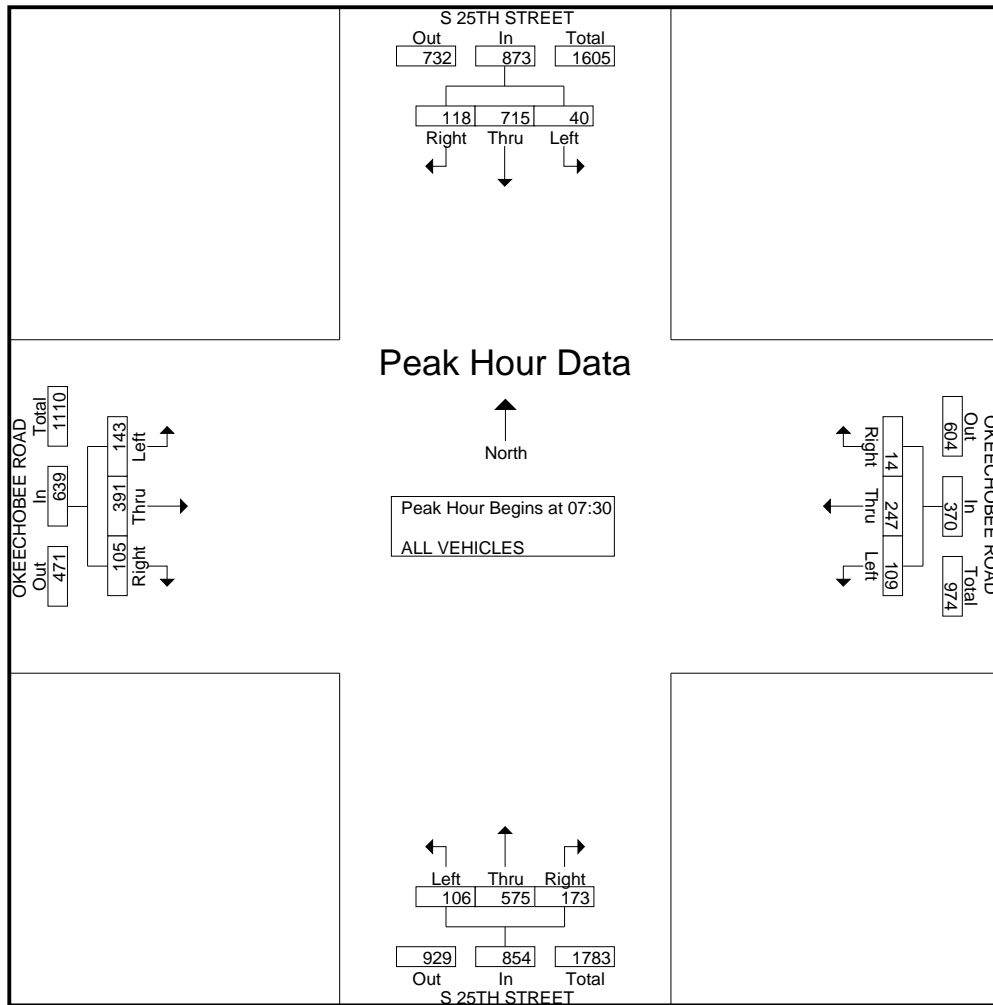
File Name : 25TH & OKEECHOBEE

Site Code : 190177

Start Date : 10/22/2019

Page No : 2

Start Time	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					Int. Total
	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. 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



Traffic Survey Specialists, Inc.

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S 25TH STREET & OKEECHOBEE ROAD
FORT PIERCE, FLORIDA

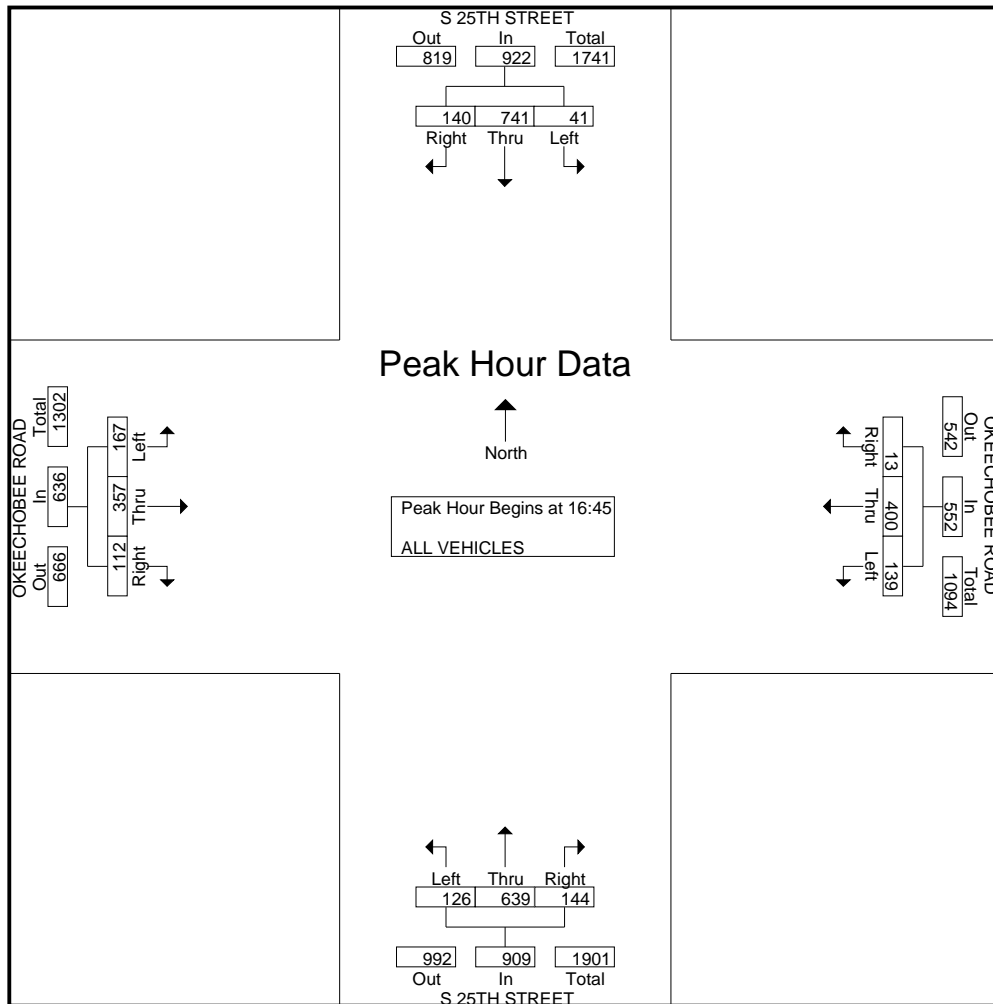
File Name : 25TH & OKEECHOBEE

Site Code : 190177

Start Date : 10/22/2019

Page No : 3

Start Time	S 25TH STREET From North					OKEECHOBEE ROAD From East					S 25TH STREET From South					OKEECHOBEE ROAD From West					Int. Total
	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. 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.

Delray Beach, Florida

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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

Start Time	S 25TH STREET From North				OKEECHOBEE ROAD From East				S 25TH STREET From South				OKEECHOBEE ROAD From West				Int. Total	
	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right		
08:00	1	0	1	0	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	0	1
Total	1	0	1	0	0	0	0	0	1	0	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	0	1
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	4
Total	0	0	2	0	0	0	0	0	0	0	1	0	1	0	2	0	0	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:15	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	0	4
17:45	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Total	0	0	1	0	0	0	1	0	1	0	2	0	1	0	1	0	0	7
Grand Total	1	0	4	0	0	0	1	0	2	0	3	0	2	0	3	0	0	16
Apprch %	20	0	80	0	0	0	100	0	40	0	60	0	40	0	60	0	0	
Total %	6.2	0	25	0	0	0	6.2	0	12.5	0	18.8	0	12.5	0	18.8	0	0	

VIRGINIA AVENUE & OKEECHOBEE ROAD
 FT PIERCE, FLORIDA
 COUNTED BY: S. SALVO & L. PALOMINO (V)
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 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

ALL VEHICLES

Date	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
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

VIRGINIA AVENUE & OKEECHOBEE ROAD
 FT PIERCE, FLORIDA
 COUNTED BY: S. SALVO & L. PALOMINO (V)
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 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 : 2

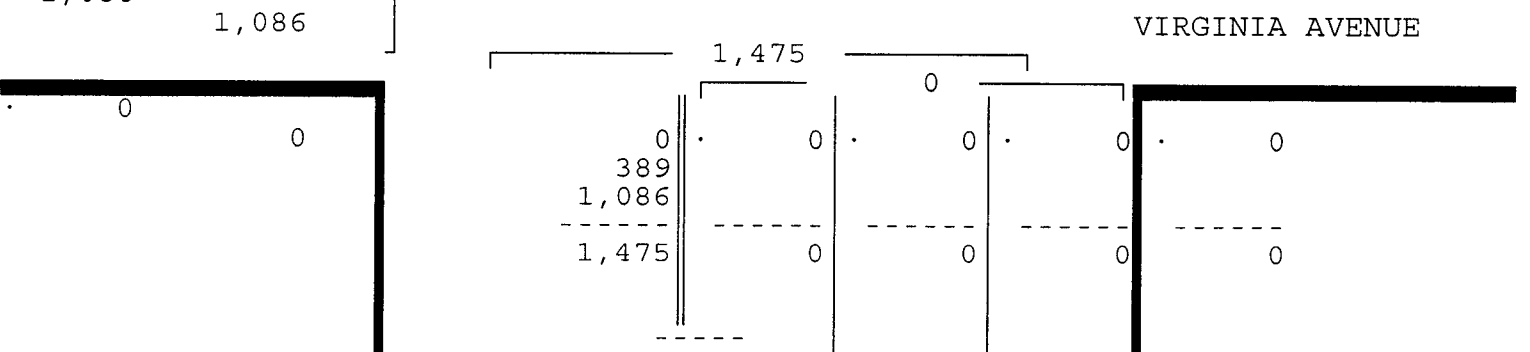
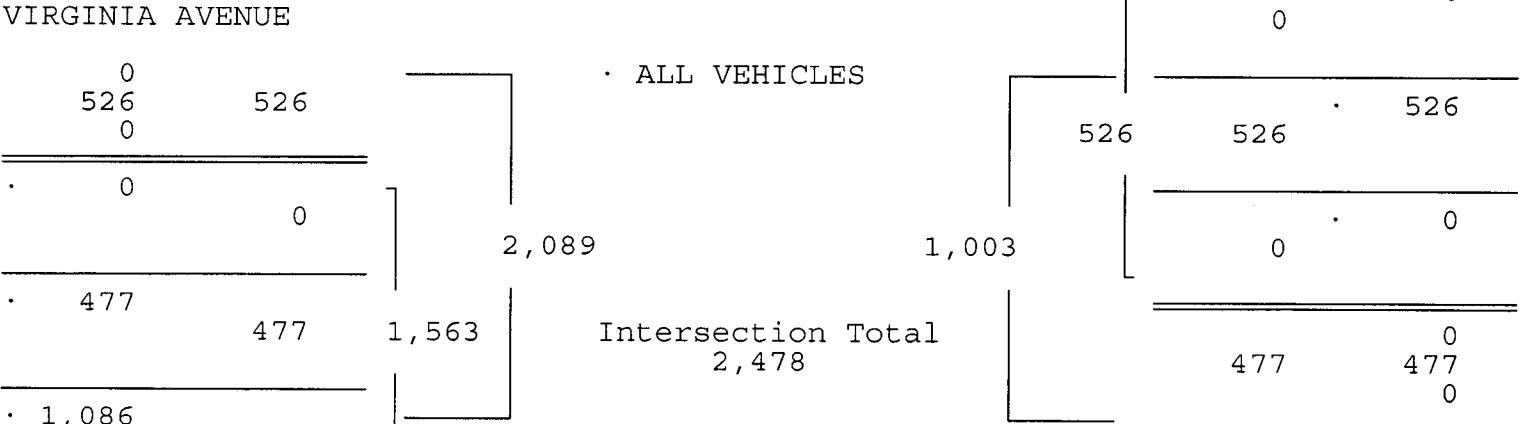
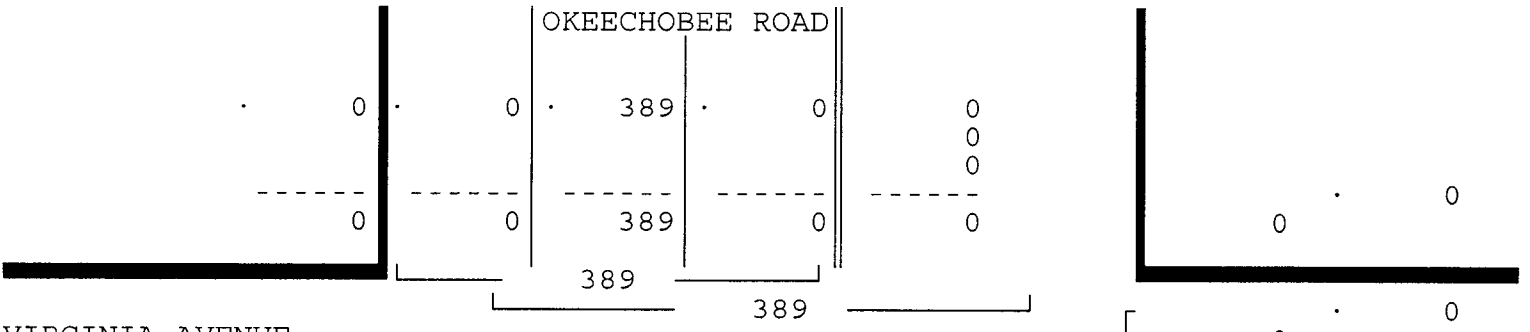
ALL VEHICLES

OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

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	526	0	0	0	0	0	0	0	477	1086
Percent	0%	0%	100%	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	136	0	0	0	0	0	0	0	134	317
Hi total	104			136			0			451					
PHF	.94			.97			.0			.87					



VIRGINIA AVENUE & OKEECHOBEE ROAD
 FT PIERCE, FLORIDA
 COUNTED BY: S. SALVO & L. PALOMINO (V)
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

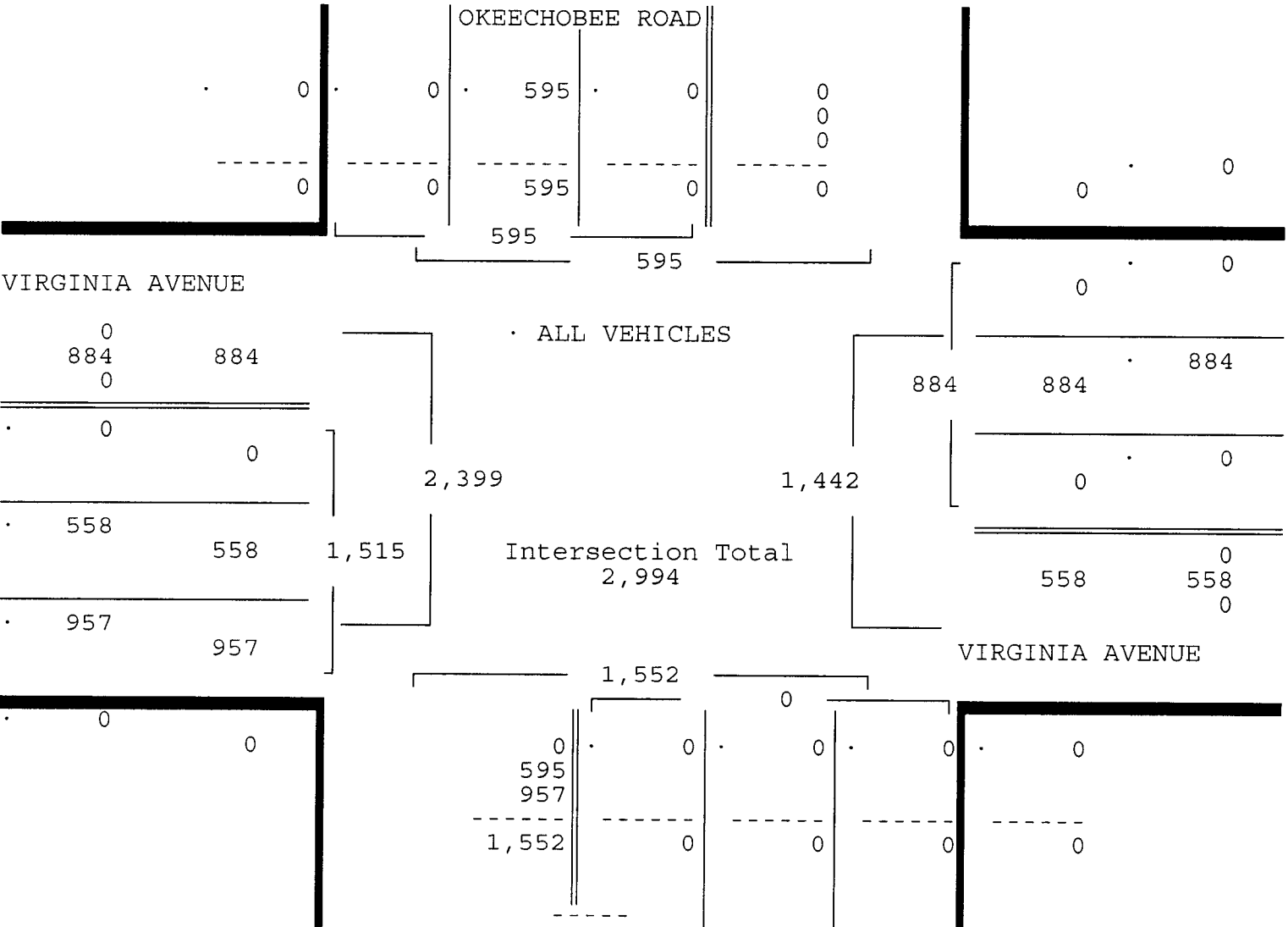
Site Code : 00190070
 Start Date: 04/03/19
 File I.D. : VIRG_OKE
 Page : 3

ALL VEHICLES

OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				VIRGINIA AVENUE From South				VIRGINIA AVENUE From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

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	884	0	0	0	0	0	0	0	558	957
Percent	0%	0%	100%	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	272	0	0	0	0	0	0	0	145	256
Hi total	167				272				0				401		
PHF	.89				.81				.0				.94		



VIRGINIA AVENUE & OKEECHOBEE ROAD
 FT PIERCE, FLORIDA
 COUNTED BY: S. SALVO & L. PALOMINO (V)
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 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

Date	OKEECHOBEE ROAD From North				VIRGINIA AVENUE From East				----- From South				VIRGINIA AVENUE From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
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 C9028; FM 230017 7 32 01)

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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 C9028; 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 & VIRGINIA 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

Timings
1: Okeechobee Road & Virginia Avenue



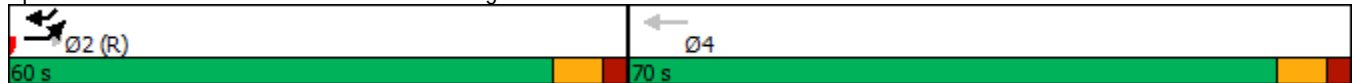
Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔
Traffic Volume (vph)	482	1097	531	393
Future Volume (vph)	482	1097	531	393
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (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 Effect 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 Capacity Utilization 36.2%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 1: Okeechobee Road & Virginia Avenue



Queues

1: Okeechobee Road & Virginia Avenue



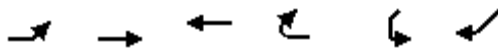
Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	507	1155	559	414
v/c Ratio	0.20	0.31	0.68	0.19
Control Delay	6.3	6.8	55.6	0.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.3	6.8	55.6	0.7
Queue Length 50th (ft)	62	112	164	0
Queue Length 95th (ft)	96	155	198	15
Internal Link Dist (ft)		358	1207	
Turn Bay 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

HCM Signalized Intersection Capacity Analysis

1: Okeechobee Road & Virginia Avenue

Existing AM Peak Hour.syn
06/22/2020



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

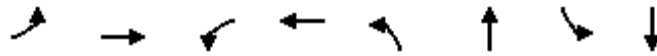
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
3: S 25th Street & Okeechobee Road

Existing AM Peak Hour.syn

06/22/2020

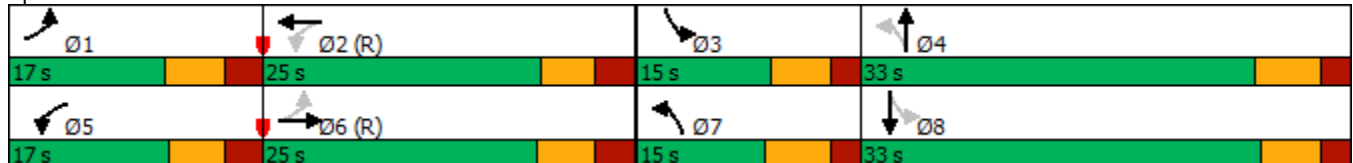


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	159	434	121	274	118	638	44	794
Future Volume (vph)	159	434	121	274	118	638	44	794
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	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 Effect 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

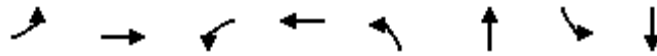
Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 59 (66%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 35.7
 Intersection LOS: D
 Intersection Capacity Utilization 79.2%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: S 25th Street & Okeechobee Road



Queues
3: S 25th Street & Okeechobee Road

Existing AM Peak Hour.syn
06/22/2020



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.

HCM Signalized Intersection Capacity Analysis

3: S 25th Street & Okeechobee Road

Existing AM Peak Hour.syn
06/22/2020



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

Timings
1: Okeechobee Road & Virginia Avenue

Existing PM Peak Hour.syn
06/22/2020

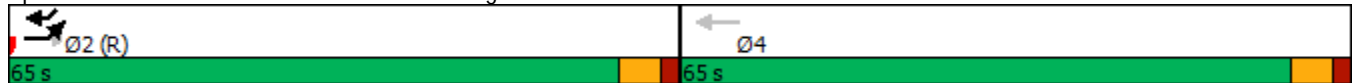


Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔
Traffic Volume (vph)	564	967	893	601
Future Volume (vph)	564	967	893	601
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	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 Effect 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 Capacity Utilization 48.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 1: Okeechobee Road & Virginia Avenue



Queues

1: Okeechobee Road & Virginia Avenue

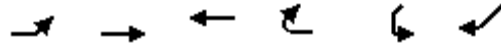


Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	594	1018	940	633
v/c Ratio	0.27	0.31	0.72	0.34
Control Delay	10.6	10.8	46.9	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	10.8	46.9	9.2
Queue Length 50th (ft)	102	128	265	100
Queue Length 95th (ft)	153	178	293	159
Internal Link Dist (ft)		326	1056	
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

HCM Signalized Intersection Capacity Analysis
 1: Okeechobee Road & Virginia Avenue

Existing PM Peak Hour.syn
 06/22/2020



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	

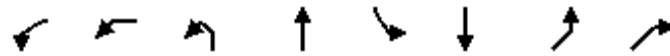
Intersection Summary			
HCM 2000 Control Delay		20.7	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio		0.44	
Actuated Cycle Length (s)		130.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization		48.3%	ICU Level of Service A
Analysis Period (min)		15	

c Critical Lane Group

Timings
3: Okeechobee Road & S 25th Street

Existing PM Peak Hour.syn

06/22/2020

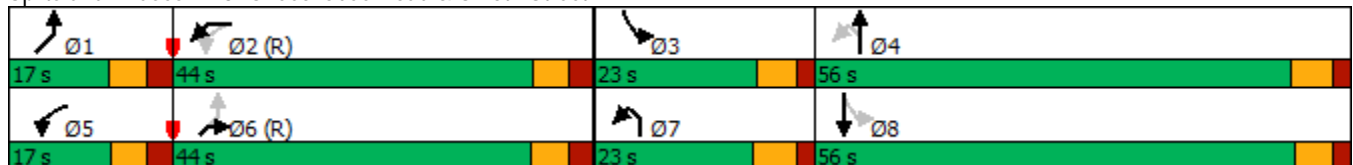


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations	↙	↙↘	↙	↑↓	↙	↑↓	↙	↘↙
Traffic Volume (vph)	154	444	140	709	46	823	185	396
Future Volume (vph)	154	444	140	709	46	823	185	396
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector 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 Effect 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 Capacity Utilization 80.1%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

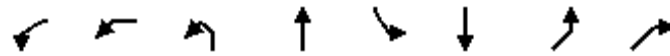
Splits and Phases: 3: Okeechobee Road & S 25th Street



Queues
3: Okeechobee Road & S 25th Street

Existing PM Peak Hour.syn

06/22/2020




























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

HCM Signalized Intersection Capacity Analysis
 3: Okeechobee Road & S 25th Street

Existing PM Peak Hour.syn

06/22/2020

												
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

Timings
1: Okeechobee Road & Virginia Avenue



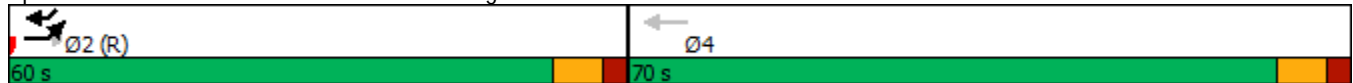
Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔
Traffic Volume (vph)	583	1274	628	469
Future Volume (vph)	583	1274	628	469
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (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 Effect 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 Capacity Utilization 40.9%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 1: Okeechobee Road & Virginia Avenue



Queues

1: Okeechobee Road & Virginia Avenue

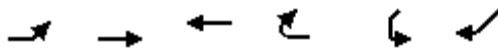


Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	614	1341	661	494
v/c Ratio	0.26	0.38	0.69	0.24
Control Delay	7.8	8.6	53.0	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	2.9
Queue Length 50th (ft)	88	153	191	24
Queue Length 95th (ft)	132	207	225	51
Internal Link Dist (ft)		282	721	
Turn Bay 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				

HCM Signalized Intersection Capacity Analysis

1: Okeechobee Road & Virginia Avenue

Background AM Peak Hour.syn
06/22/2020



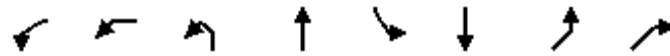
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	583	1274	628	0	0	469
Future Volume (vph)	583	1274	628	0	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			0.85
Flt Protected	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

Timings
3: Okeechobee Road & S 25th Street

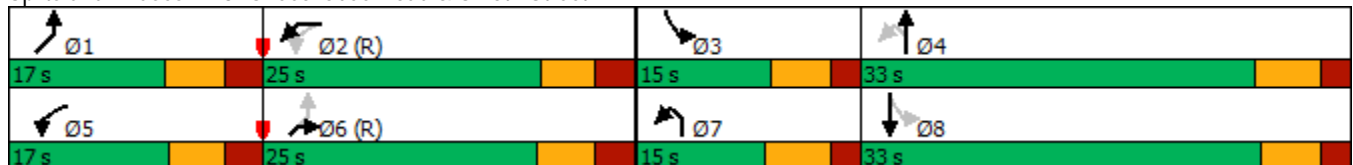


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations	↵	↵↵	↵	↑↑	↵	↑↑	↵	↵↵
Traffic Volume (vph)	141	318	137	741	51	922	185	504
Future Volume (vph)	141	318	137	741	51	922	185	504
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector 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 Effect 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	

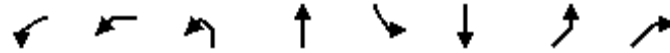
Intersection Summary

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 Capacity Utilization 79.4%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 3: Okeechobee Road & S 25th Street



Queues
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.

