THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

DEVELOPMENT REVIEW

Property Information

Property address or Location: Intersection of Crossroads Pkwy. & Andrews Ave. 27.417365, -80.394795

Parcel ID #(s): 2324-312-0005-000-4

Project description: Transforming the land into an 83 lot RV park with amenity center

Application Type

■ Site Plan ☐ Conditional Use w/New Construction ☐ Conceptual Development Plan

☐ Minor Amendment ☐ Major Amendment

Site Information

Non-Residential: Proposed Sq. Ft.: 74,700 Site Acreage: 10.9

Residential: Proposed Units: _____ Proposed Sq. Ft.: _____ Site Acreage: _____

Alexander George & Company Corp.	Leo Giangrande, Principle, GEP
Property Owner(s)	**Applicant/Representative, Title, Company**
14800 Indrio Rd.	710 SE Ocean Blvd.
Street Address	Street Address
Fort Pierce FL 34945	Stuart FL 34994
City State Zip	City State Zip
	772-888-9076
Phone Number	Phone Number
alexandergeorgeandcompany@gmail.c	leo@gep-llc.com
Email Address	Email Address

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

Alex George

Property Owner(s) Signature(s)

APPOINTMENTS ARE REQUIRED FOR APPLICATION SUBMITTALS

CALL 772.467.3737 OR E-MAIL PLANNING_DL@CITYOFFORTPIERCE.COM

For more information, please refer to the website:

https://www.cityoffortpierce.com/971/Application-Submittal-for-Technical-Revi

General Information

- **Incomplete application packets will not be accepted.**
- In-take meetings are required for application submittals.
- Site plan approval is valid for one (1) year following City Commission approval. To maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date.
- Fee Schedule - https://www.cityoffortpierce.com/DocumentCenter/View/2620/Fee-Schedule-
- Public Notice Fees - https://www.cityoffortpierce.com/DocumentCenter/View/8818/Public-Notice-Fees-

Site Plan submittal requirements:

Submit one (1) original & three (3) hard copies and one (1) CD or Flash Drive of the following. Additional copies will be required of subsequent submittals.

- [x] Complete application
- [x] Warranty Deed
- [x] SLC Property Record Card
- [x] Detailed project description
- [x] General location map (see Section 125-313)
- [x] Survey (see Section 125-313)
- [ ] Site Plan (see Section 125-313)
- [x] Landscaping Plan (see Section 123-37)
- [x] Conceptual Drainage Plan (see Section 125-313)
- [x] Environmental Impact Report
- [ ] Beach/Dune System protection plan, if applicable (see Section 125-313)
- [x] Lighting Plan (see Section 125-313)
- [ ] Design Review submittals (see Design Review application)
- [x] Traffic Impact Report
- [x] Concurrency Review submittals (see Concurrency Review application)

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

DESIGN REVIEW

Property Information

Property address or Location: Intersection of Crossroads Pkwy & Andrews Ave. 27.4173627,-80.394795

Parcel ID #(s): 2324331200050000-4

Project description: **Transforming the land into an 83 lot RV park with amenity center**

Alexander George & Company Corp.	Leo Giangrande, Principle, PEPGEP
Property Owner(s)	**Applicant/Representative, Title, Company**
14800 Indrio Rd.	710 SE Ocean Blvd.
Street Address	Street Address
Fort Pierce FL 34945	Stuart FL 34994
City State Zip	City State Zip
	772-888-9076
Phone Number	Phone Number
alexandergeorgeandcompany@gmail.c	leo@gepllc.com
Email Address	Email Address

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

Alex George

Property Owner(s) Signature(s)

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For more information, please refer to the website:

https://www.cityoffortpierce.com/971/Application-Submittal-for-Technical-Revi

Design Review Application Checklist
(City Code of Ordinances 125-314)