HCM Signalized Intersection Capacity Analysis

3: Okeechobee Road & S 25th Street

Background AM Peak Hour.syn

06/22/2020



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

Timings
1: Okeechobee Road & Virginia Avenue



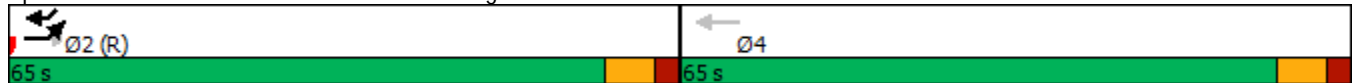
Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔
Traffic Volume (vph)	677	1141	1048	709
Future Volume (vph)	677	1141	1048	709
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (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 Effect 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 Capacity Utilization 57.2%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Okeechobee Road & Virginia Avenue



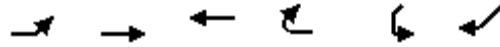
Queues

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				

HCM Signalized Intersection Capacity Analysis
 1: Okeechobee Road & Virginia Avenue

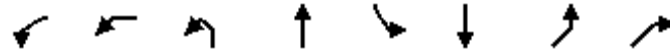


Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			↔↔
Traffic Volume (vph)	677	1141	1048	0	0	709
Future Volume (vph)	677	1141	1048	0	0	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			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

Timings
3: Okeechobee Road & S 25th Street

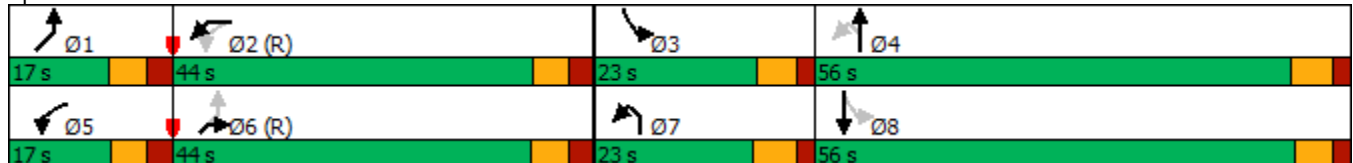


Lane Group	WBL2	WBL	NBL	NBT	SBL	SBT	NEL	NER
Lane Configurations	↙	↙↙	↙	↑↑	↙	↑↑	↙	↙↙
Traffic Volume (vph)	179	516	163	824	53	956	215	460
Future Volume (vph)	179	516	163	824	53	956	215	460
Turn Type	pm+pt	Prot	pm+pt	NA	pm+pt	NA	pm+pt	Prot
Protected Phases	5	2	7	4	3	8	1	6
Permitted Phases	2		4		8		6	
Detector 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 Effect 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	

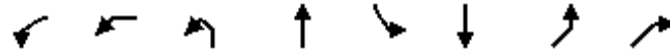
Intersection Summary

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



Queues
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

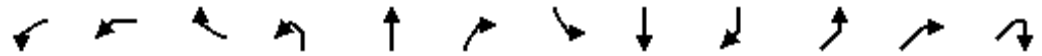
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
3: Okeechobee Road & S 25th Street

Background PM Peak Hour.syn

06/22/2020



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

Timings
1: Okeechobee Road & Virginia Avenue

Future Total AM peak.syn
06/22/2020

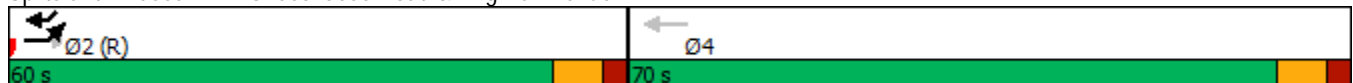


Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔
Traffic Volume (vph)	587	1274	628	479
Future Volume (vph)	587	1274	628	479
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (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 Effect 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



Queues

Future Total AM peak.syn

1: Okeechobee Road & Virginia Avenue

06/22/2020

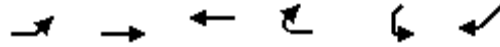


Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	618	1341	661	504
v/c Ratio	0.26	0.38	0.69	0.25
Control Delay	7.8	8.6	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	8.6	53.0	3.0
Queue Length 50th (ft)	89	153	191	26
Queue Length 95th (ft)	132	207	225	53
Internal Link Dist (ft)		281	1314	
Turn Bay 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

HCM Signalized Intersection Capacity Analysis
 1: Okeechobee Road & Virginia Avenue

Future Total AM peak.syn
 06/22/2020



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

Timings
3: Okeechobee Road & S 25th Street

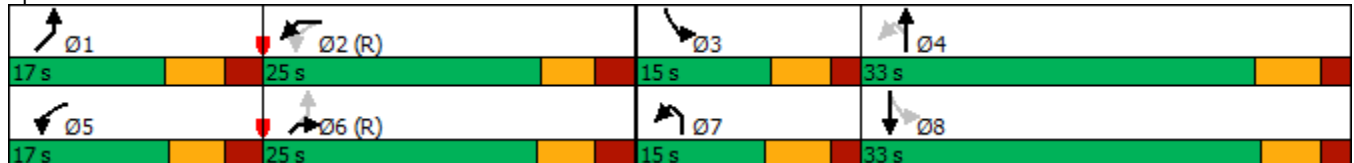
Future Total AM peak.syn
06/22/2020

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 Effect 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

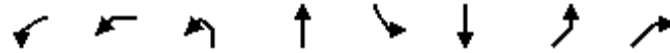
Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 59 (66%), Referenced to phase 2:WBL and 6:NEL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 48.1
 Intersection LOS: D
 Intersection Capacity Utilization 79.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: Okeechobee Road & S 25th Street



Queues
3: Okeechobee Road & S 25th Street

Future Total AM peak.syn
06/22/2020




























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.

HCM Signalized Intersection Capacity Analysis
3: Okeechobee Road & S 25th Street

Future Total AM peak.syn
06/22/2020

												
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

Timings
1: Okeechobee Road & Virginia Avenue

Future Total PM peak.syn
06/22/2020

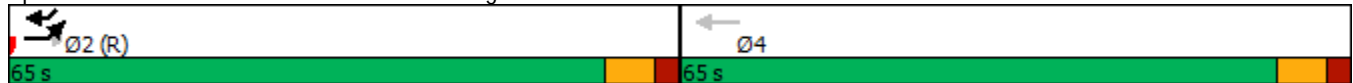


Lane Group	EBL	EBT	WBT	SWR
Lane Configurations	↖↖	↑↑↑	↑↑↑	↗↗
Traffic Volume (vph)	688	1141	1048	716
Future Volume (vph)	688	1141	1048	716
Turn Type	Prot	NA	NA	Over
Protected Phases	2			2
Permitted Phases		2	4	
Detector Phase	2	2	4	2
Switch Phase				
Minimum Initial (s)	12.0	12.0	12.0	12.0
Minimum Split (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 Effect 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 Capacity Utilization 57.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Okeechobee Road & Virginia Avenue



Queues

1: Okeechobee Road & Virginia Avenue

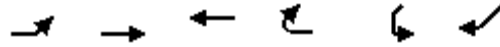


Lane Group	EBL	EBT	WBT	SWR
Lane Group Flow (vph)	724	1201	1103	754
v/c Ratio	0.48	0.53	0.49	0.59
Control Delay	26.8	27.4	26.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.8	27.4	26.6	26.9
Queue Length 50th (ft)	218	265	237	244
Queue Length 95th (ft)	272	310	279	315
Internal Link Dist (ft)		228	779	
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

HCM Signalized Intersection Capacity Analysis
 1: Okeechobee Road & Virginia Avenue

Future Total PM peak.syn
 06/22/2020

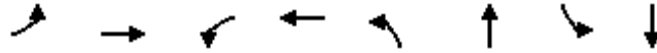


Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			↔↔
Traffic Volume (vph)	688	1141	1048	0	0	716
Future Volume (vph)	688	1141	1048	0	0	716
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.3	7.3	7.3			7.3
Lane Util. Factor	0.97	0.91	0.91			0.88
Frt	1.00	1.00	1.00			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			

Timings
3: S 25th Street & Okeechobee Road

Future Total PM peak.syn
06/22/2020

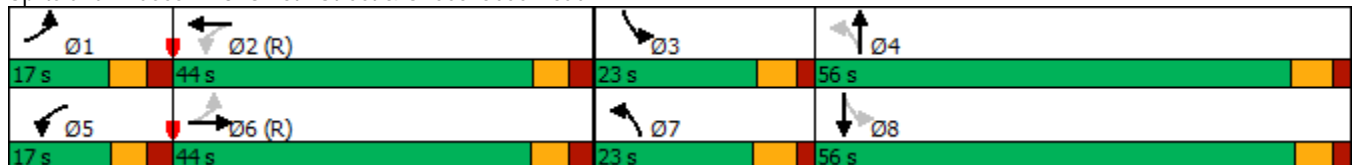


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	186	515	141	322	139	741	51	923
Future Volume (vph)	186	515	141	322	139	741	51	923
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	6	5	2	7	4	3	8
Permitted Phases	6		2		4		8	
Detector Phase	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 Effect 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

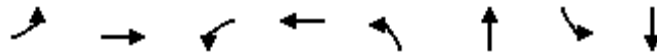
Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 49 (35%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 44.1
 Intersection LOS: D
 Intersection Capacity Utilization 86.9%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 3: S 25th Street & Okeechobee Road



Queues
3: S 25th Street & Okeechobee Road

Future Total PM peak.syn
06/22/2020



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.

HCM Signalized Intersection Capacity Analysis
 3: S 25th Street & Okeechobee Road

Future Total PM peak.syn
 06/22/2020



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:
 County:
 FDOT District:

Analysis Date:
 Conducted By:
 Checked By:
 Agency/Company Name:

Intersection & Approach Description:

Analysis Scenario:
 Design Hour:
 Intersection Control:
 Posted Speed Limit (MPH):
 Type of Terrain:

Number of Approach Lanes:
 Undivided or Divided Highway:

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement	Include?	Volume	% Trucks	PCEV	
Advancing	Left	12	2.0%	13	
	Through	-	2.0%	713	
	Right	No		0.0%	N/A
Opposing	Left	No		0.0%	N/A
	Through	-	2.0%	747	
	Right	Yes	18	2.0%	19

Advancing Volume:
 Opposing Volume:
 Left Turn Volume:

% Left Turns in Advancing Volume:

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure:

Warrant Met?:

Additional Comments / Justifications:

designed SBD
drawn LTH, ST
checked SBD
date 03/25/2020
scale 3/16"=1'-0" (I.D.N.)
job no. 140125_A16

Scott Blakeslee Disher
AR-0011586 AA-0003285

16 UNIT APARTMENT BUILDING

ARIA APARTMENTS
FORT PIERCE, FLORIDA
by: ARROW INVESTMENT GROUP, LLC.

project

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ELEVATIONS



REAR ELEVATION
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"

designed SBD
drawn LTH, ST
checked SBD
date 09/25/2020
scale 3/16"=1'-0" (I.D.N.)
job no. 190725_A16

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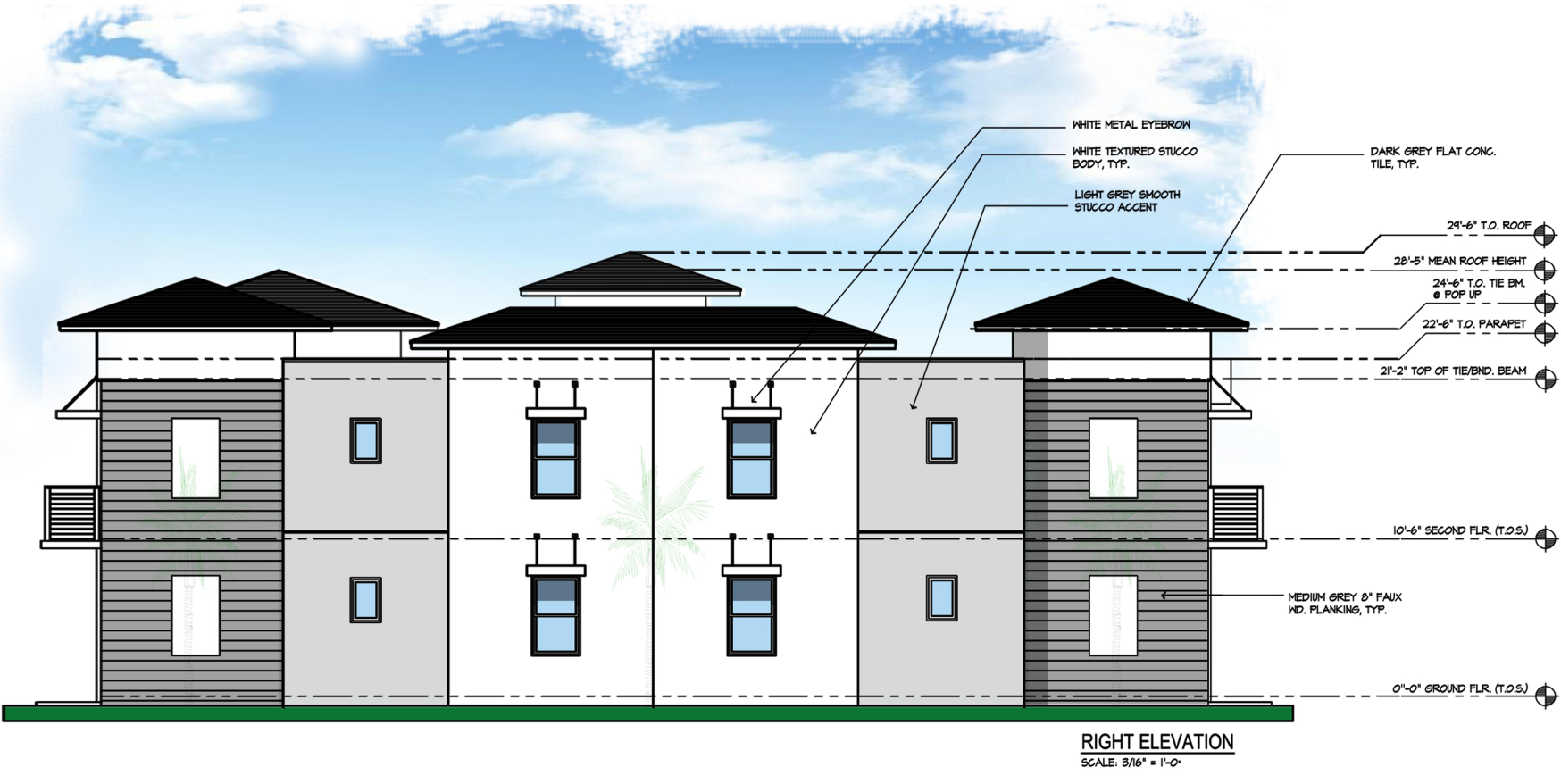
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CALCULATIONS (PER LEVEL)		
AIR CONDITIONED AREAS		
AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
AC (4)	UNIT D	957 SF
AC (3)	UNIT C	957 SF
AC (2)	UNIT B	1227 SF
AC	UNIT A	735 SF
TTL.		7752 SF

NON CONDITIONED AREAS		
NC	BREEZEWAY	522 SF
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

revisions
no. date
REVISION 6/17/20

designed SBD
drawn LTH, ST
checked SBD
date 03/25/2020
scale 3/16"=1'-0" (1/2"=1')
job no. 140725_A16

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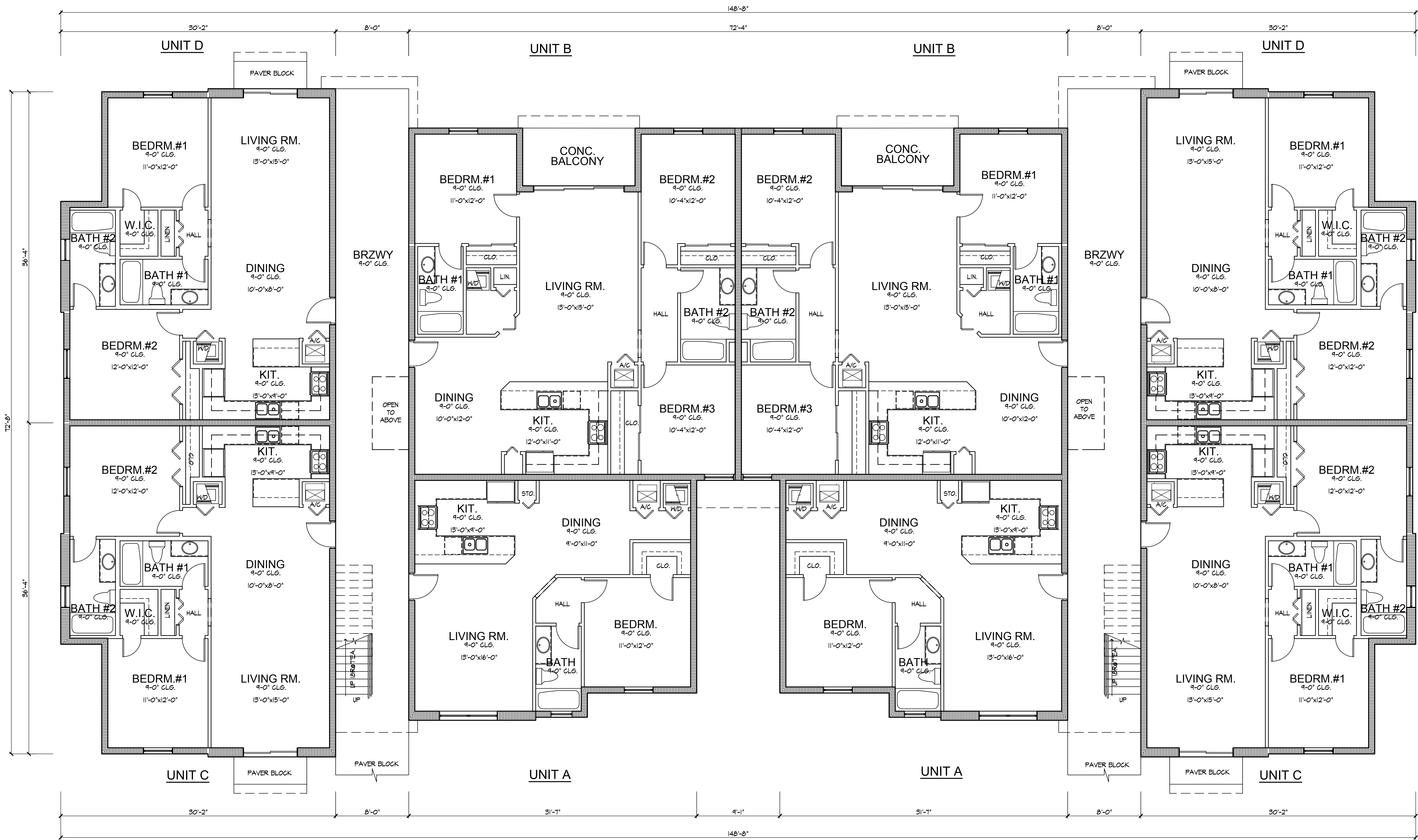
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drawing
GROUND
FLOOR PLAN

sheet
A-1



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16 UNIT APARTMENT BUILDING
ARIA APARTMENTS
FORT PIERCE, FLORIDA
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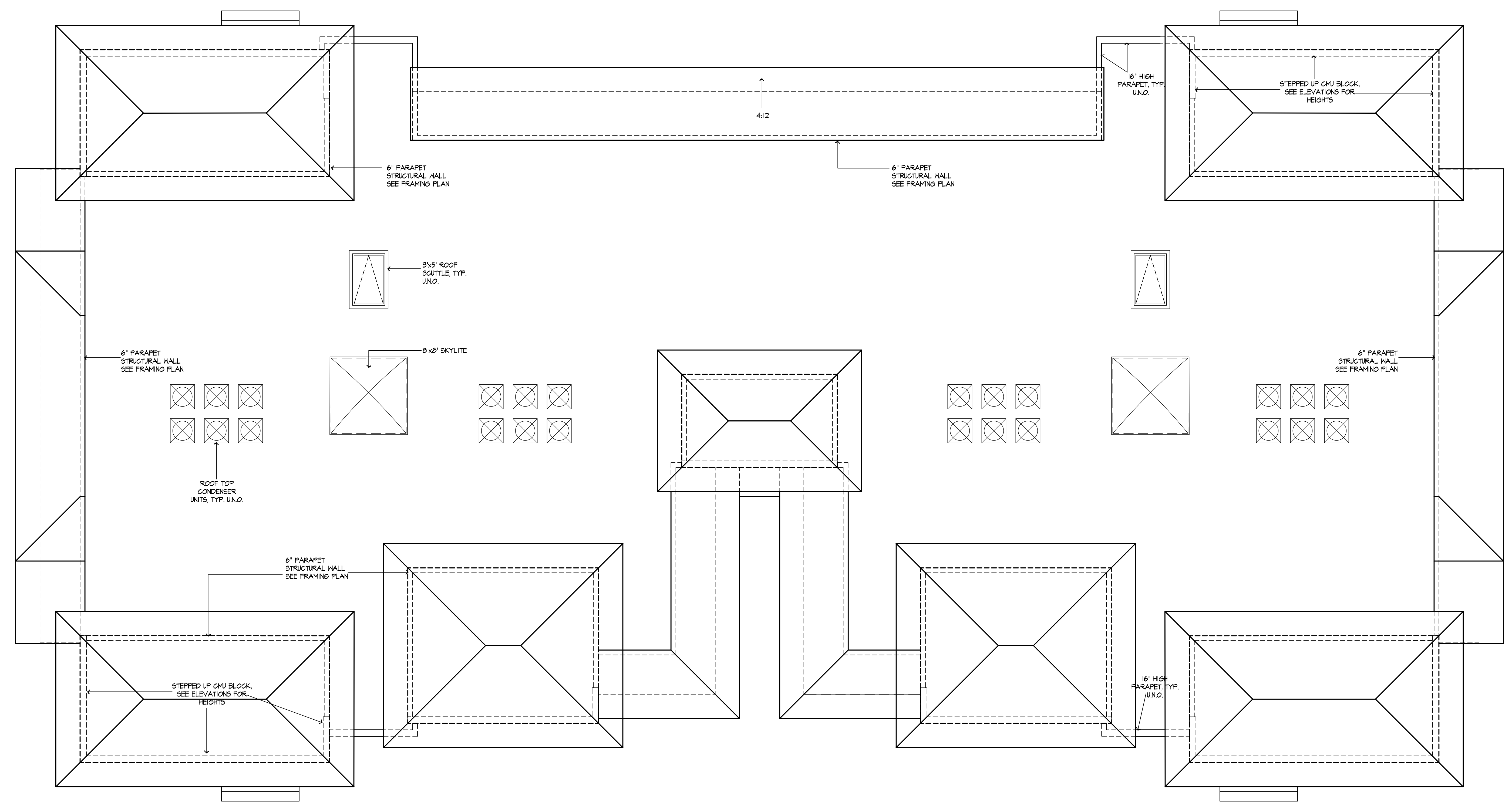
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drawing
SECOND
FLOOR PLAN

sheet
A-3







REAR ELEVATION
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"

revisions no. REVIEW date 6/18/20

designed SBD
drawn LTH, ST
checked SBD
date 02/25/2020
scale 3/16"=1'-0" (U.O.N.)
job no. 140725_A16

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24 UNIT APARTMENT BUILDING

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sheet
A-4

designed SBD
drawn LTH, ST
checked SBD
date 09/25/2020
scale 3/16"=1'-0" (I.D.N.)
job no. 190725_A16

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24 UNIT APARTMENT BUILDING

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sheet
A-5



LEFT ELEVATION
SCALE: 3/16" = 1'-0"



RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

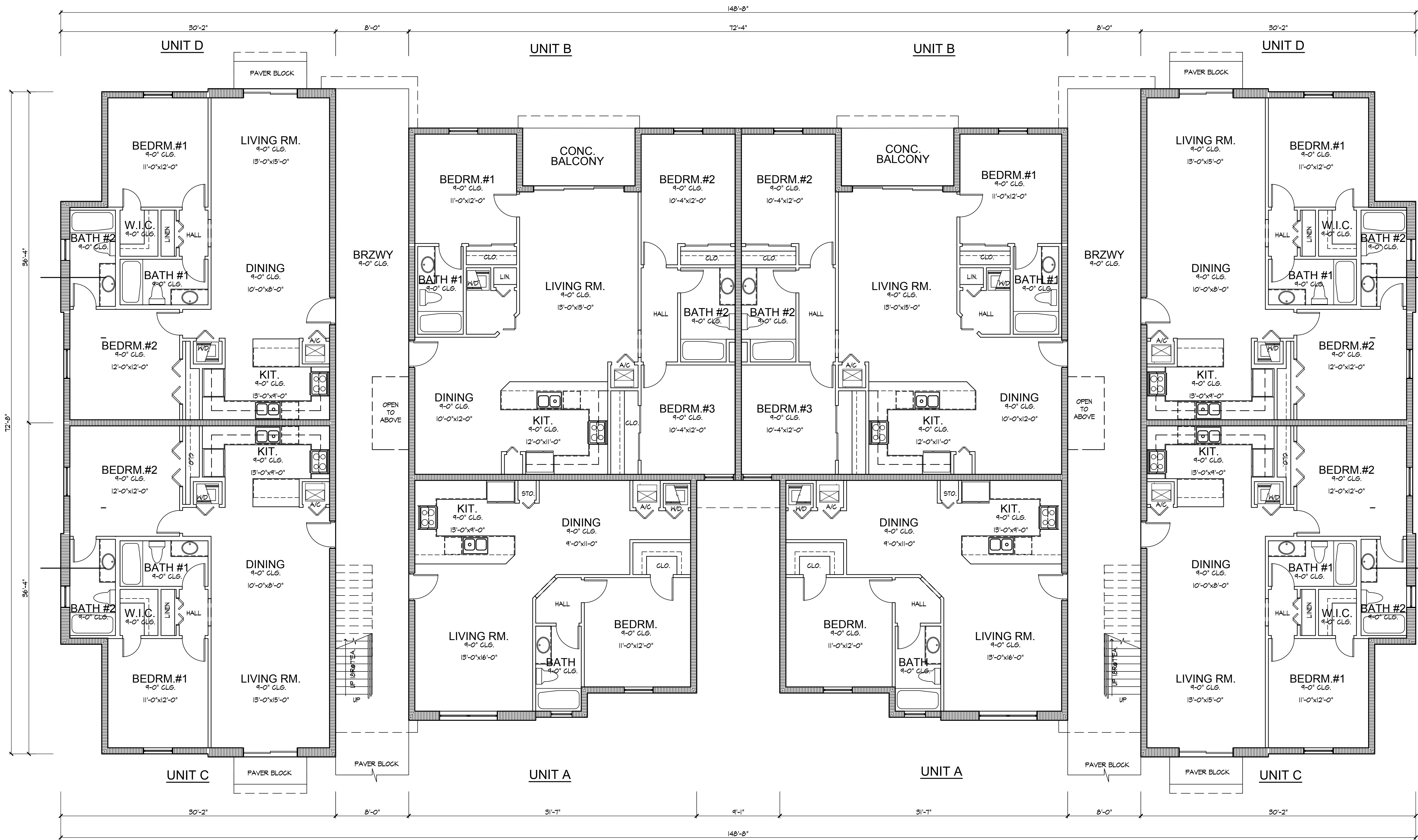
CALCULATIONS (PER LEVEL)		
AIR CONDITIONED AREAS		
AC	UNIT A	735 SF
AC (2)	UNIT B	1227 SF
AC (3)	UNIT C	957 SF
AC (4)	UNIT D	957 SF
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AC (3)	UNIT C	957 SF
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AC	UNIT A	735 SF
TTL.		7752 SF

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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

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no. date
REVIEW 6/18/20

designed SBD
drawn LTH, ST
checked SBD
date 03/25/2020
scale 3/16"=1'-0" (1/2")
job no. 140725_A16

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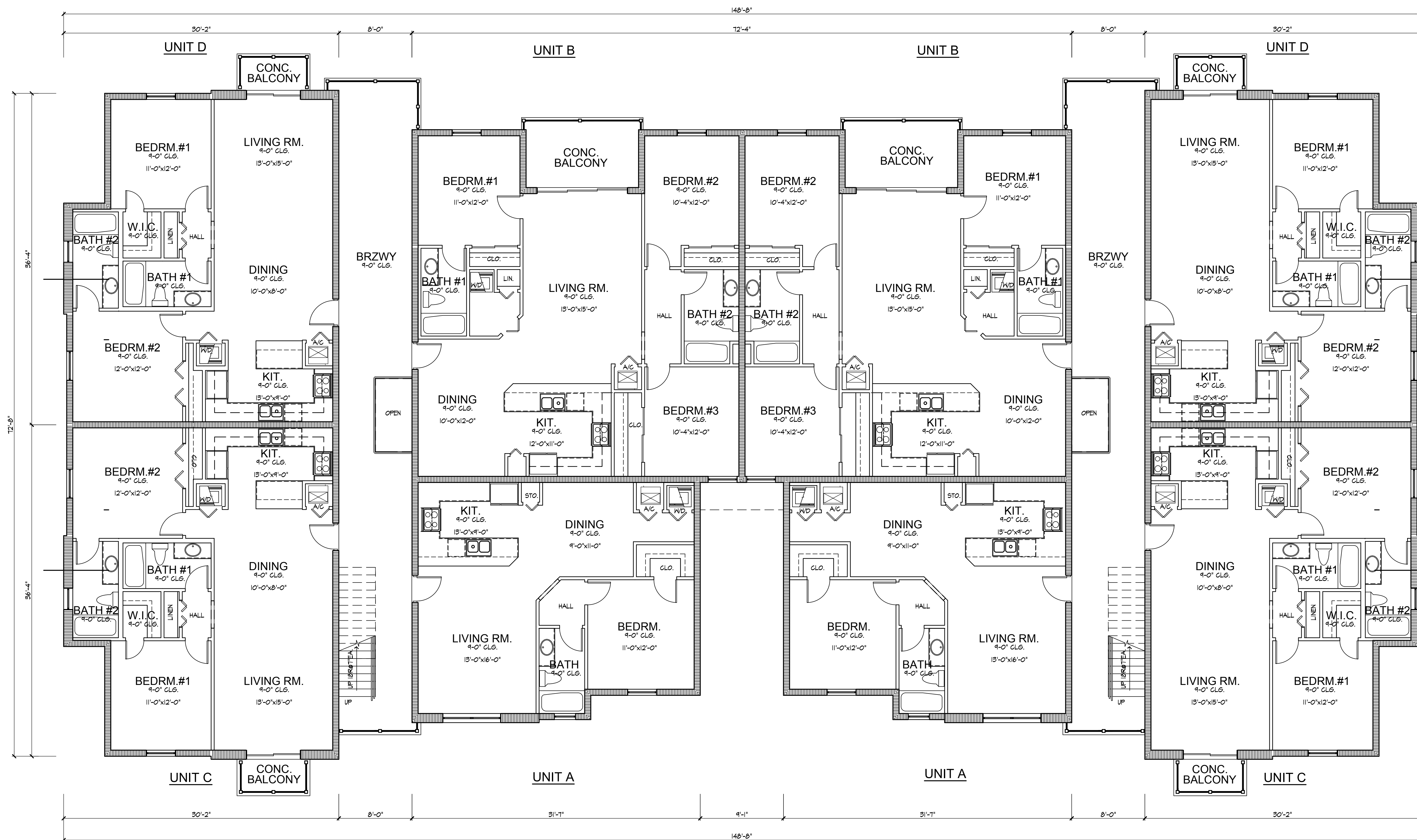
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FLOOR PLAN

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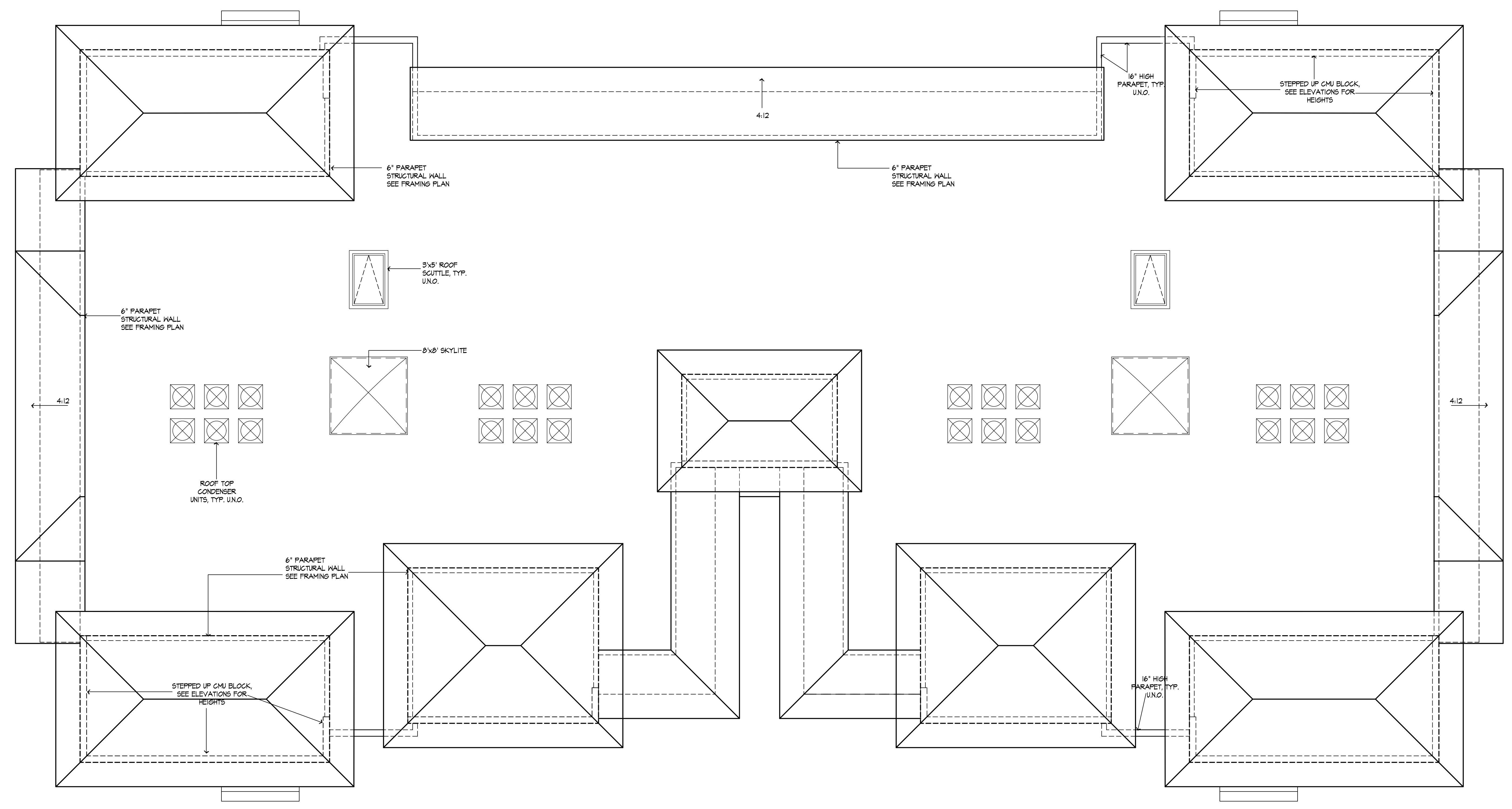
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THIRD
FLOOR PLAN



designed SED
drawn VHV
checked SED
date 6/19/20
scale 1/4" = 1'-0" (U.O.N.)
job no. 190723_CHA16

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AR-0011586 AA-0003285

CLUBHOUSE
ARIA APARTMENTS
FT. PIERCE, FLORIDA
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by: ARROW INVESTMENT GROUP

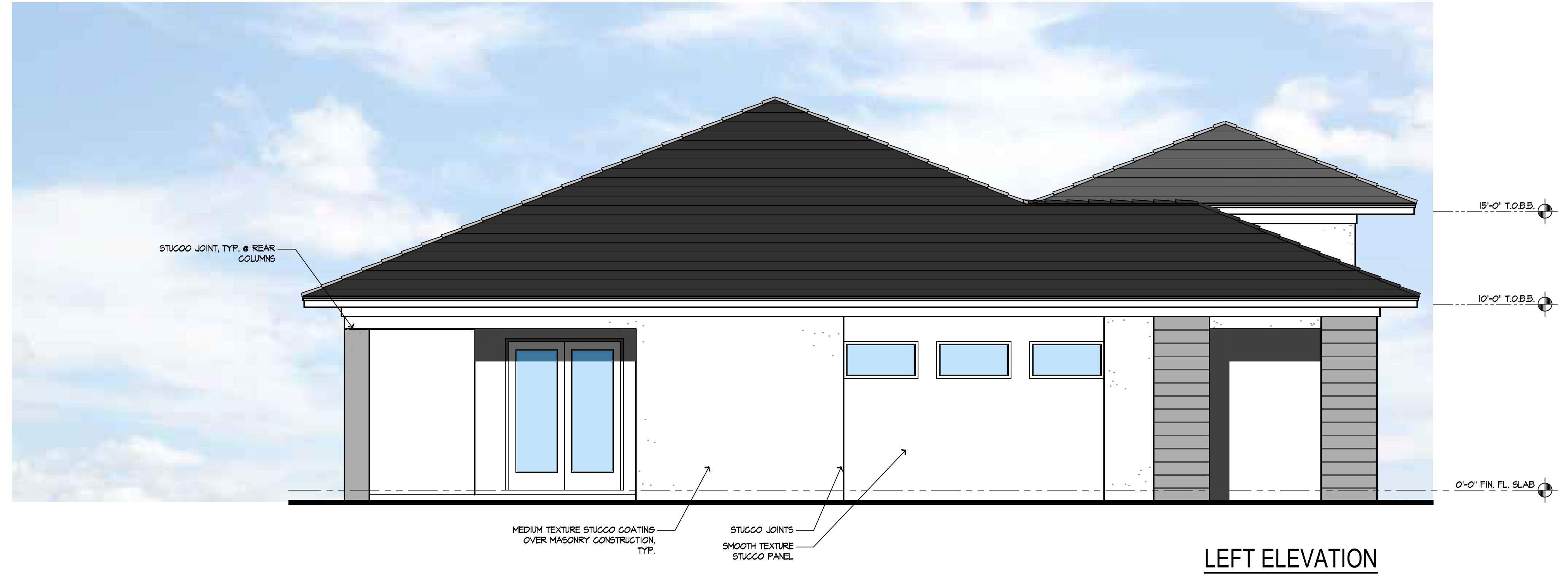
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drawing
ELEVATIONS

sheet
A-2



designed SED
drawn VHV
checked SED
date 6/19/20
scale 1/4" = 1'-0" (A.O.N.)
job no. 190723_GHA16

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AR-0011586 AA-0003285



LEFT ELEVATION



RIGHT ELEVATION

CLUBHOUSE
project
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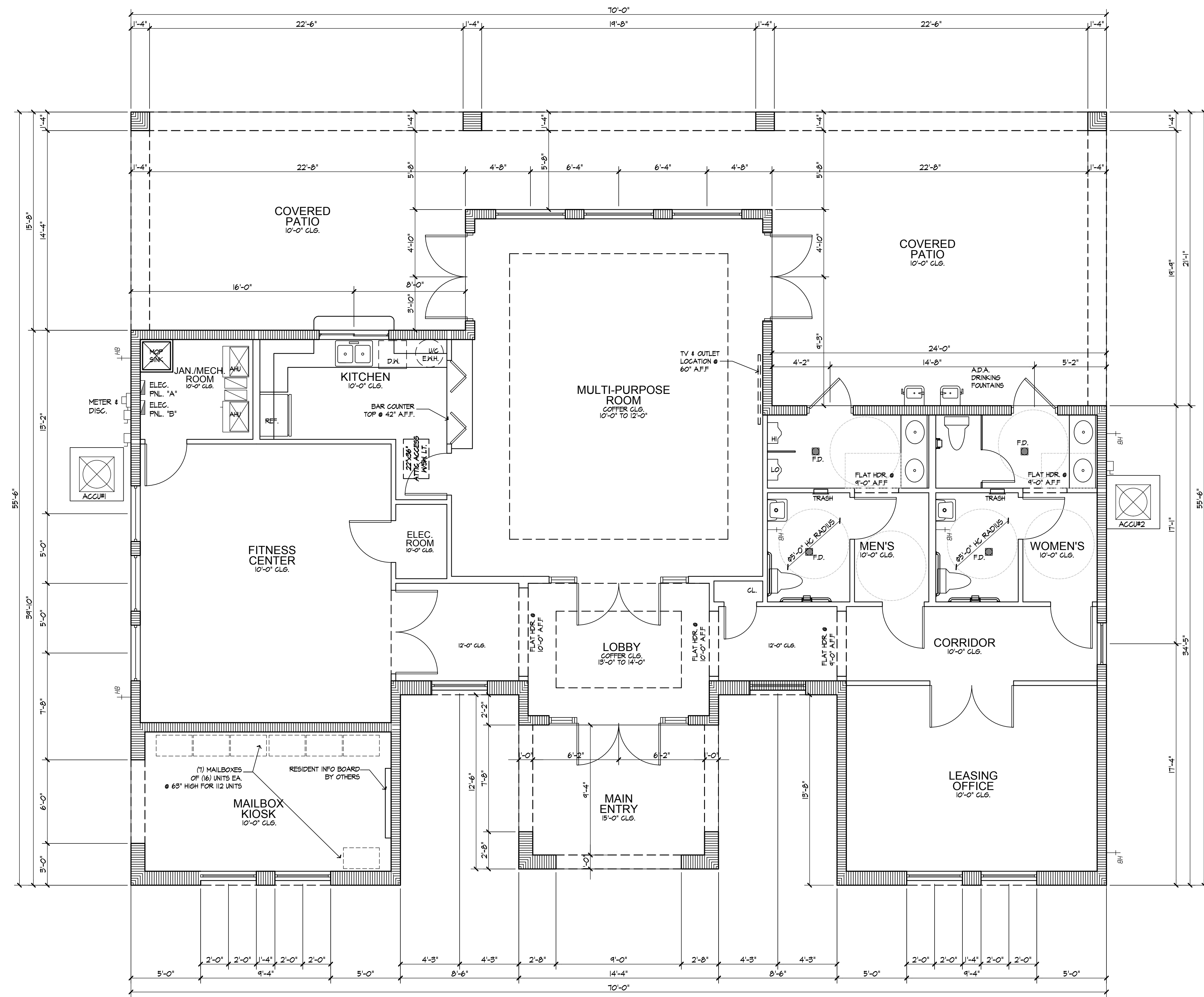
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ELEVATIONS

designed SED
drawn VHV
checked SED
date 6/19/20
scale 1/4" = 1'-0" (I.O.N.)
job no. 190729_CHA16

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



Scott Blakeslee Disher
AR-0011586 AA-0003285

CLUBHOUSE
ARIA APARTMENTS
FT. PIERCE, FLORIDA
project
by: ARROW INVESTMENT GROUP

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drawing
FLOOR PLAN

revisions
no. date
0 //

designed SED
drawn VHV
checked SED
date 6/19/20
scale 1/4" = 1'-0" (U.S.N.)
job no. 190723_CHA16

Scott Blakeslee Disher
AR-0011586 AA-0003285

project
CLUBHOUSE
ARIA APARTMENTS
FT. PIERCE, FLORIDA
by: ARROW INVESTMENT GROUP

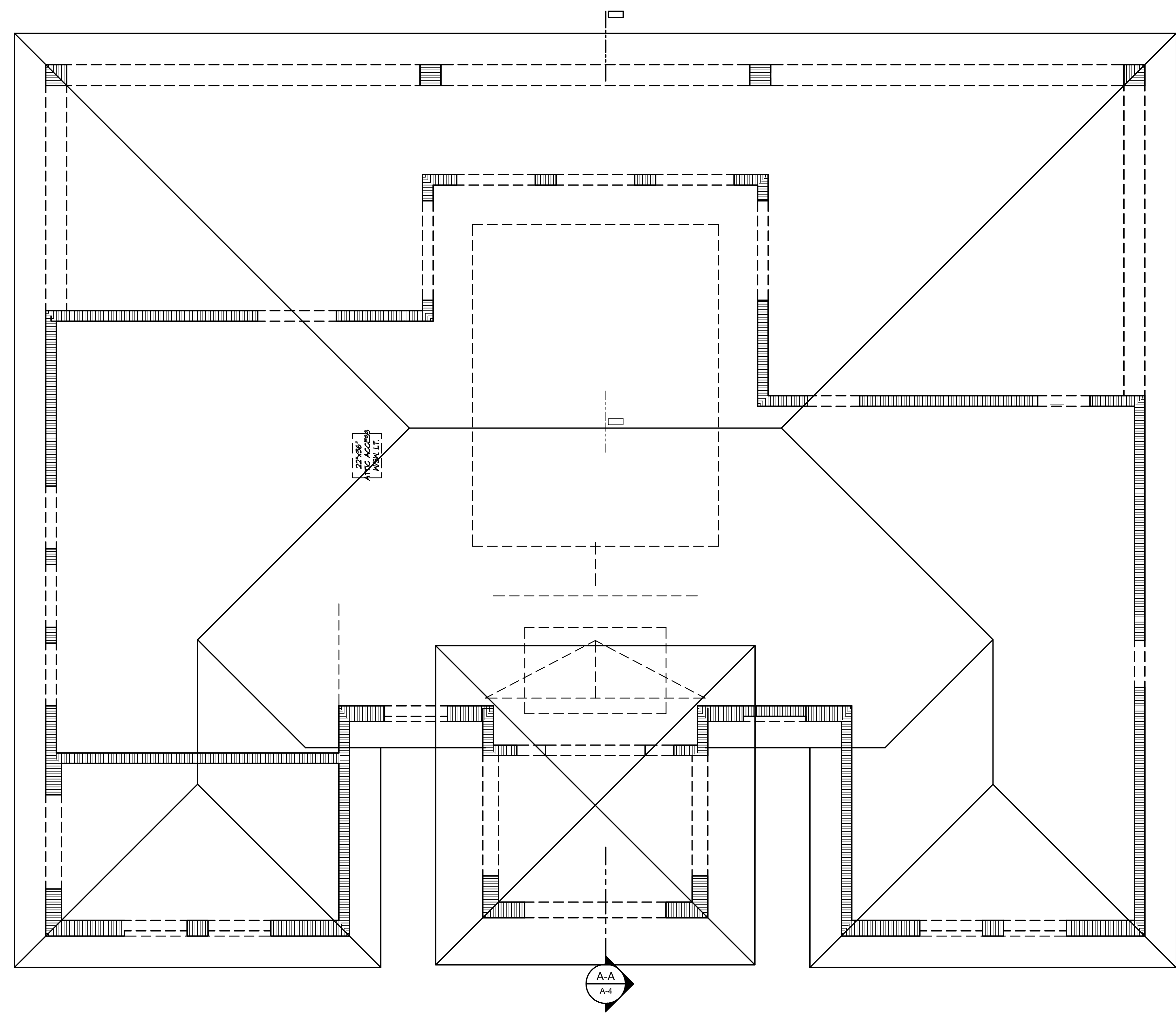
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drawing
ROOF
FRAMING
PLAN

sheet
S-2



designed SBD
drawn VHV
checked SBD
date 06/12/20
scale 1/4" = 1'-0" (1/2"N)
job no. 190724_EM.dwg

Scott Blakeslee Dishar
AR-0011586 AA-0003285
PROGRESS SET
06/15/20

ENTRY MONUMENT
FORT PIERCE NORTH APTS. & COMMERCIAL CENTER
FT. PIERCE, FLORIDA
by: ARROW INVESTMENT GROUP

project

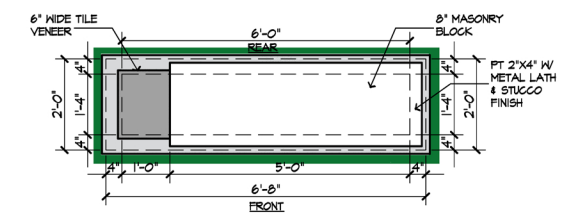
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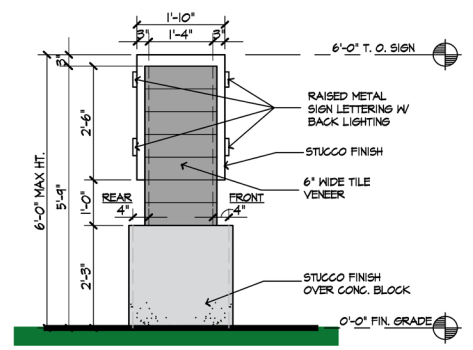
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drawing
**ENTRY
MONUMENT**

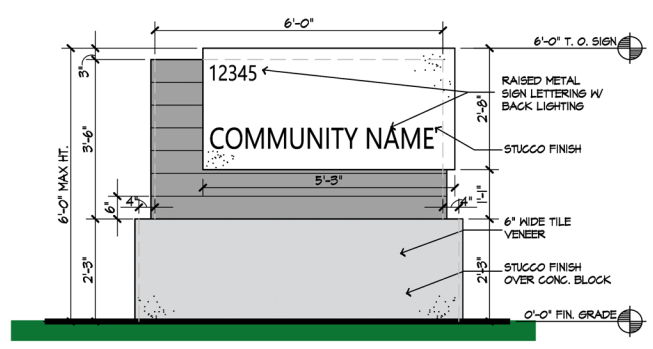
sheet
A-1



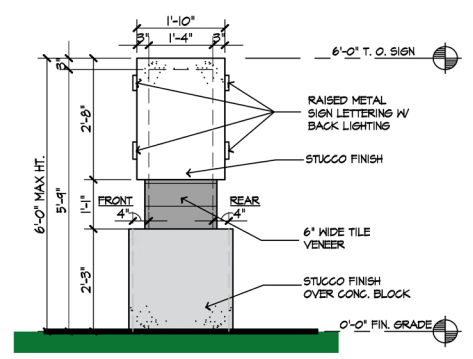
ENTRY MONUMENT PLAN
SCALE: 1/2" = 1'-0"



ENTRY MONUMENT LEFT SIDE ELEVATION
SCALE: 1/2" = 1'-0"



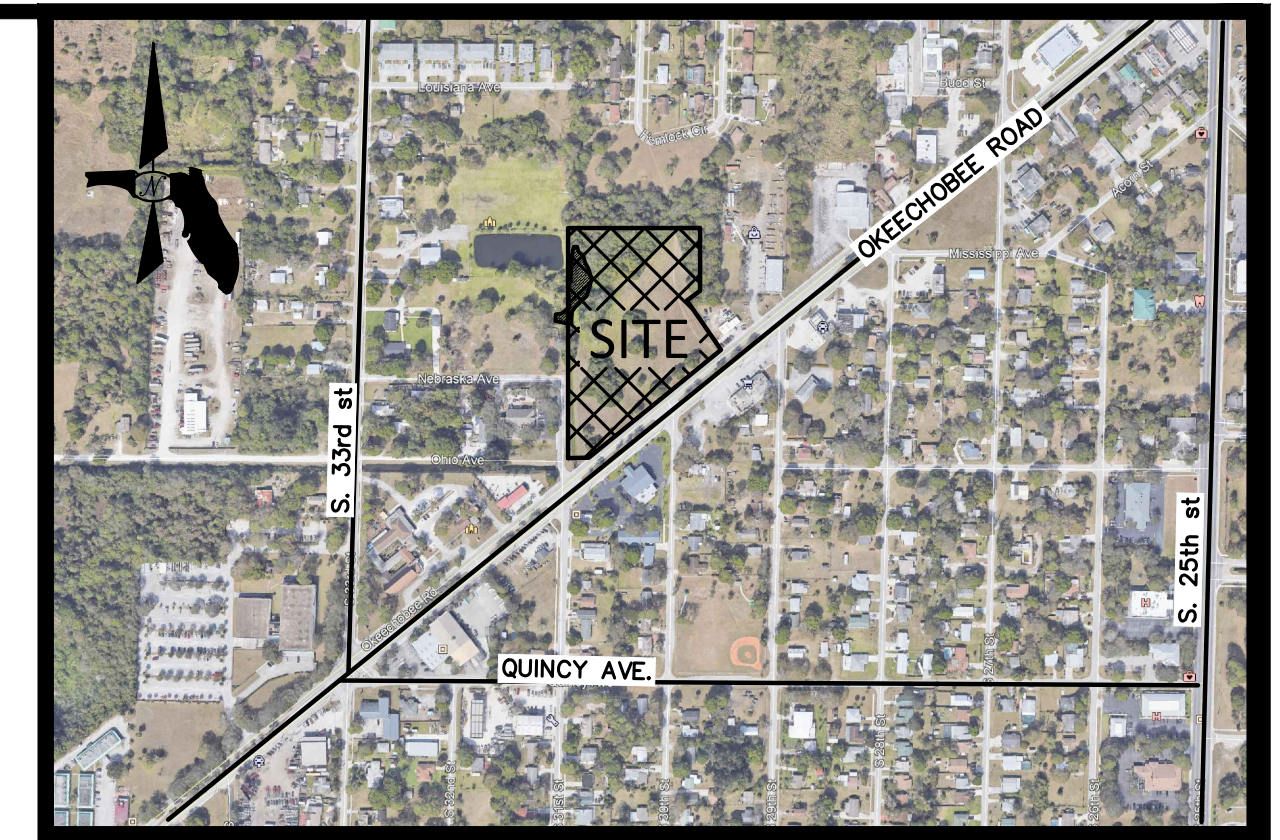
ENTRY MONUMENT FRONT ELEVATION
SCALE: 1/2" = 1'-0" (REAR ELEVATION TO MATCH FRONT ELEVATION)



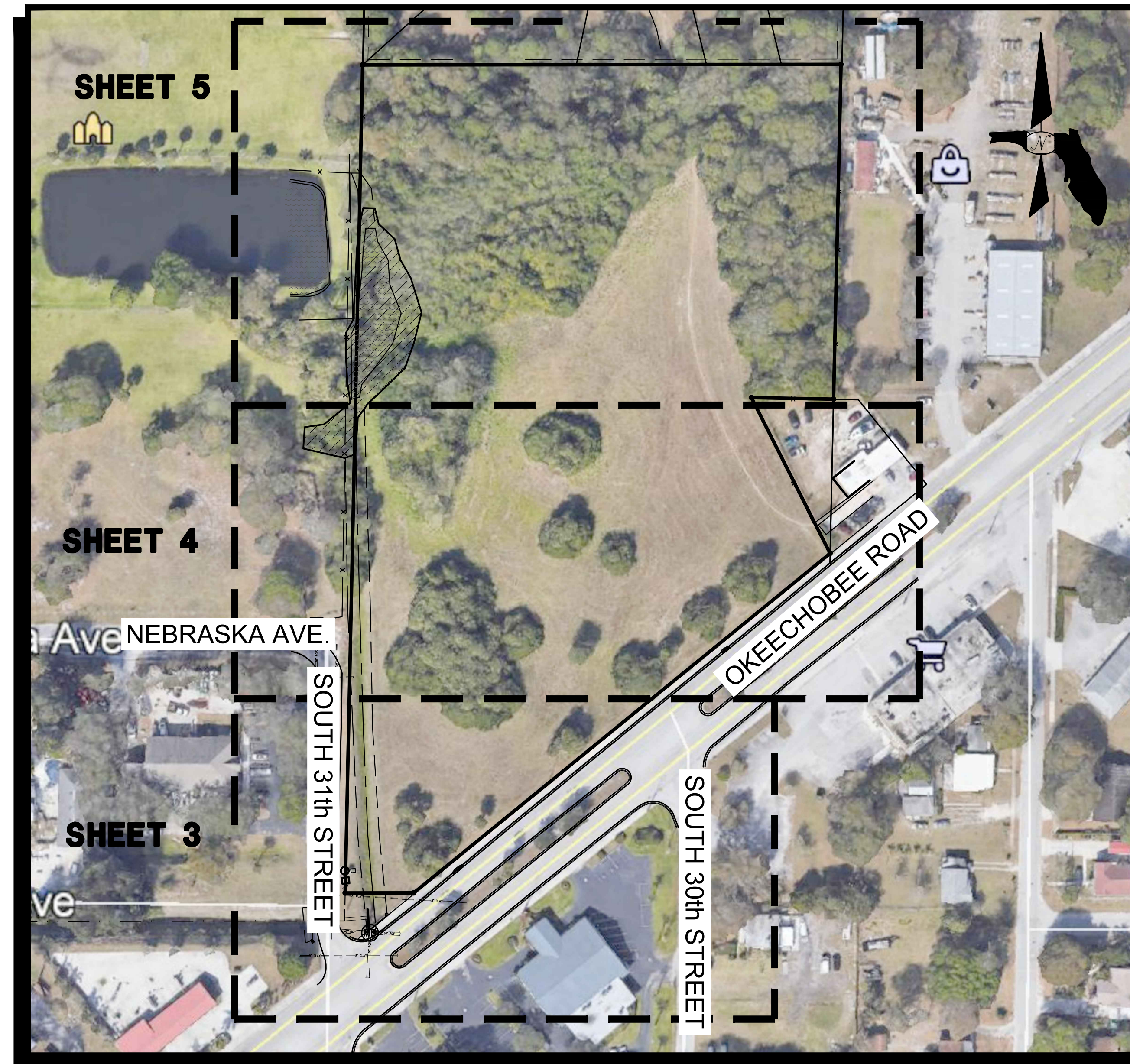
ENTRY MONUMENT RIGHT SIDE ELEVATION
SCALE: 1/2" = 1'-0"

ST. LUCIE COUNTY STATE OF FLORIDA

SKETCH OF BOUNDARY SURVEY FOR FORT PIERCE NORTH PROPERTY OKEECHOBEE ROAD



VICINITY MAP
NOT TO SCALE



KEY 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
 - P.G. - 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
 - ROP - 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.

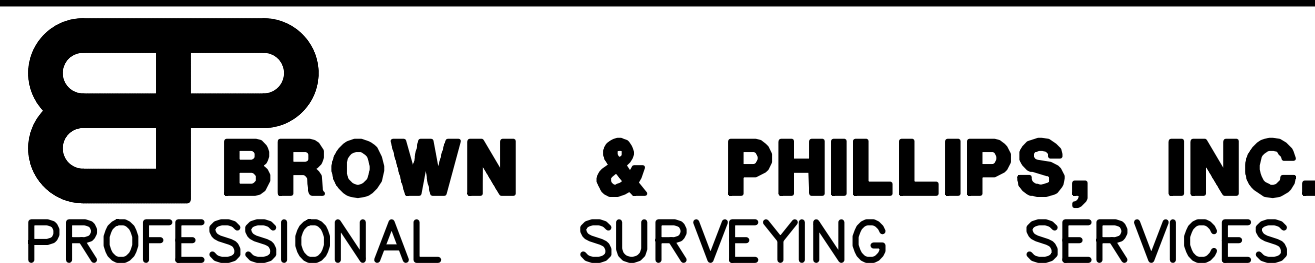
SURVEY REPORT:

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. ^ox^o 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.

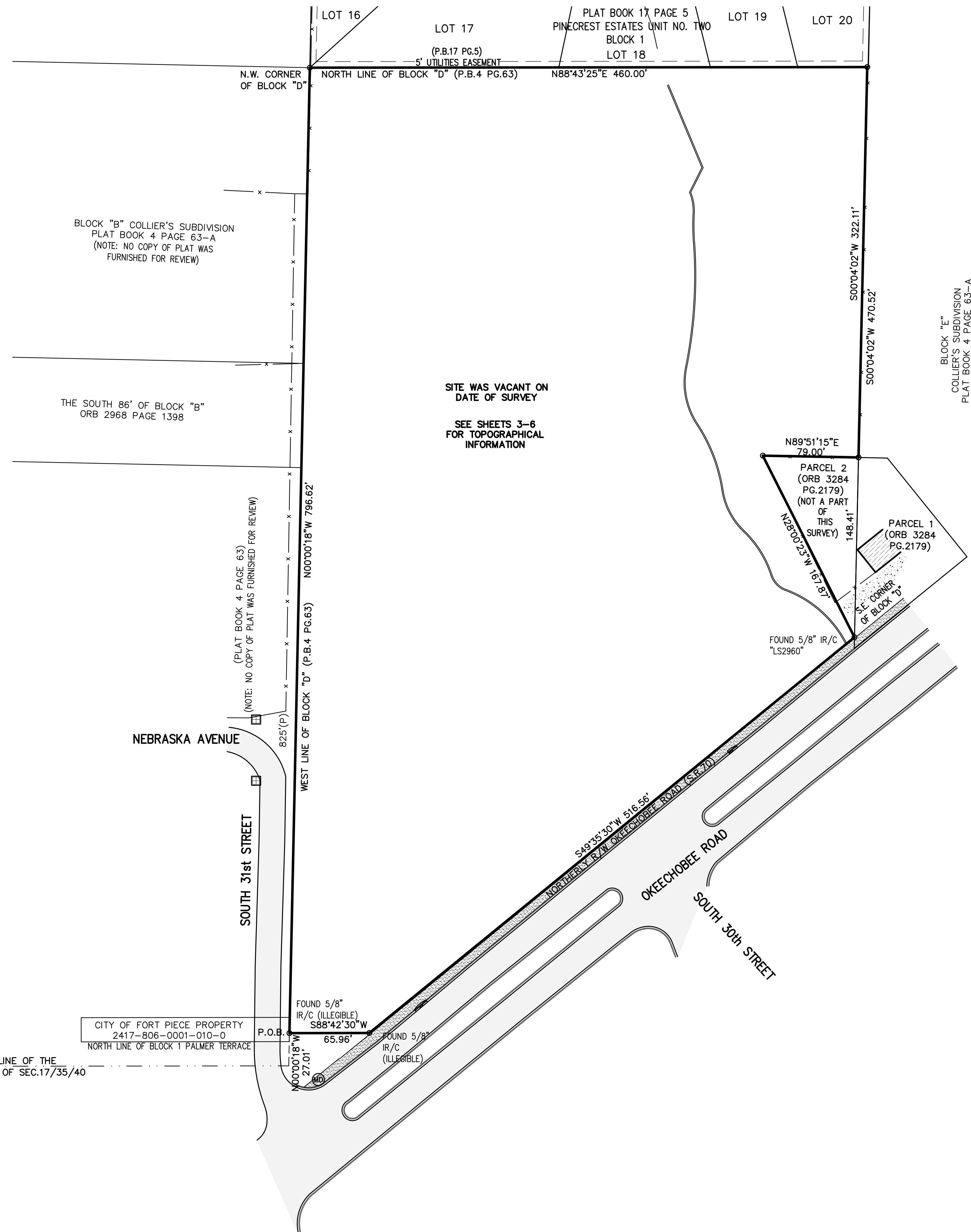
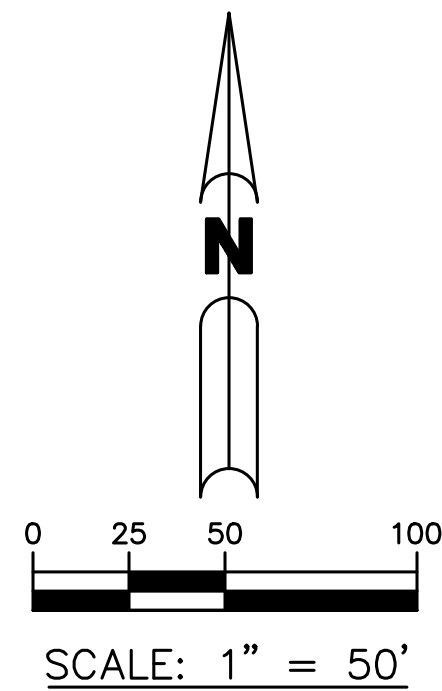
DATE	REVISIONS	#	DRAWN: JAO	PROJ. No. 19-098
12/19/19	ADD WETLANDS & TREE CHART	1	CHECKED: JEP	SCALE: N.T.S.
3/12/20	ADD'L WETLANDS DATA	2	F.B. ST. LUCIE CO.	DATE: SEPT 2019
			PAGES: 32 - 33	SHT. 1 OF 6



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

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 10:30:41 PM, AutoCAD PDF (Small Plot) Plot Job



S.W. CORNER OF THE N.E.1/4 OF SEC.17/35/40 - R.R SPIKE (NOT FOUND)
 P.O.C. N88°42'30"E (D) 661.40' SOUTH LINE OF THE N.E.1/4 OF SEC.17/35/40

BLOCK "E"
 COLLIER'S SUBDIVISION
 PLAT BOOK 4 PAGE 63-A
 (NOTE: NO COPY OF PLAT WAS FURNISHED FOR REVIEW)
 ORB 1414 PAGE 2565

BP 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	#

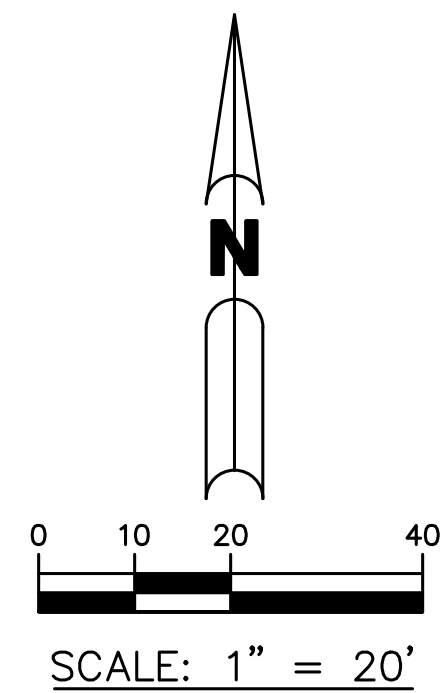
SKETCH OF
 BOUNDARY SURVEY

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

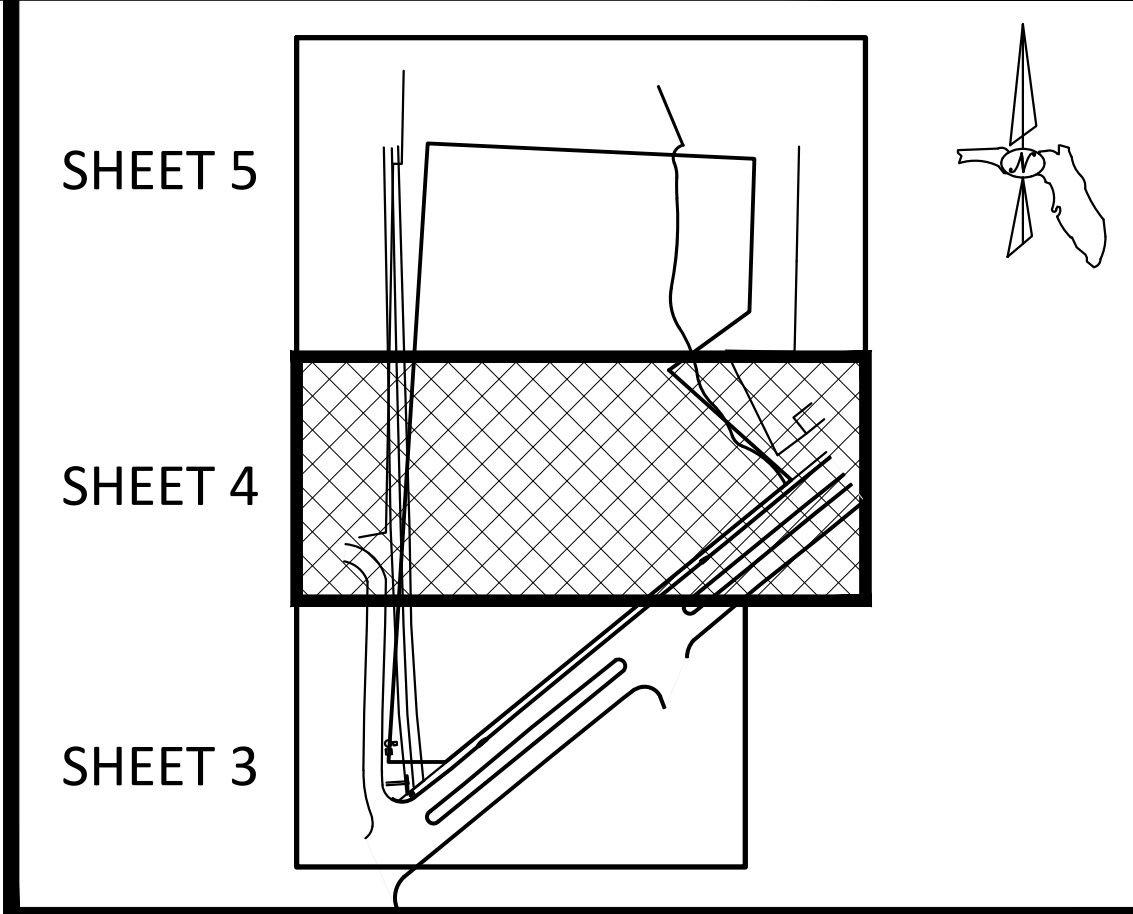
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LEGEND			
BACKFLOW PREVENTER		BANYAN TREE	
ELECTRIC BOX		OAK TREE	
MAILBOX		PALM TREE	
METAL LIGHT POLE		PINE TREE	
SIGN		UNKNOWN TREE	
TRAFFIC SIGNAL BOX		ASPHALT	
WATER VALVE		BUILDING	
WOOD POWER POLE		CONCRETE	

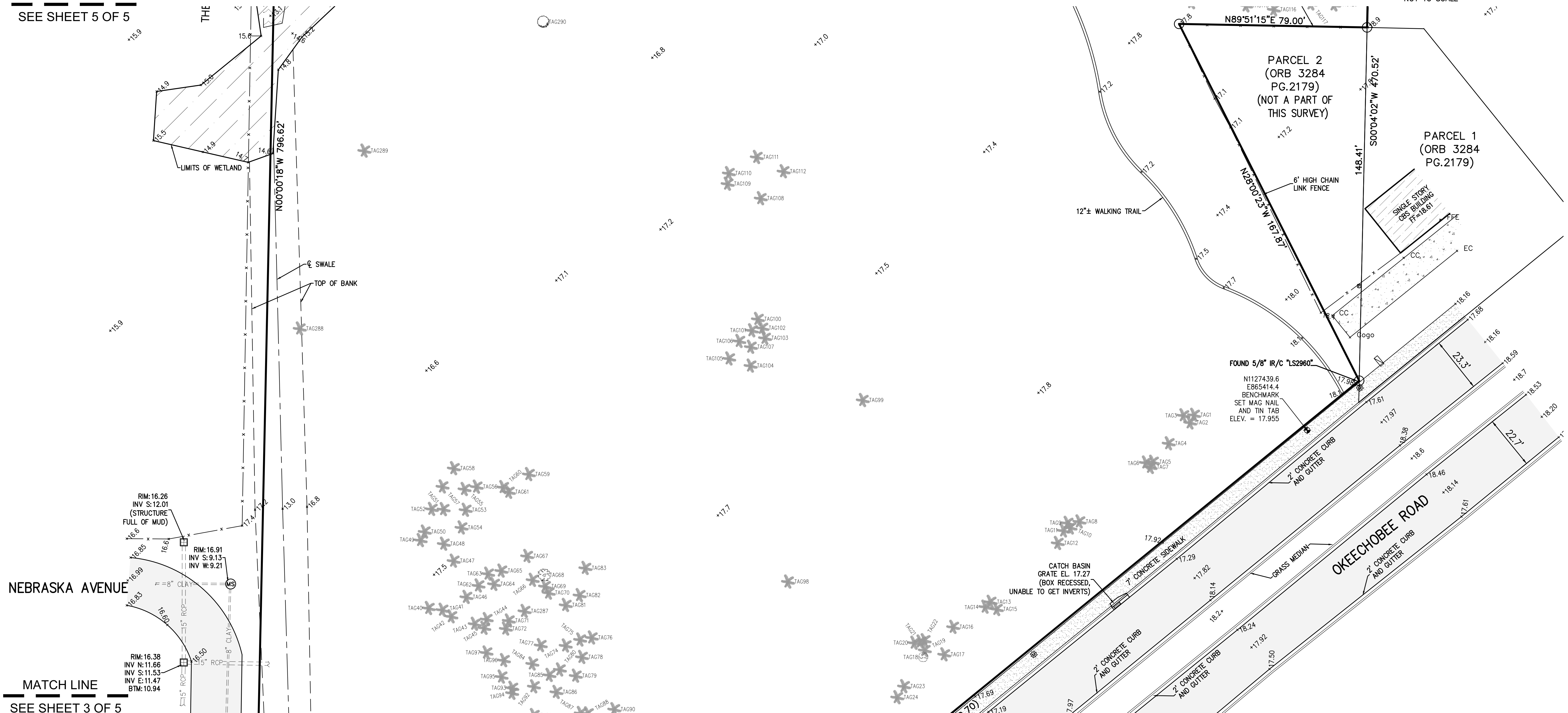
ABBREVIATIONS:
 P.O.C. - POINT OF COMMENCEMENT
 P.B. - POINT OF BEGINNING
 P.B. - PLAT BOOK
 ORB - OFFICIAL RECORD BOOK
 D.B. - DEED BOOK
 PG. - PAGE
 R/W - RIGHT-OF-WAY
 R - RADIUS
 Δ - CENTRAL ANGLE
 A - ARC LENGTH
 U.E. - UTILITY EASEMENT
 D.E. - DRAINAGE EASEMENT
 (P) - PLAT DIMENSION
 (D) - DEED DIMENSION
 (M) - MEASURED DIMENSION
 CL - 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



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

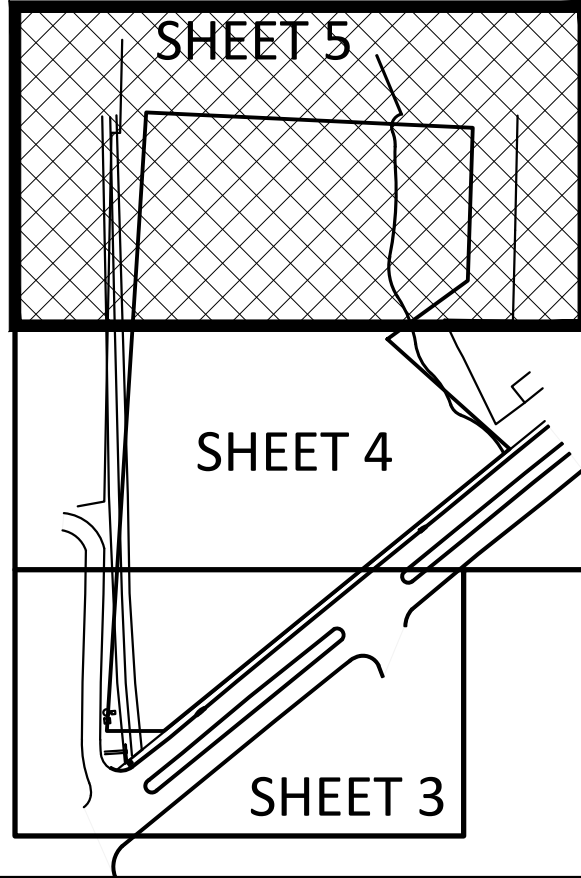
DATE	REVISIONS	#

SKETCH OF
BOUNDARY SURVEY

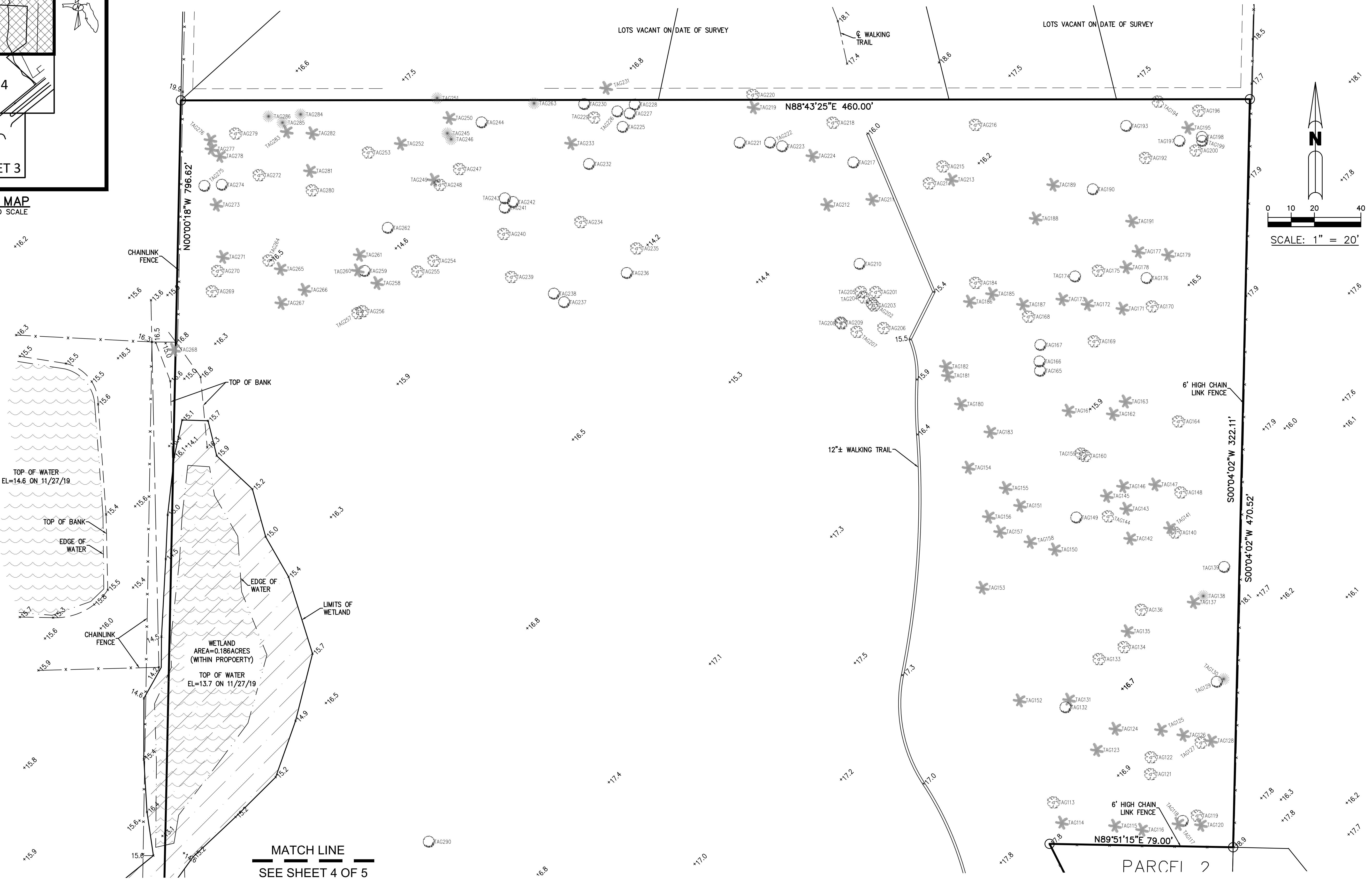
FORT PIERCE NORTH
PROPERTY
OKEECHOBEE ROAD

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



KEY MAP
NOT TO SCALE



MATCH LINE
SEE SHEET 4 OF 5

B 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	22'
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	

DATE	REVISIONS	#

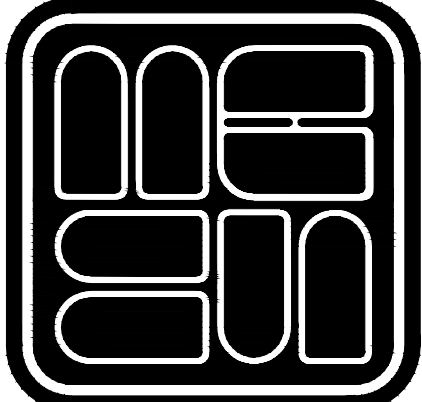
SKETCH OF
BOUNDARY SURVEY

FORT PINEERCE NORTH
PROPERTY
OKEECHOBEE ROAKD

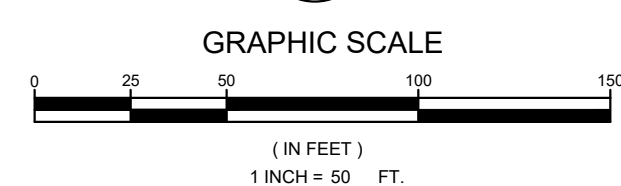
DRAWN: JAO
CHECKED: JEP
F.B. ST. LUCIE Co.
PAGES: 32 - 33

PROJ. No. 19-098
SCALE: 1"=20'
DATE: SEPT. 2019
SHEET 6 OF 6

BP 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



MICHAEL B. SCHORAH & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • DEVELOPMENT CONSULTANTS
 TEL: (561) 968-0080
 FAX: (561) 642-9726
 www.schorah.com
 EB# 2438 LB# 2438
 1850 FOREST HILL BLVD., SUITE 206
 WEST PALM BEACH, FLORIDA 33406

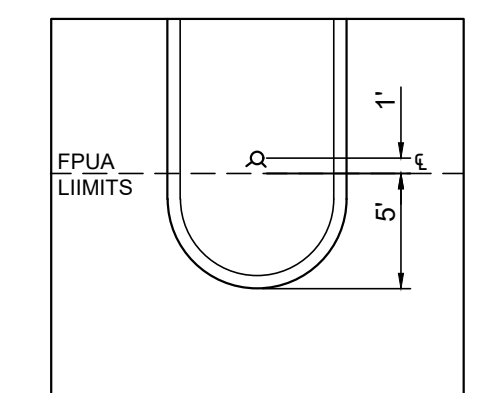


LEGEND

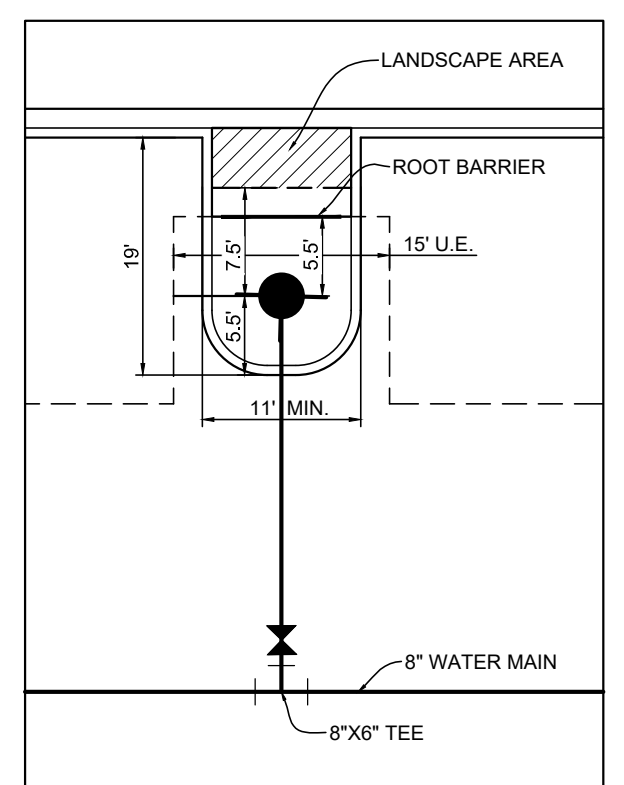
- DRAINAGE PIPE AND INLET (FINAL PIPE SIZES TO BE DETERMINED)
- SANITARY MAIN (8" PVC) AND MANHOLE (SANITARY SYSTEM TO BE PRIVATE)
- WATER MAIN (8" C-900 / D.I.P.)
- FIRE DEPARTMENT CONNECTION (FDC)
- FIRE HYDRANT
- RE-CONFIGURED DITCH

NOTES:

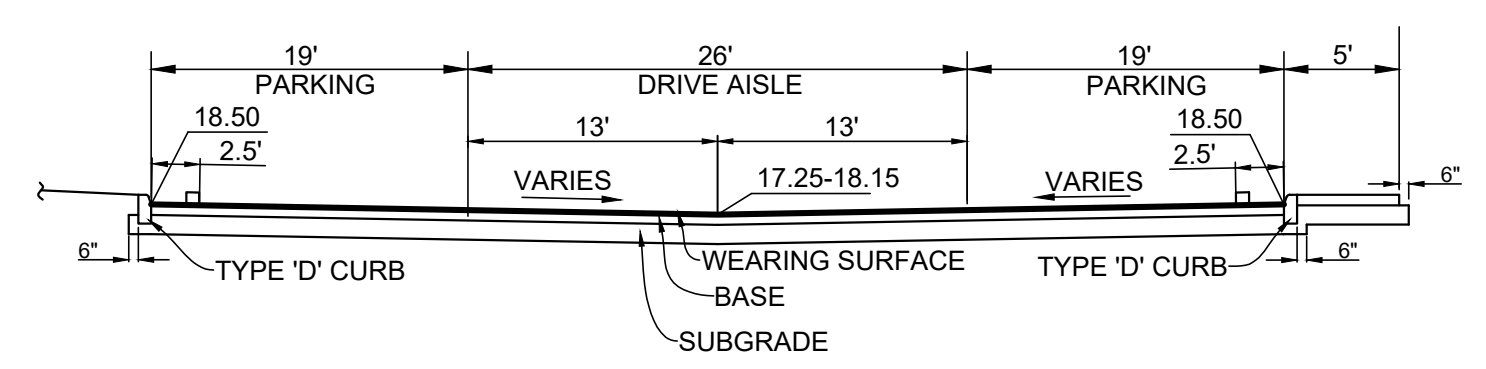
1. MINIMUM FINISHED FLOOR ELEVATION TO BE SET AT OR ABOVE 100 - YEAR, 3 - DAY STAGE (ZERO DISCHARGE)
2. MINIMUM PERIMETER ELEVATION TO BE SET AT OR ABOVE 25 - YEAR, 3 - DAY STAGE.
3. RESIDENTIAL BUILDINGS TO BE FIRE SPRINKLED. FIRE DEPARTMENT CONNECTIONS TO BE LOCATED 100' MAXIMUM FROM A FIRE HYDRANT.
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.



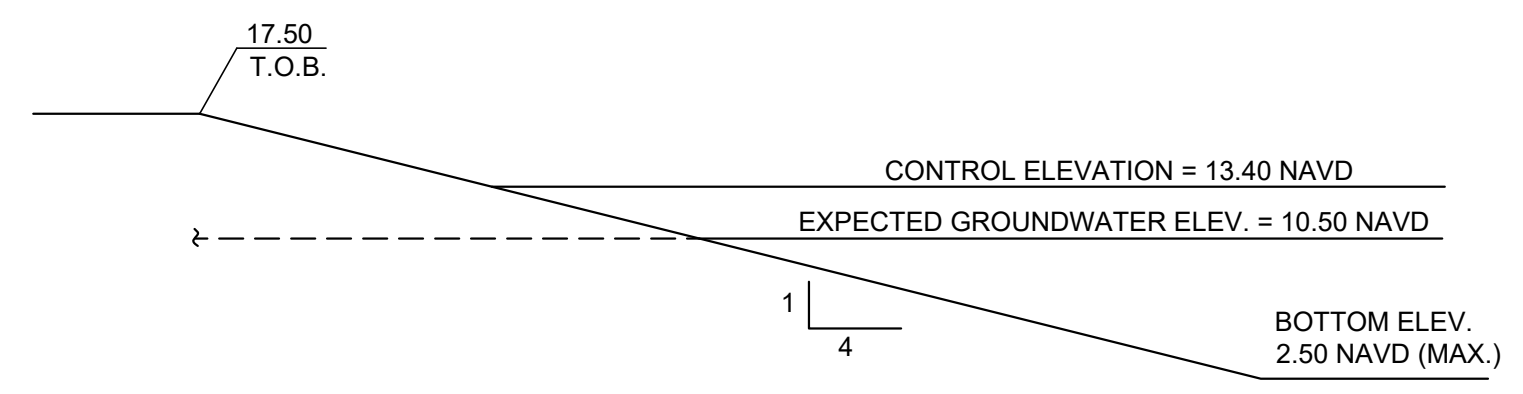
FDC NEAR UTILITY EASEMENT
 NOT TO SCALE



FIRE HYDRANT SHALL HAVE 5' CLEAR ON ALL SIDES. LANDSCAPE MATERIAL SHALL BE LIMITED TO SOIL WITHIN 7.5' OF FIRE HYDRANT.
 HYDRANT LOCATION DETAIL
 NOT TO SCALE



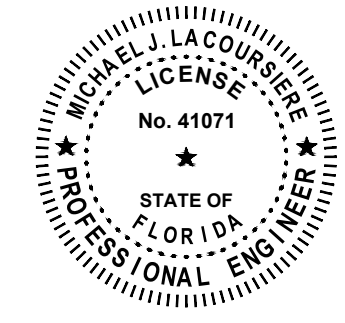
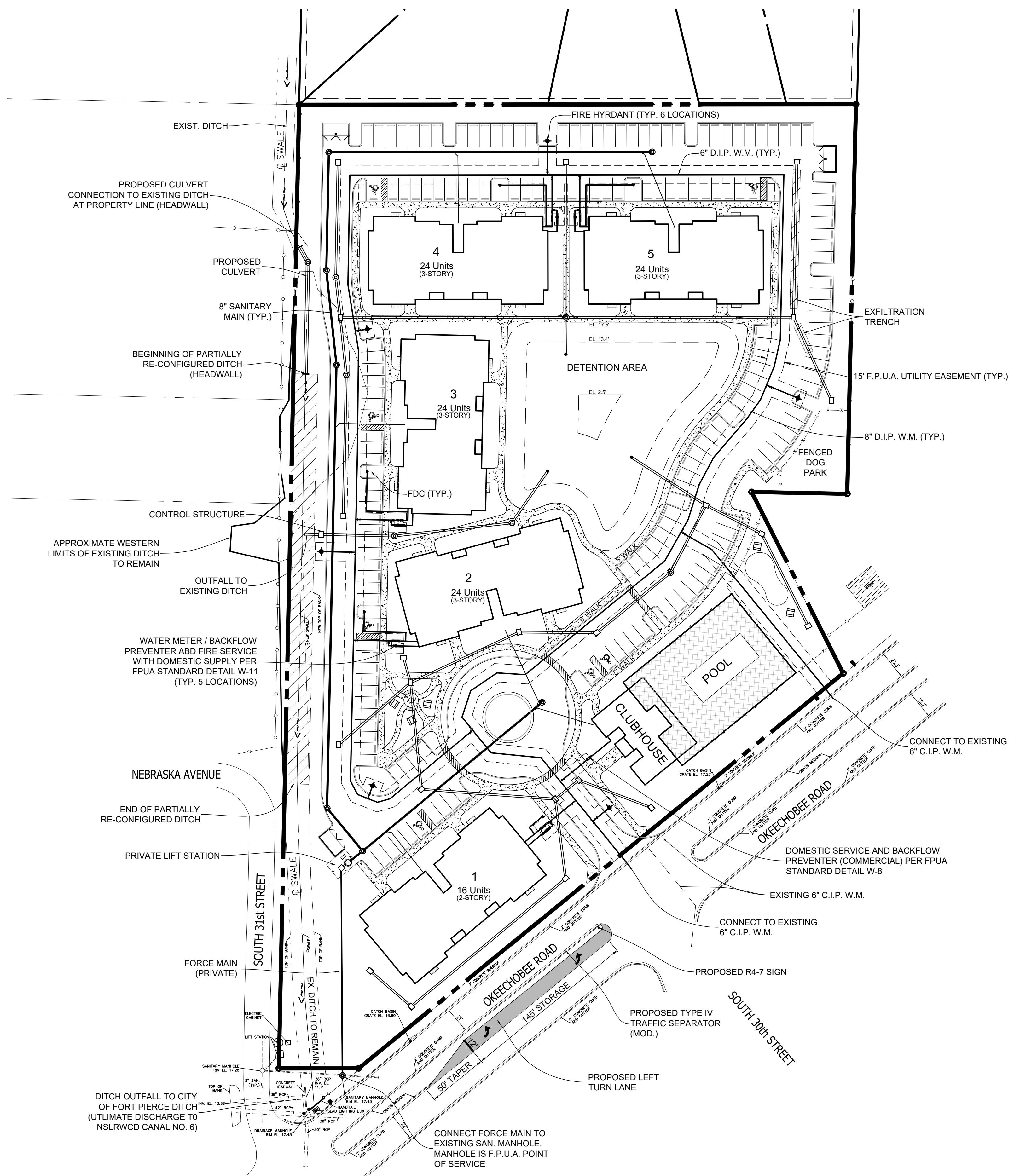
TYPICAL PARKING / DRIVE SECTION



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



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MICHAEL J. LACOURRIERE, 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.

Date/Time: Tue, 16 Jun 2020 - 8:51am
 PathName: P:\1769 FORT PIERCE NORTH\CIVIL\CAD\1769 SITE.dwg

REVISIONS	

DRAWN/CHECKED:	AMG/MJL
MICHAEL J. LACOURRIERE, P.E. SCALE	1" = 50'
FLORIDA LICENSE #1071 FOR MICHAEL B. SCHORAH AND ASSOCIATES, INC.	DATE: MARCH 2020

PROJECT:	ARIA APARTMENTS
DESCRIPTION:	CONCEPTUAL ENGINEERING PLAN

JOB NO.	1769
SHEET NO.	1
OF 1C	

THE DOCUMENTS PRESENTED HEREIN ARE NOT IN FINAL FORM. THEY ARE TRANSMITTED TO RECEIVE PUBLIC AGENCY REVIEW, COMMENTS, AND INTERPRETATIONS.

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 TABEUBIA (TABEUBIA 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 NUCCIFERA)	CN 14
JAPANESE BLUEBERRY (ELAEOCARPUS DECIPENS)	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 ELLIOTTI DENS4)	PE 15

LANDSCAPE NOTES

- ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER AS DEFINED BY THE DIVISION OF PLANT INDUSTRY "GRASSES AND STANDARDS" LATEST EDITION.
- ALL LANDSCAPE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FT. PIERCE CODE.
- THE LANDSCAPE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS CHANGES WITHOUT THE AUTHORIZATION OF THE CITY OF FT. PIERCE, THE OWNER AND THE LANDSCAPE ARCHITECT.
- 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.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS.
- 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.
- ALL SOD SHALL BE STENOPTERUM SECUNDATUM "FLORITAM" (ST. AUGUSTINE SOD), UNLESS OTHERWISE NOTED.
- 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.
- 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 FOOT INDEX 548.
- 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.
- 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 BUILDINGS.
- 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.
- ALL TREES NOT LOCATED WITHIN A LANDSCAPE BED SHALL RECEIVE A 4"-5" DIA. MULCH RING.
- ALL EXOTIC AND NUISANCE VEGETATION SHALL BE REMOVED FROM SUBJECT PROPERTY PRIOR TO ANY CERTIFICATE OF OCCUPANCY.
- TREES ARE TO BE INSTALLED WITH A 10" SEPARATION 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 ENCRUSCH CLOSER THAN 5' WITH A ROOT BARRIER PRESENT. ONLY SOD CAN BE INSTALLED WITHIN 7.5' OF A FIRE HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL.
- 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.

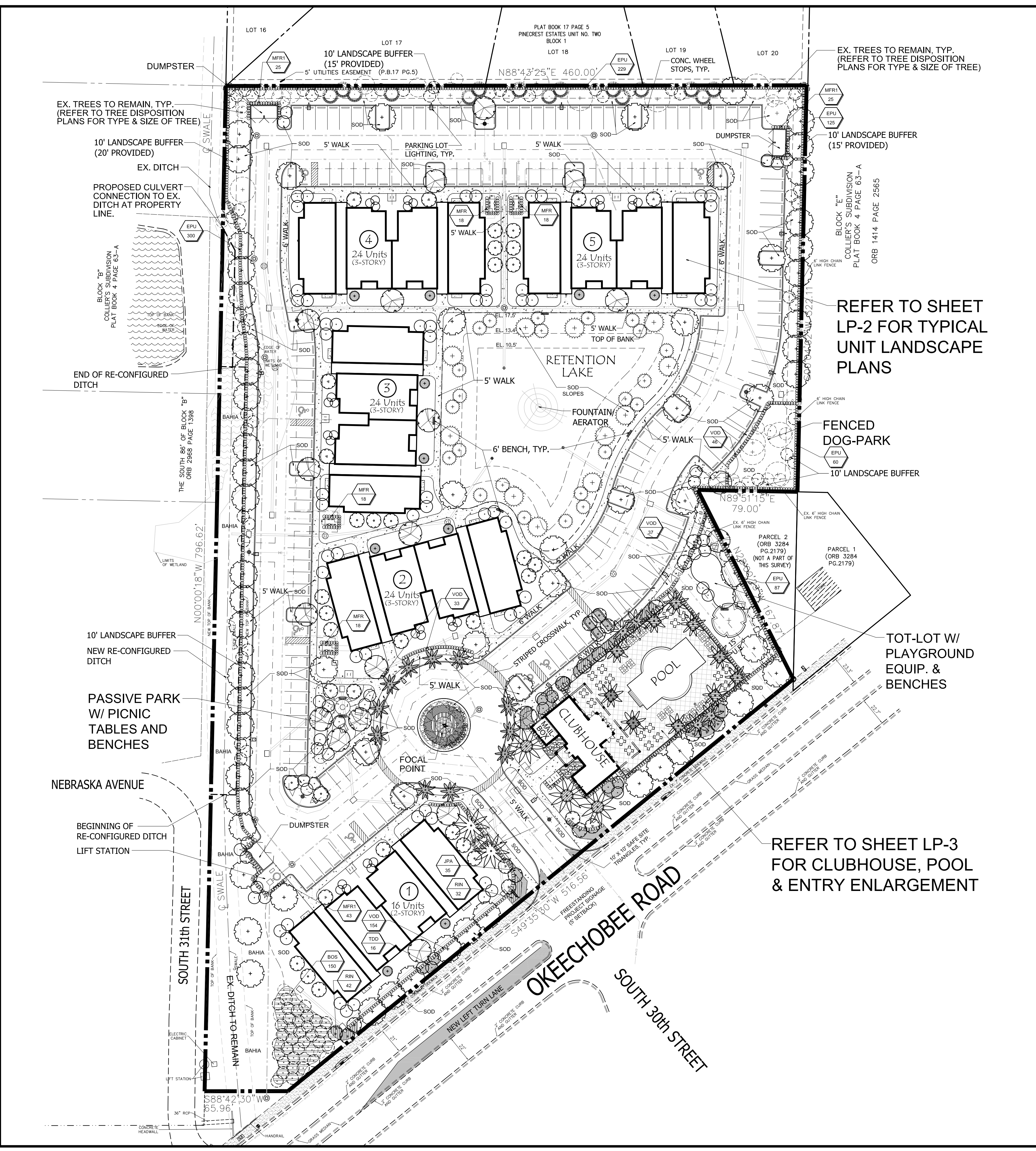
LANDSCAPE DATA

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

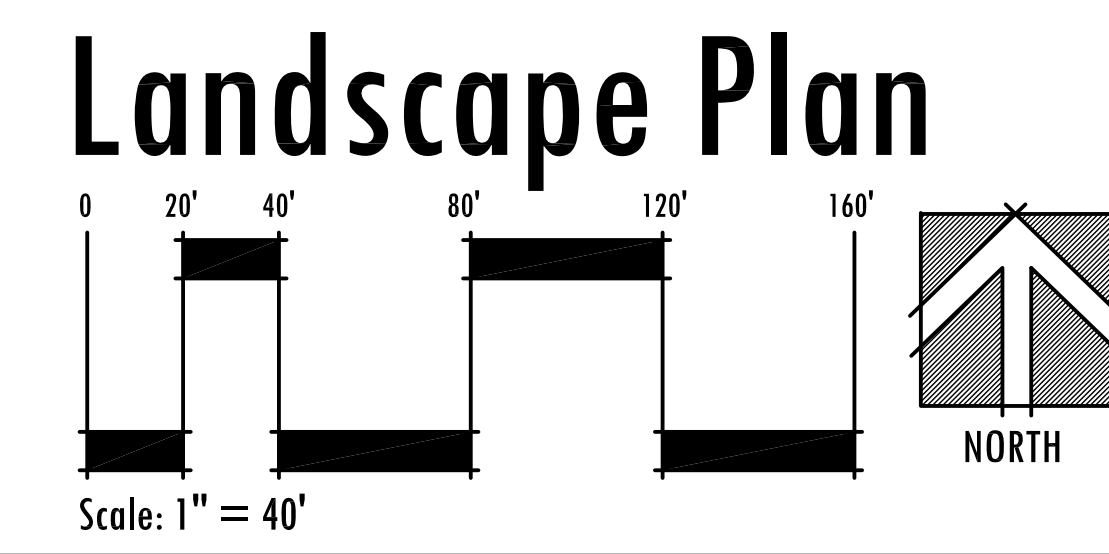
* REQUIRES 1 TREE PER 200 S.F. OF BUFFER
 ** REQUIRES 1 TREE PER 300 S.F. OF BUFFER
 *** 25 ADDITIONAL TREES

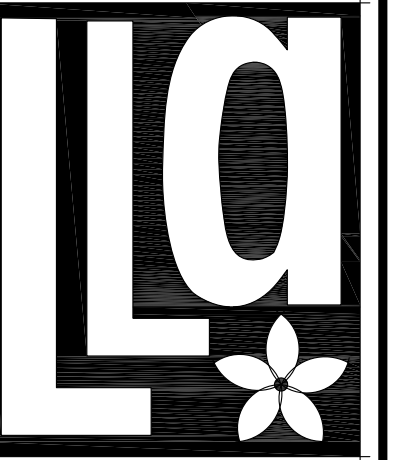


REFER TO SHEET LP-2 FOR TYPICAL UNIT LANDSCAPE PLANS

REFER TO SHEET LP-3 FOR CLUBHOUSE, POOL & ENTRY ENLARGEMENT

REFER TO SHEET LP-4 FOR PLANT LIST

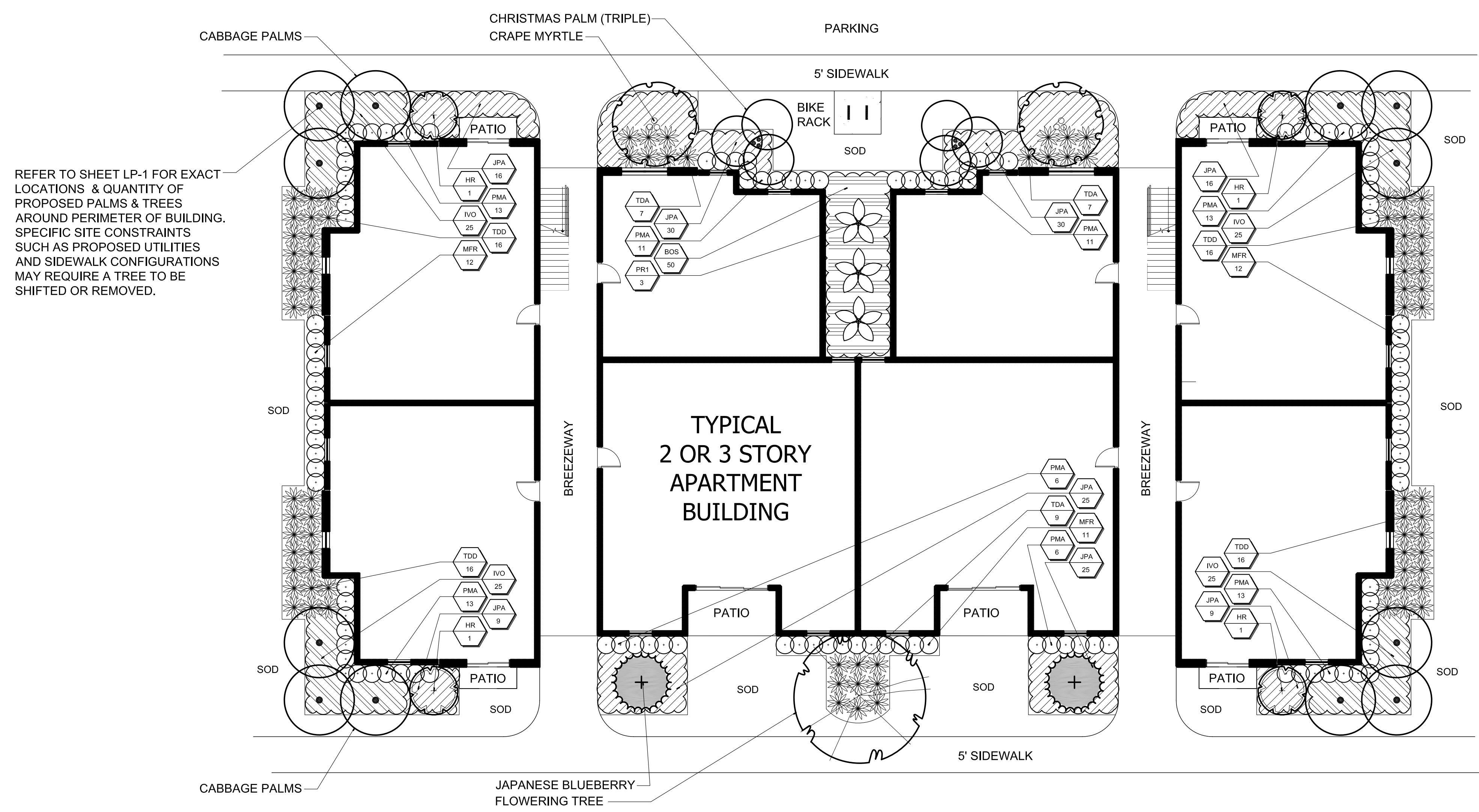




Litterick Landscape Architecture
 2740 SW Martin Downs Blvd. #199
 Palm City, FL 34990
 561-719-3876
 JasonLA1677@yahoo.com

Project Name

Arrow Fort Pierce Residential
 Ft. Pierce, Florida



REFER TO SHEET LP-1 FOR EXACT LOCATIONS & QUANTITY OF PROPOSED PALMS & TREES AROUND PERIMETER OF BUILDING. SPECIFIC SITE CONSTRAINTS SUCH AS PROPOSED UTILITIES AND SIDEWALK CONFIGURATIONS MAY REQUIRE A TREE TO BE SHIFTED OR REMOVED.

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 ROEBELENI	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.

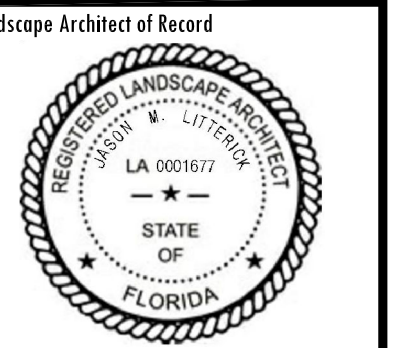
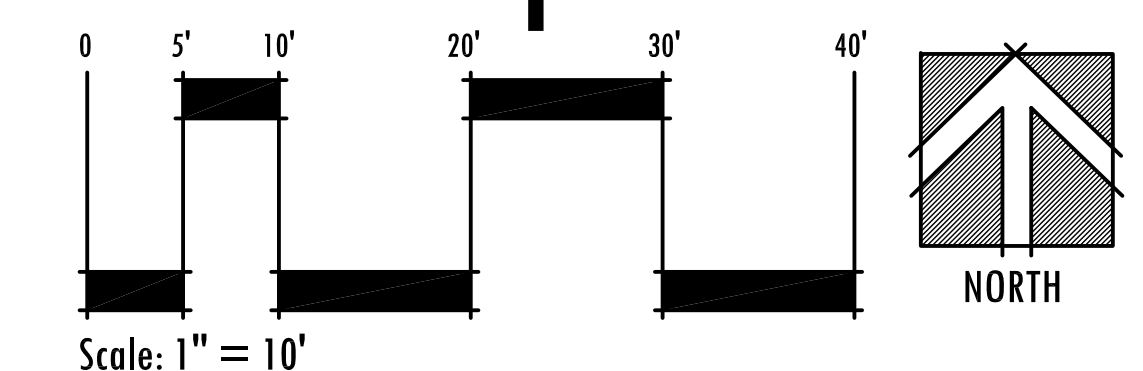
SHRUBS & GROUNDCOVERS						
SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES:
* V	TDD	64 TRIPSACUM FLORIDANA	FLORIDA GAMA GRASS	#3, 16" O.A.	36" O.C.	FULL & THICK
* V	TDA	23 TRIPSACUM DACTYLOIDES	FAKAHATCHEE GRASS	#3, 24" O.A.	48" O.C.	FULL & THICK
* V	BOS	50 NEPHROLEPIS EXALTATA	BOSTON FERN	#3, 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

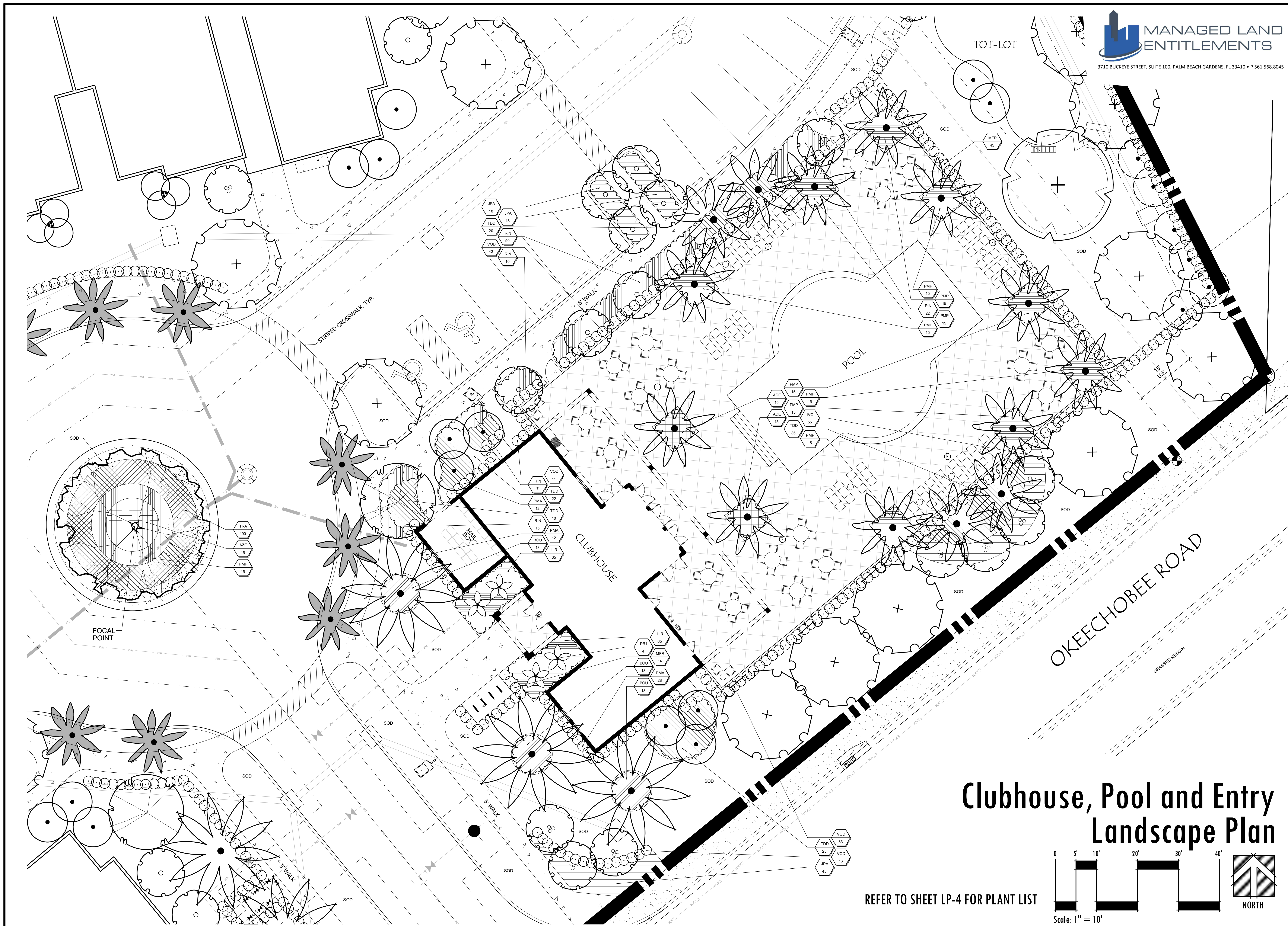


Jason M. Litterick, RLA (LA0001677)

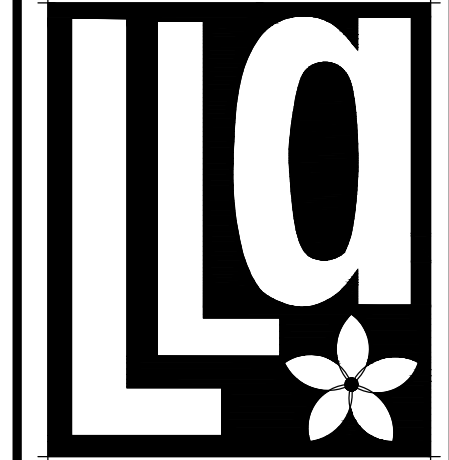
Scale: 1" = 10'-0"

Designed: JML
 Drawn: JML
 Approved: JML
 Date: 6/25/2020
 Job no.
 Revisions:

Sheet No.
LP-2



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

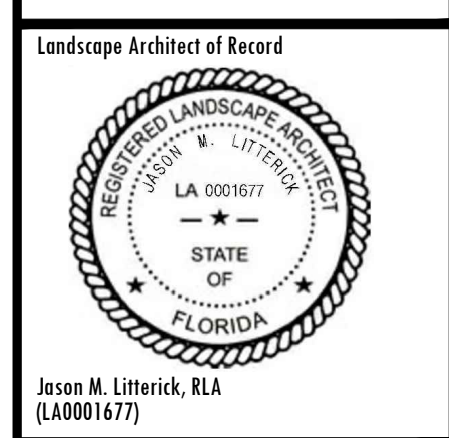


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Project Name

Arrow Fort Pierce Residential

Ft. Pierce, Florida



Scale: 1" = 10'-0"

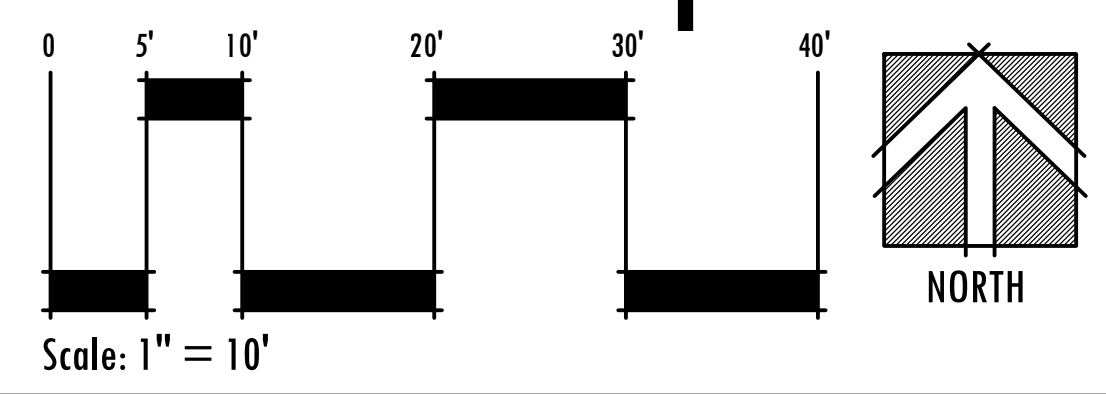
Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.:	
Revisions:	

Sheet No.

LP-3

Clubhouse, Pool and Entry Landscape Plan

REFER TO SHEET LP-4 FOR PLANT LIST



PLANT LIST (LP-1 & LP-3)

NOTE: DOES NOT INCLUDE PLANTS SPECIFIED ON SHEET LP-2, TYPICAL UNIT LANDSCAPE PLAN

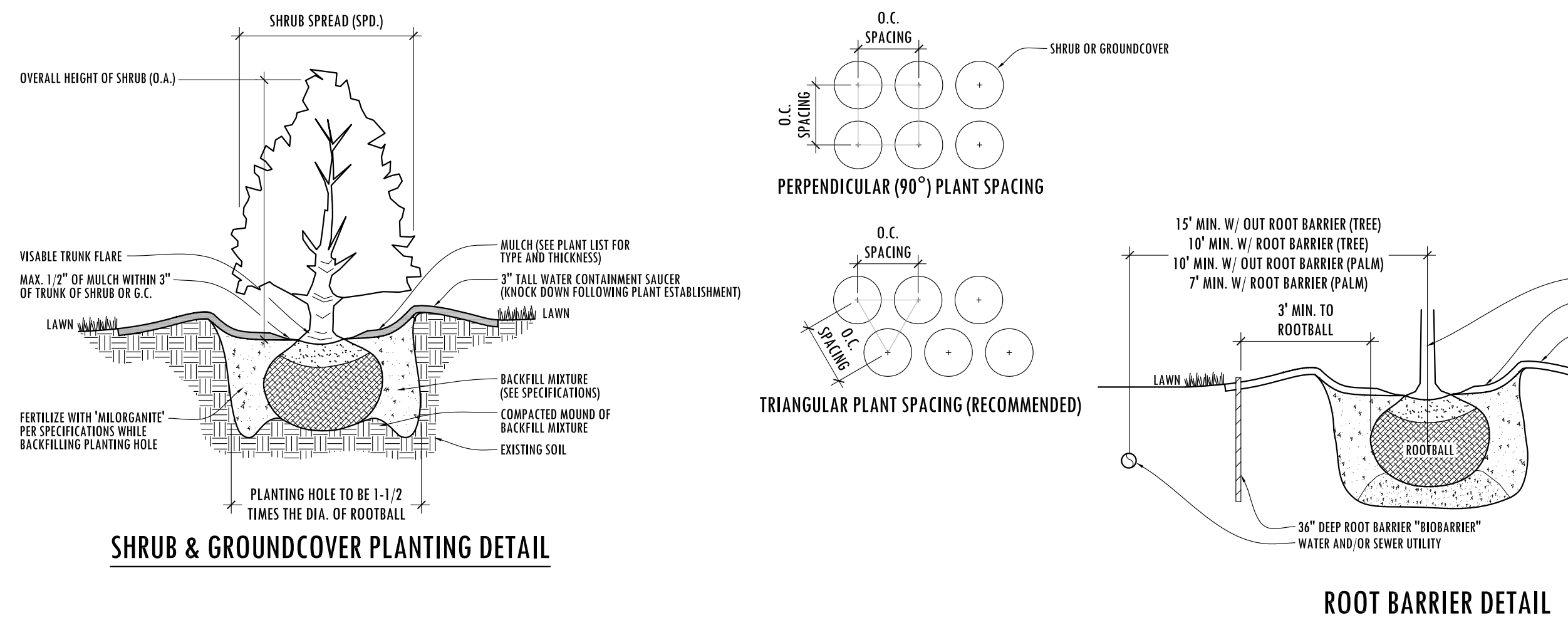
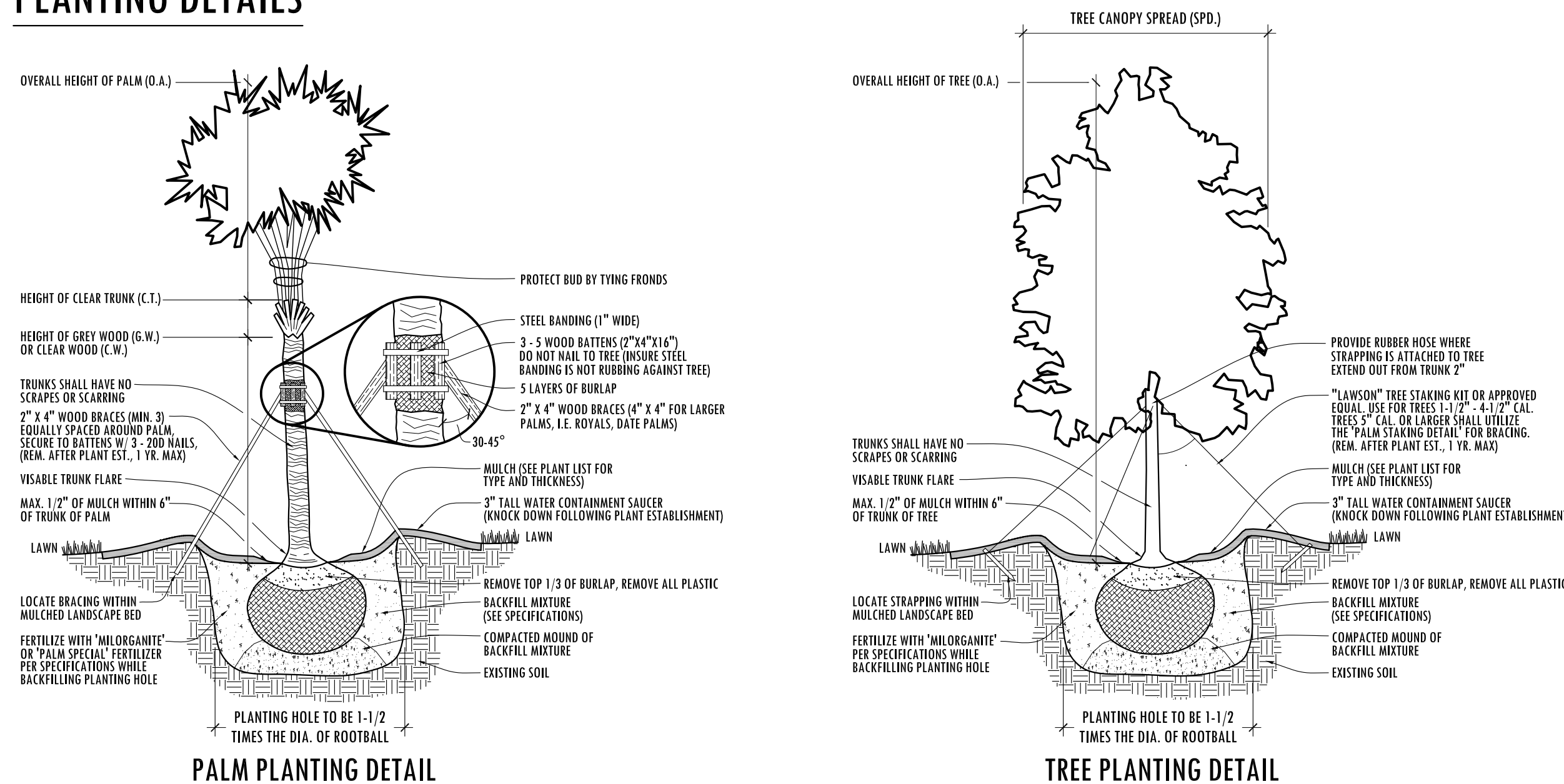
SYM	QTY	BOTANICAL NAME	COMMON NAME	HEIGHT	SPR.	NOTES:
*V	RSP 155	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		RELOCATED CABBAGE PALM
*V	ESP 20	SABAL PALMETTO	CABBAGE PALM	SEE DISPOSITION CHART		EXISTING CABBAGE PALM TO REMAIN
*V	EPE 5	PNIS ELLIOTTI 'DENSE'	S. FLA. SLASH PINE	SEE DISPOSITION CHART		EXISTING SLASH PINE TO REMAIN
*V	EQL 11	QUERSCUS LAURIFOLIA	LAUREL OAK	SEE DISPOSITION CHART		EXISTING LAUREL OAK TO REMAIN
*V	PE 15	PNIS ELLIOTTI 'DENSE'	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	DELOXIS REGIA	ROYAL PONCIANA	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	TD 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	QUERSCUS VIRGINIANA	LIVE OAK	14' O.A., 3" DBH	6'	FULL & THICK
*V	QV 1	QUERSCUS 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 DECIPENS	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	LJ 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 TABEUIA	14' O.A., 3" DBH	5'	FULL & THICK
M	AMS 10	ADONIDIA MERRILLI	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	PR 1 4	PHOENIX ROEBELENI	PYGMY DATE PALM	7' O.A., SINGLE	7'	FULL & THICK, MATCHED HEIGHTS, SINGLE TRUNK

* 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



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 GUG, 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-ROUND.

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 AND 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 TALLER:	6-8 LBS.

SHRUBS:

FERTILIZE NEW SHRUBS AND ACCENTS WITH 'MILORGANITE' AT THE FOLLOWING RATES:

- 4-4" POTS:	1 CUP
- 1 GAL:	1 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 GLAY, 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 AND THE WATERING OF SHRUBS 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 SUFFICIENCY GROWTH TO HOLD EARTH INTACT WHEN REMOVED FROM CONTAINER AND SHALL NOT BE ROOT ROUND. 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 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 4" 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 WITH THE STAKING DETAILS IMMEDIATELY AFTER PLANTING.

PLANTING SHRUBS

LAYOUT SHRUBS TO CREATE A CONTINUOUS SMOOTH FRONT LINE AND FILL IN BEMD.

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 GROUND COVER, 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 BERMOUDA 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. IT 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

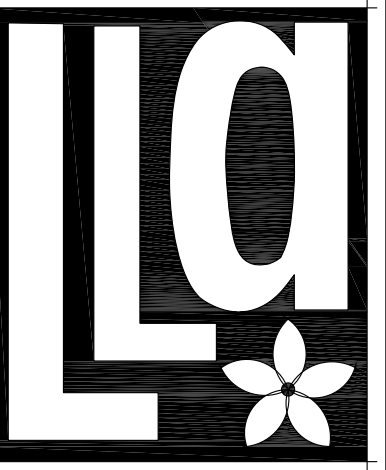
THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT UPON COMPLETION OF THE WORK TO REQUEST A FINAL INSPECTION OF THE INSTALLATION AND PLANT MATERIALS. THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE WILL NOTIFY THE LANDSCAPE CONTRACTOR OF ANY DEFICIENCIES VIA A "PUNCH LIST" WHICH SHALL 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 WARRANTY PERIOD. DEFICIENCIES NOTED AFTER THE CONDITIONAL LANDSCAPE ACCEPTANCE SHALL BE RECTIFIED DURING THE WARRANTY 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 NOTIFICATION BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER. WARRANTIES 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.



Litterick Landscape Architecture

2740 SW Martin Downs Blvd. #199
 Palm City, FL 34990
 561-719-3876
 JasonL1677@yahoo.com

Project Name

Arrow Fort Pierce Residential
 Ft. Pierce, Florida

Landscape Architect of Record



Jason M. Litterick, RLA (LA0001677)

Scale: Not to Scale

Designed: JML
 Drawn: JML
 Approved: JML
 Date: 6/25/2020
 Job no.
 Revisions:

Sheet No.

LP-4

Landscaping Specifications & Planting Details



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:

3	UPDATE LFS	06/22/20
2	PHOTOMETRIC STUDY	06/19/20
1	PHOTOMETRIC STUDY	06/17/20
No.	Revision/Issue	Date

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
LO
DRAWN BY E.MONTERO

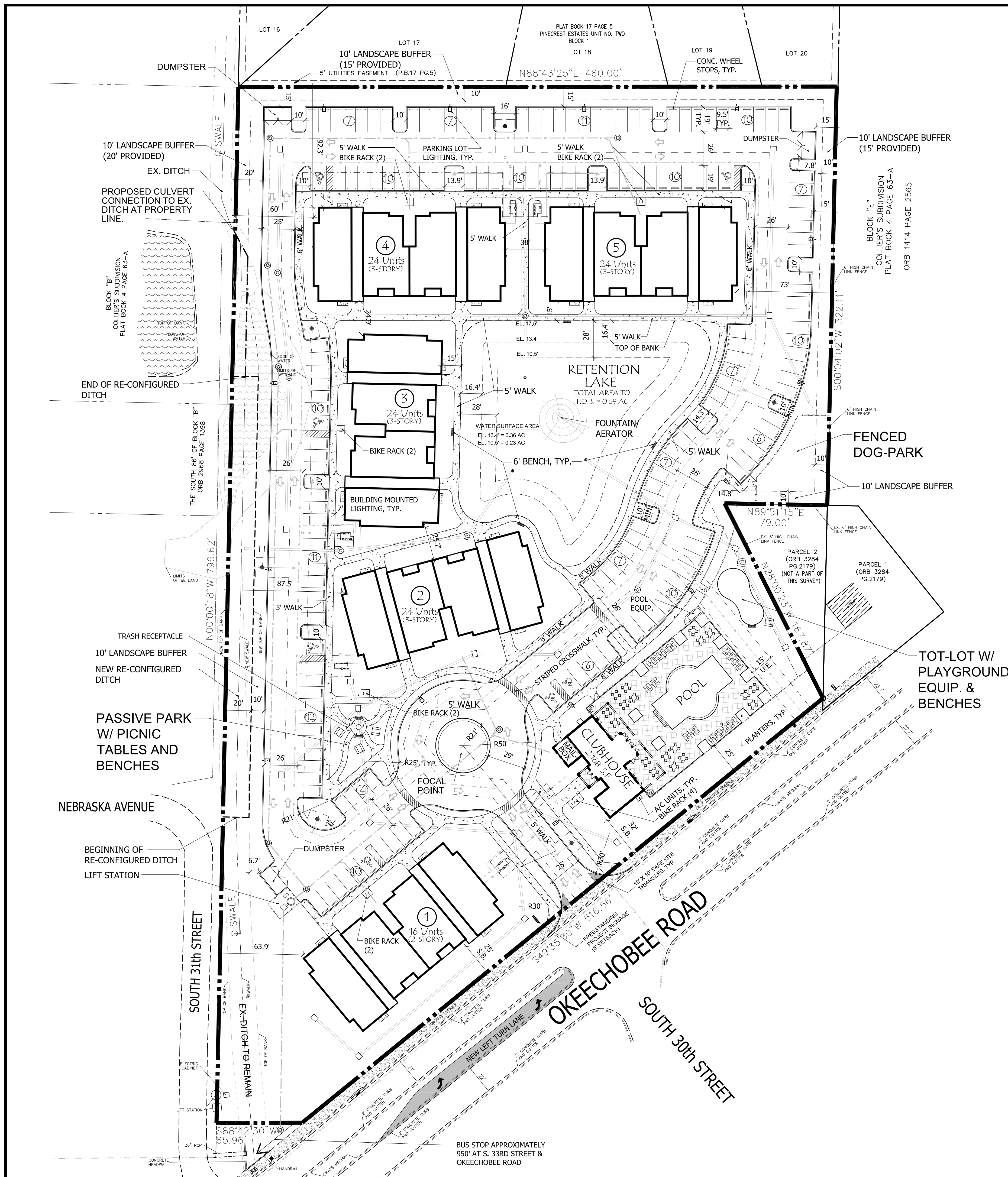
ARROW FORT PIERCE NORTH LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	DIM TYPE	WATTS	MOUNTING	NOTES
SA	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T3-FINISH / MA1017-FINISH	UNV	LED	N/A	112W	20' POLE	NOTE 1, 2
SB	LED SITE HEAD	LUMARK	PRV-PA2A-740-U-T4W	UNV	LED	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 # US128TH4-9666
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

Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	LLF	Lum. Watts	Arr. Watts
SA	3	SA	SINGLE	15749	15749	0.900	112	112
SB	5	SB	SINGLE	15560	15560	0.900	112	112
SC	7	SC	SINGLE	11268	11268	0.900	112	112
SD	3	SD	SINGLE	8200	8200	0.900	99	99
SE	2	SE	SINGLE	9131	9131	0.900	86	86
SF	5	SF	SINGLE	1209	1209	0.900	16.5	16.5
SW	16	SW	SINGLE	4311	4311	0.900	34	34

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





APPLICATION DATA:

NAME OF APPLICATION: ARIA APARTMENTS
 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



PROJECT TEAM

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

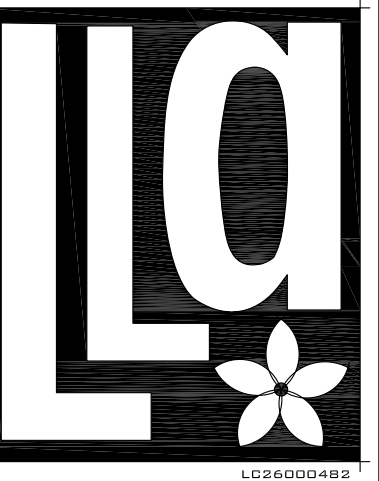
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 300 Avenue of the Champions, Suite 260
 Palm Beach Gardens, Florida 33418
 Contact: Scott Disher (561-202-6990)

CIVIL ENGINEER/SURVEYOR
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 West Palm Beach, Florida 33406
 Contact: Michael LaCoursiere (561-968-0080)

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

LANDSCAPE ARCHITECT
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 Palm City, Florida 34990
 Contact: Jason Litterick (561-719-3876)

SURVEYOR
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 1860 Old Okeechobee Road, Suite 509
 West Palm Beach, Florida 33409
 Contact: John Phillips (561-615-3988)

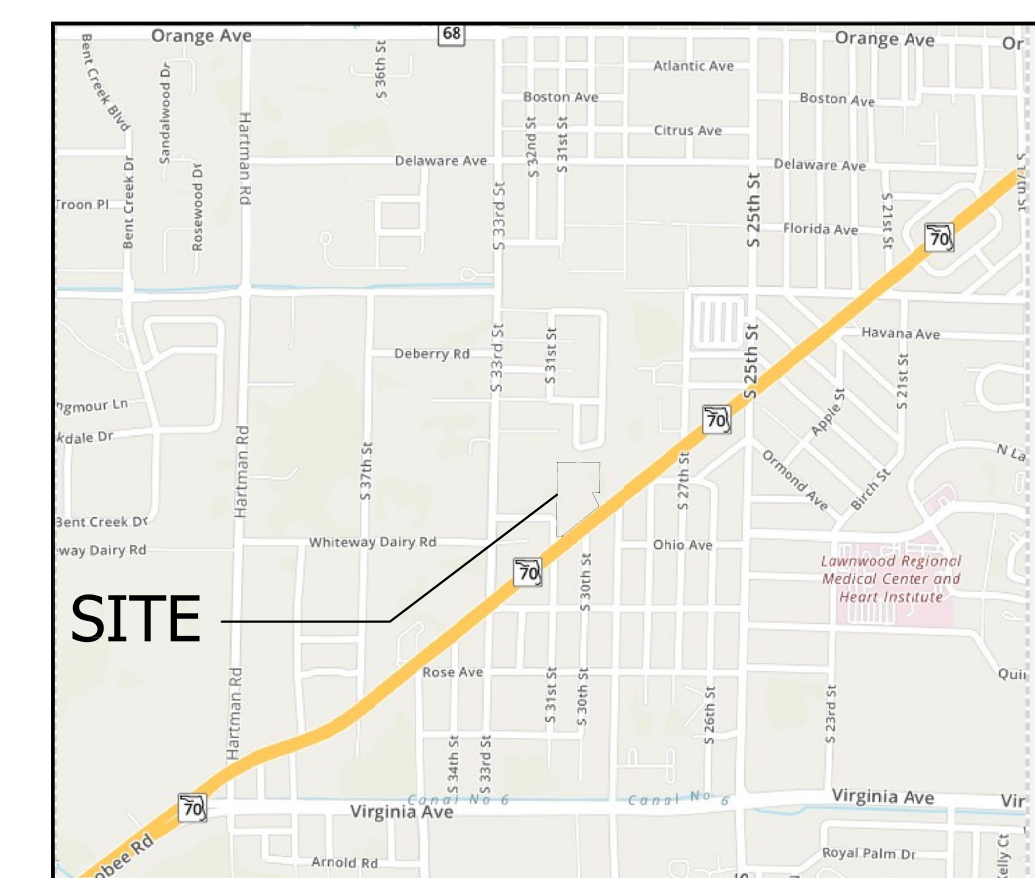


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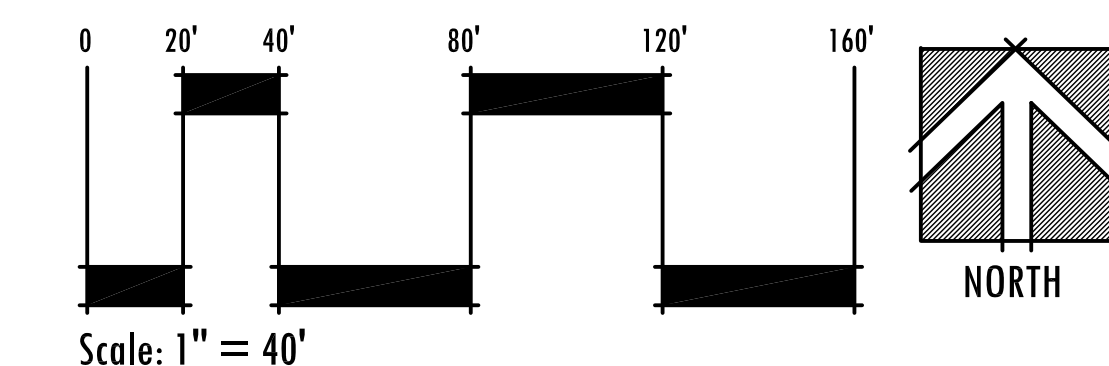
Project Name

Aria Apartments
 Ft. Pierce, Florida

LOCATION MAP



Site Plan



REFER TO SHEET SP-2 FOR SITE PLAN DETAILS

Landscape Architect of Record



Jason M. Litterick, RLA (LA0001677)

Scale: 1" = 40'-0"

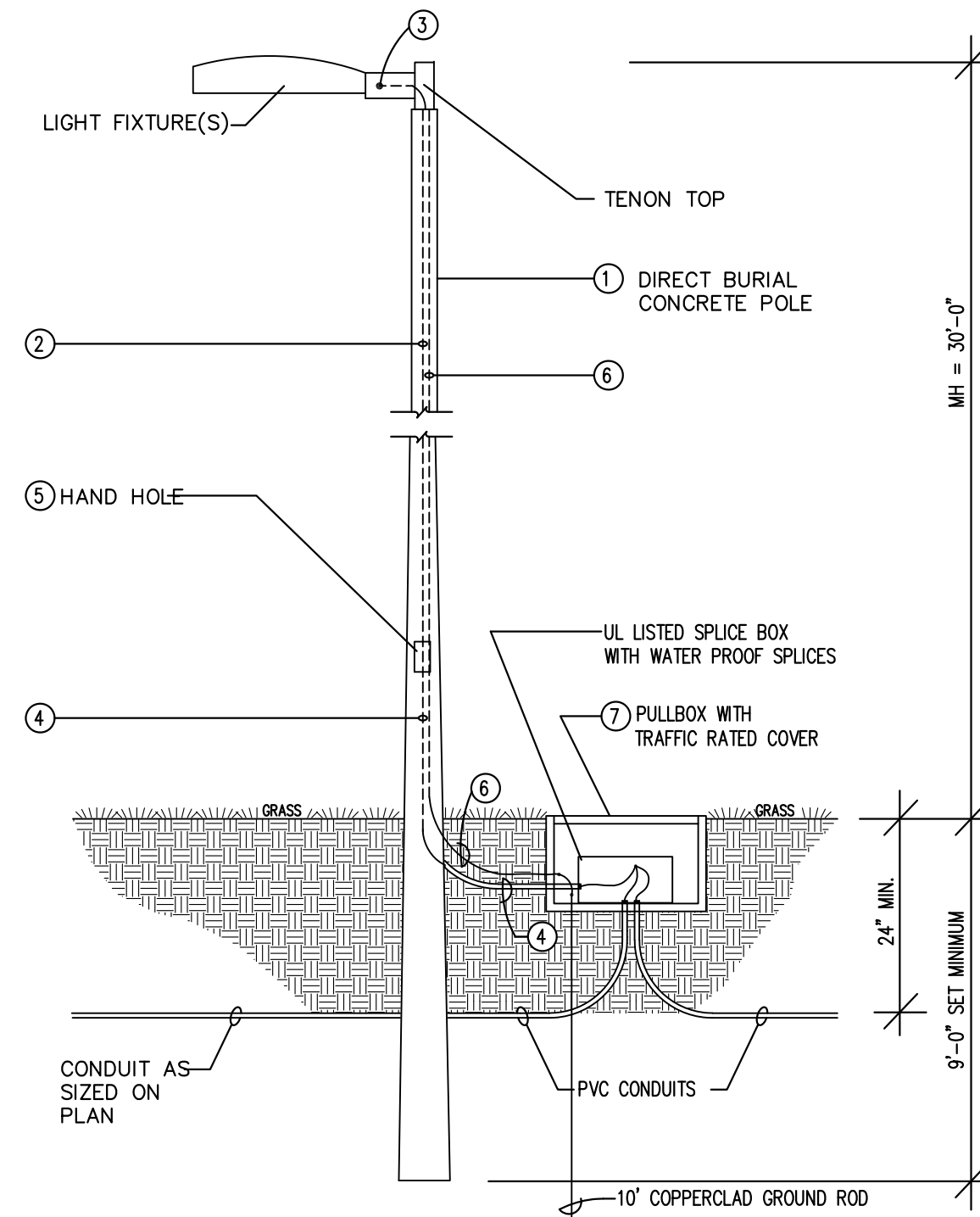
Designed: JML
 Drawn: JML
 Approved: JML
 Date: 6/25/2020
 Job no.
 Revisions:

Sheet No.

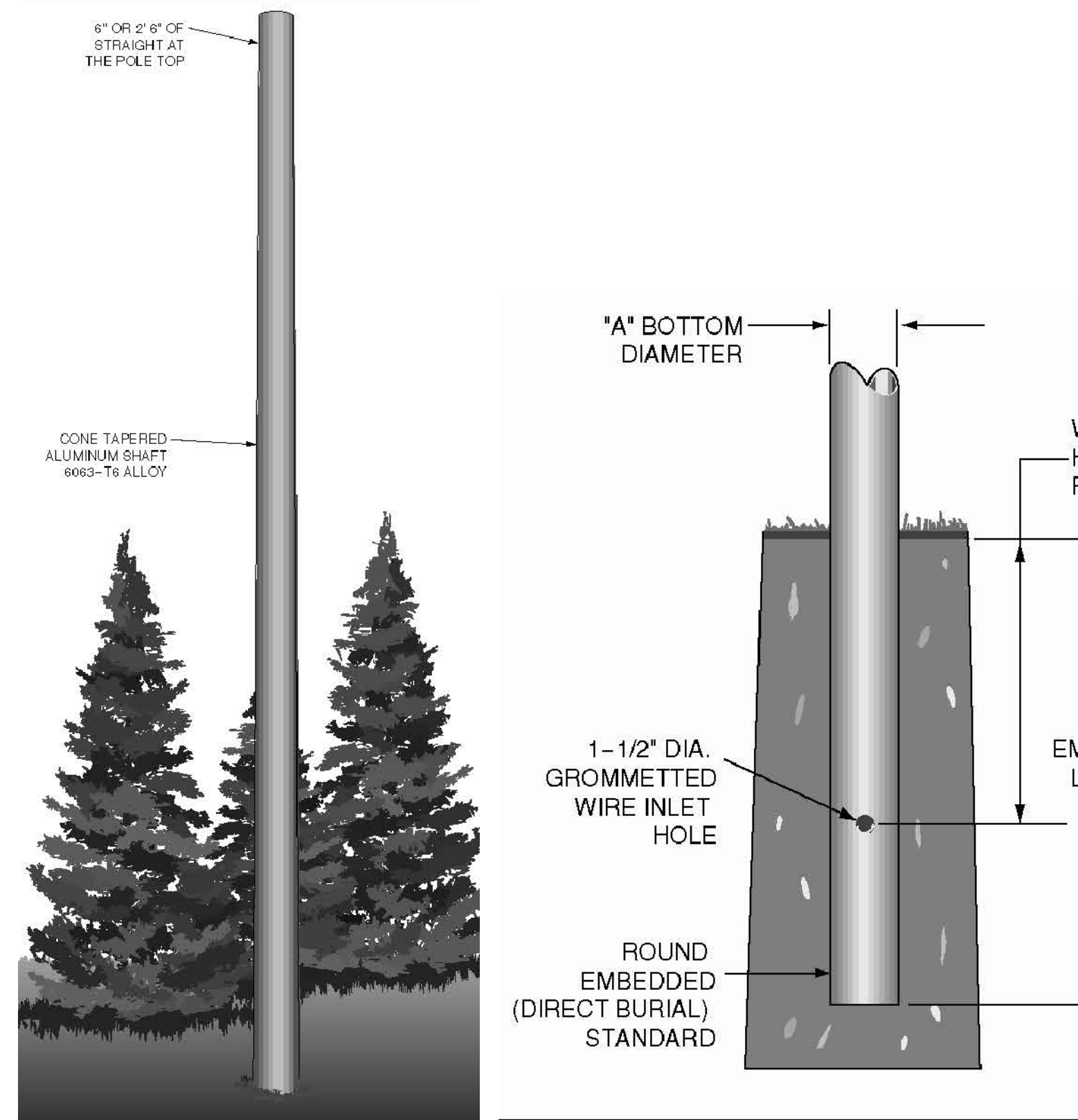
SP-1

STANDARD LIGHTING POLE DETAIL

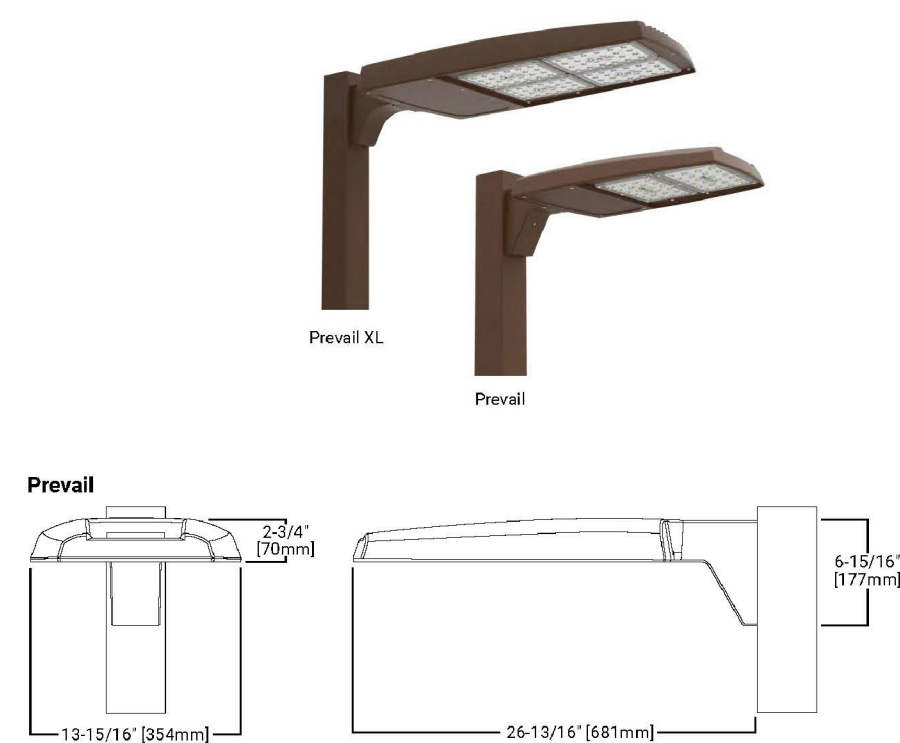
- (1) LIGHTING POLE. THE MANUFACTURER IS TO PROVIDE CERTIFICATION BY FLORIDA PE, SHOWING WIND LOAD RATING OF 170 MPH WITH SPECIFIED FIXTURES INSTALLED. THE FINAL POLE SET IS TO BE DETERMINED BY THE PROFESSIONAL ENGINEER.
- (2) INTERNAL WIRING. INTERNAL WIRING TO BE IN UL LISTED CONDUITS, INSIDE POLE. 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. QUARTZITE 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.



VALMONT STRUCTURES, INC.
DIRECT BURIAL ALUMINUM POLE
ALUMINUM LIGHT POLE DETAIL
TO BE USED ON ALL POOL LIGHTING
(13' MOUNTING HEIGHT) 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

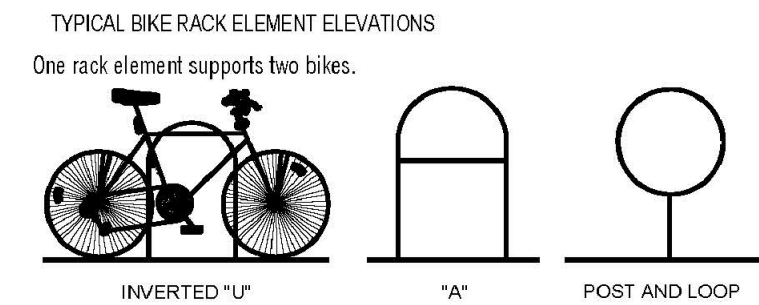
WALL MOUNT LUMINAIRE

WaveLinx

MCGRAW - EDISON WALL MOUNT LED LUMIERE
BUILDING MOUNTED LIGHTING
N.T.S.



"LANDSCAPEFORMS - CHASE PARK LITTER"
TRASH RECEPTACLE DETAIL
N.T.S.

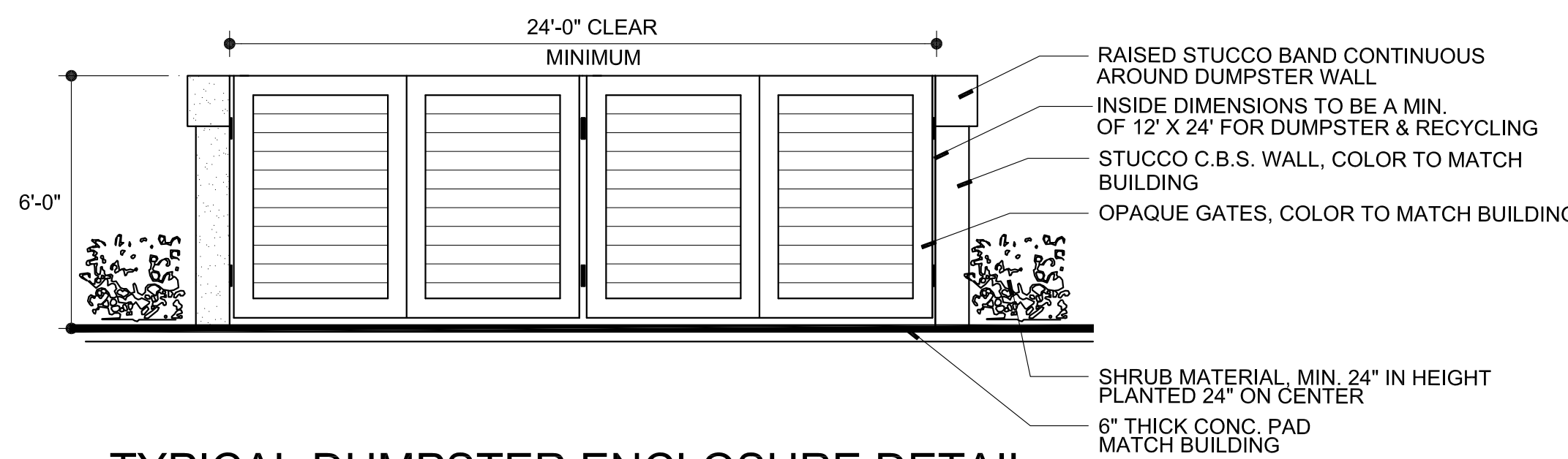


- ELEMENT STYLE CONSISTENT WITH THE ABOVE TYPICAL ELEVATION TO BE SELECTED BY OWNER AT TIME OF BUILDING PERMIT, SUBJECT TO APPROVAL BY ZONING STAFF.
- A RACK IS ONE OR MORE ELEMENTS JOINED ON A COMMON BASE
- BIKE RACK AND RACK AREA DIMENSIONAL CRITERIA BASED ON RECOMMENDATIONS FROM THE ASSOCIATION OF PEDESTRIAN AND BICYCLE PROFESSIONALS (APBP)

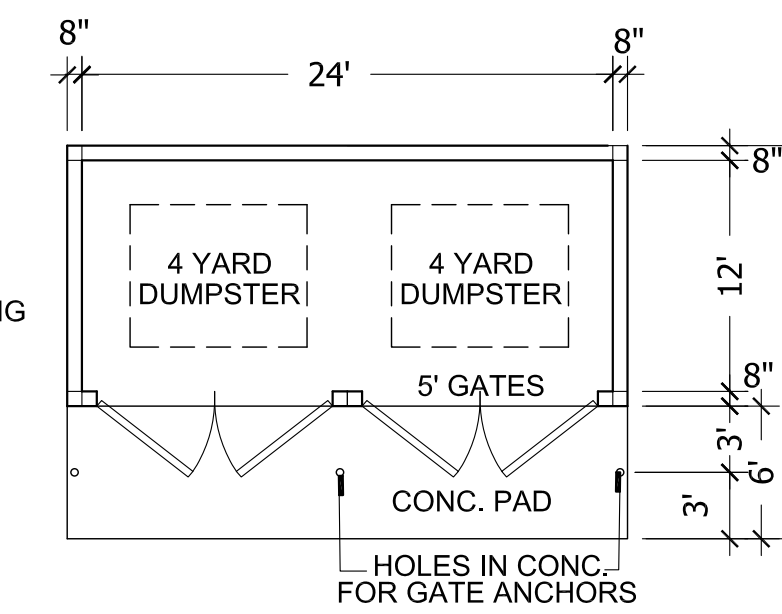
BIKE RACK DETAIL
N.T.S.



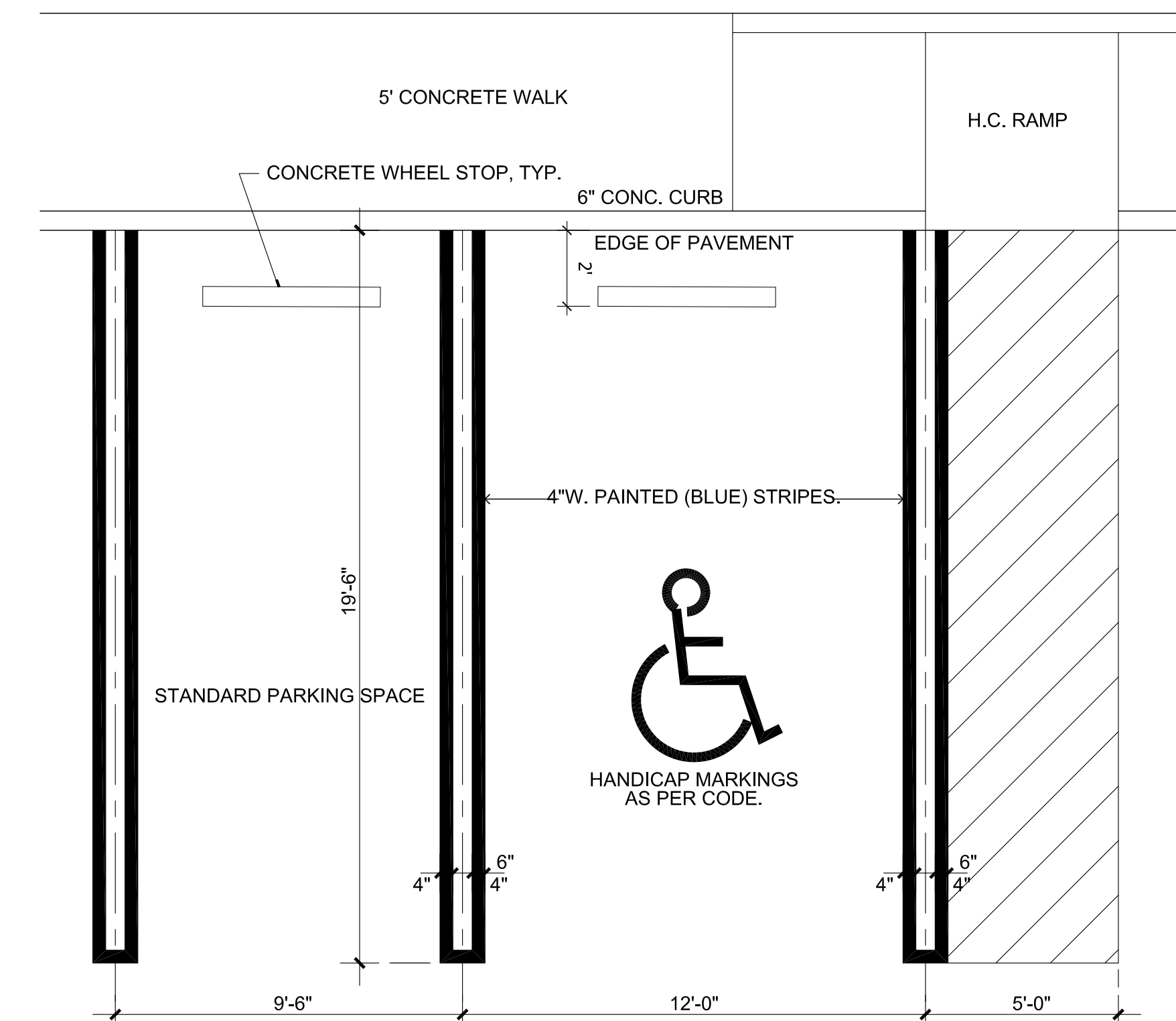
LANDSCAPE FORMS - CHASE PARK BENCH
CAST ALUM. W/ STEEL FRAMES & DIVIDER ARMS
BENCH DETAIL
N.T.S.



TYPICAL DUMPSTER ENCLOSURE DETAIL
N.T.S.

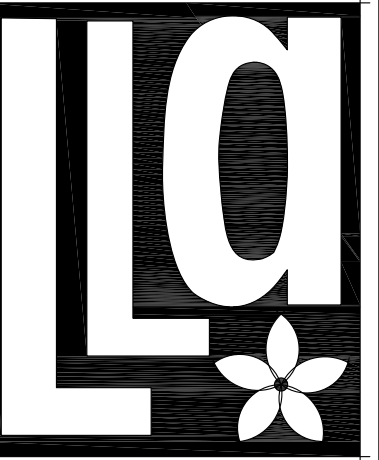


HANDICAP PARKING SIGN AS PER ADA REQUIREMENTS



STANDARD & HANDICAP PARKING LAYOUT
N.T.S.

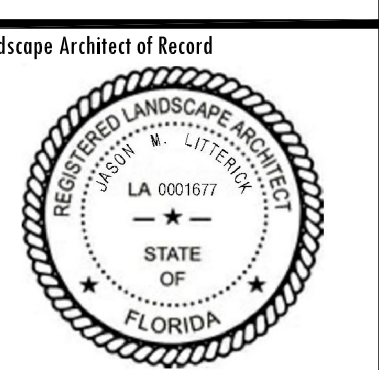
Site Plan Details



Litterick Landscape Architecture
2740 SW Martin Downs Blvd. #199
Palm City, FL 34990
561-719-3876
jasonla1677@yahoo.com

Project Name

Aria Apartments
Ft. Pierce, Florida

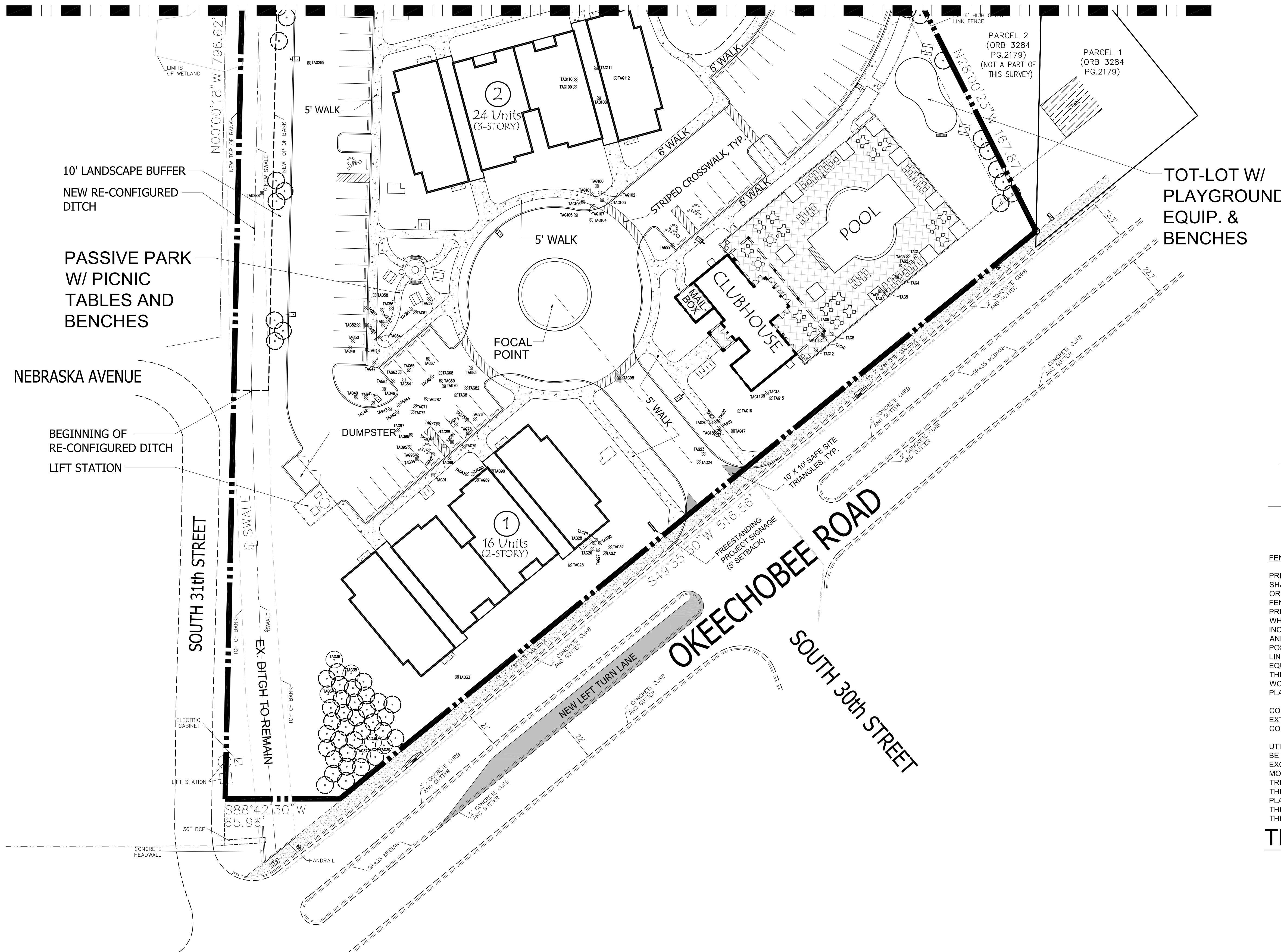


Scale: As Noted

Designed:	JML
Drawn:	JML
Approved:	JML
Date:	6/25/2020
Job no.	
Revisions:	

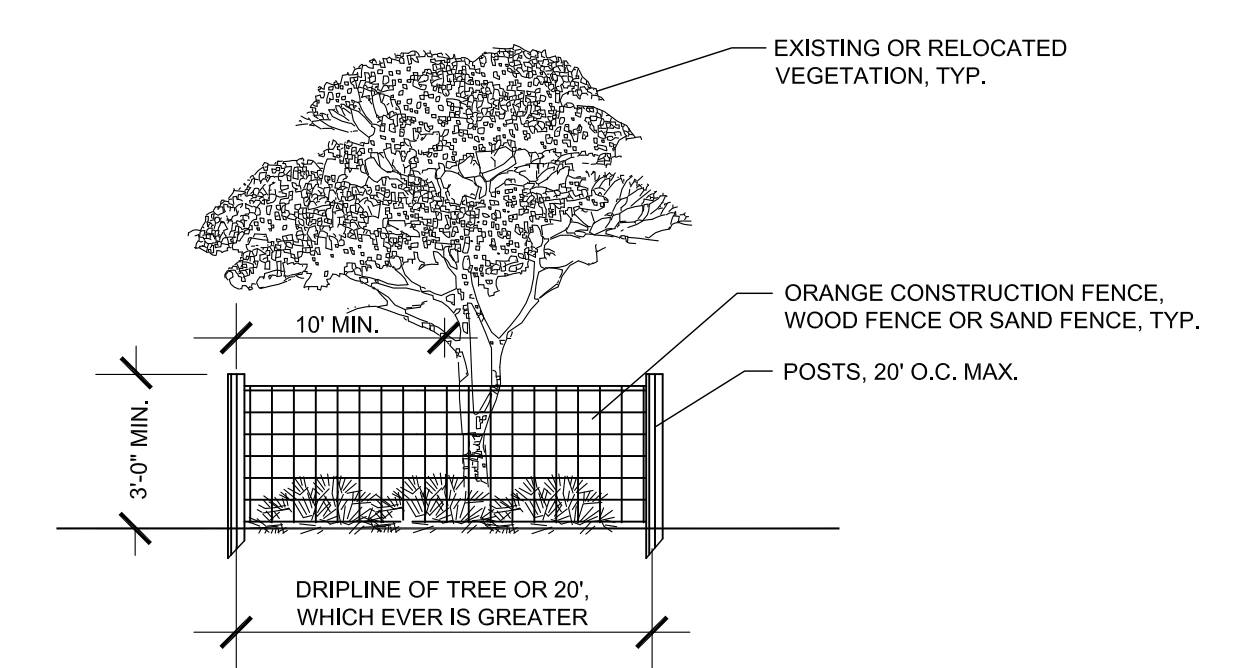
Sheet No.
SP-2

MATCHLINE (SEE SHEET TR-1)



EXISTING TREE LEGEND

- EXISTING TREE TO BE REMOVED OR RELOCATED
- EXISTING PALM TO REMAIN
- RELOCATED PALM
- EXISTING PINE TO REMAIN
- EXISTING OAK TO REMAIN



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.

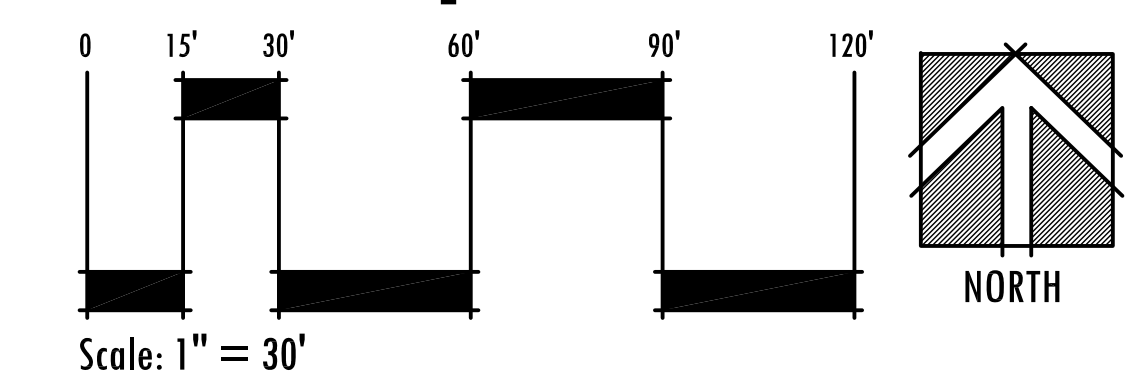
CONSTRUCTION WITHIN CANOPY & TREE BARRICADE SHALL BE DONE WITH EXTREME CARE TO MINIMIZE DISTURBANCE TO THE ROOTS BY EXCAVATING, COMPACTING OR ADDING FILL.

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 Disposition Plan



REFER TO SHEET TR-3 FOR TREE DISPOSITION CHART

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	24	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	ND	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	ND	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	ND	10		REMOVE	NONE
130	PINE	YES	28		REMAIN	
131	PALM	YES	16	24'	RELOCATE	
132	UNKNOWN	ND	24		REMOVE	NONE
133	OAK	YES	10		REMOVE	NONE
134	OAK	YES	28		REMAIN	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	ND	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	ND	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	PONCICIANA	ND	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'	RELOCATE	
174	UNKNOWN	ND	16		REMOVE	NONE
175	OAK	YES	16		REMOVE	16"
176	UNKNOWN	ND	20		REMOVE	NONE
177	PALM	YES	18	28'	RELOCATE	
178	PALM	YES	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	ND	24		REMOVE	NONE
191	PALM	YES	16	14'	RELOCATE	
192	OAK	YES	36		REMOVE	36"
193	UNKNOWN	ND	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	ND	8		REMOVE	
198	UNKNOWN	ND	8		REMOVE	
199	UNKNOWN	ND	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	ND	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	ND	10		REMOVE	NONE
218	OAK	YES	14		REMAIN	
219	PALM	YES	20	19'	REMAIN	
220	OAK	YES	30		REMAIN	OFF-SITE
221	UNKNOWN	ND	8		REMOVE	NONE
222	UNKNOWN	ND	12		REMOVE	NONE
223	UNKNOWN	ND	8		REMOVE	NONE
224	PALM	YES	18	20'	RELOCATE	
225	UNKNOWN	ND	6		REMOVE	NONE
226	UNKNOWN	ND	6		REMOVE	NONE
227	UNKNOWN	ND	4		REMOVE	NONE
228	UNKNOWN	ND	6		REMOVE	NONE
229	OAK	YES	6		REMAIN	
230	UNKNOWN	ND	12		REMOVE	NONE
231	PALM	YES	22	18'	REMAIN	OFF-SITE
232	UNKNOWN	ND	30		REMOVE	NONE
233	PALM	YES	22	17'	RELOCATE	
234	OAK	YES	12		REMOVE	NONE
235	OAK					