Submittal for Administrative Approval

a. A survey (1" = 30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of section 123-66, location of bordering streets and, if applicable, wetlands and beaches.
b. A site analysis study to include a discussion of specimen trees and other natural vegetation, access, significant topography, wetlands, buffers, setbacks, views, orientation, the surrounding built environment, and other site features that may influence design elements.
c. A draft written narrative describing the design intent of the project, its goals, and objectives and how it reflects the site analysis study results.
d. Context photographs of neighboring uses and architectural styles.
e. Photographs and/or drawings of architectural buildings or objects that serve as a precedent for the proposed building design. Models should be taken from local exemplary buildings, either existing or demolished. Documentation of such buildings is available in the city's planning department.
f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.
g. Conceptual site plan (to scale) showing proposed location of all buildings, structures, parking areas, signs and landscaping.
h. Landscape plan, at the same scale as the site plan. The planning director or designee may request enlarged plans of detailed planting areas. Planting schedule with sizes of proposed plantings must be included.
i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.
j. Exterior elevations showing architectural character, external architectural features, and streetscape of the proposed development, including materials, colors, shadow lines and landscaping. The street elevation shall encompass the entire proposed project and generally identify the major elements of the adjacent two (2) properties on either side of the site. If the adjacent properties are vacant or underutilized, a diagram shall be provided that identifies the mass and form that is allowable under current zoning. If the street elevation must be drawn at such a scale as to render architectural details of the building unreadable, drawings of individual buildings at a larger scale should be provided as well.
k. Design review concurrent with conceptual development plan procedure according to subsection 125-313 is also available.

Submittal for Board Approval

a. A written narrative describing how the project conforms to administrative approval and design review guidelines of this section.
b. A final site plan meeting the requirements of section 125-313.
c. A final site lighting plan that meets the requirements of subsection 125-313(d)(8).
d. A final landscape plan that meets the requirements of articles II and III of chapter 123.
e. Final floor plans and elevation drawings (1/8" = 1'-0" minimum scale), as detailed under administrative approval, showing exterior building materials and colors with architectural sections and details to adequately describe the project.
f. A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation.

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT
Florida

CONCURRENCY
CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	General Commercial	General Commercial	R-4
South	General Commercial	General Commercial	C-3
East	General Commercial	General Commercial	C-3
West	General Commercial	General Commercial	C-3

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	GC	C-3	0.0	10.91	N/A
****Proposed**	GC	C-3	7.6 rv pads/ac	10.91	N/A

II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum: 21,580
Current Zoning/FLU	Total gallons per day 0.0
**Proposed Zoning/FLU	Total gallons per day 21,580
**Change in Demand	Total gallons per day: 21,580

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: 21,580
Current Zoning/FLU	Total gallons per day:0.0
**Proposed Zoning/FLU	Total gallons per day:21,580
**Change in Demand	Total gallons per day: 21,580

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

Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people			
Urban District	5 acres per 1,000 people			
Community	2.5 acres per 1,000 people			
Neighborhood	1.36 acres per 1,000 people			

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

	K-8	High
School Name		
City		
Distance		
Current Zoning/FLU Enrollment Demand		
****Proposed Zoning/FLU Enrollment Demand**		
****Change in Demand**		

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	
****Proposed Zoning/FLU**	
***Change in Demand**	

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

Impact	The site is deisnged to the LOS of the 25-yr 3-day storm event Pre: 5.74 ac-ft Post: 6.67 ac-ft Diff: 0.93 ac-ft

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	2142	108
****Proposed Zoning/FLU**		
***Change in Demand**	Trips	Trips: 12
Impact to Capacity	10% increase in volume on Crossroads Pkwy.	

IV. Project Description

PHASING
Is this project (phase) part of a larger project? ☐ Yes ☑ No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: 83 rv lots Single Family: Multifamily:
Non-residential (square footage): 3,200 sq amenity center
Mixed-use (describe use):
(If this is a single phase project, name it Phase I – Total) Phase I - Total

RESIDENTIAL DATA

Type	**Phase**	**Number of Units**	**Acres**	**Expected beginning date**	**Expected completion date**
Single-family, detached					
Single-family, attached					
Multi-family					
Other (specify)					

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

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

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

GIANGRANDE
Engineering & Planning
Consulting Civil Engineers

701 SE Ocean Blvd.
Stuart, FL 34996
(Ph.) 772 888 9076

October 19, 2023

City of Fort Pierce Planning Department
100 N. U.S. Highway 1
Fort Pierce, FL 34950

Re: **Development Review Application**
Crossroads RV Park
Parcel ID: 2324-312-0005-000-4

To whom it may concern,

Giangrande Engineering & Planning (GEP) is providing this package as a request for the development review submittal of the above referenced project. This project proposes a RV park with 83 lots that will be short to long term rentals with an amenity center. The rental period will range from one night to six months, to accommodate guest passing through to longer-term needs. The site is located at the intersection of Crossroads Parkway and Andrews Avenue and the project will be constructed on the 10.91-acre lot (Parcel ID 2324-312-0005-000-4). The purpose is to gain approval of the proposed site plan and cover the required documentation. The following items are to be provided with the submittal of this document:

- Development Review Form
- Warranty Deed
- Property Appraisers Card
- General Location Map
- Drainage Report
- Survey
- Site Plan
- Plan Set
- Landscape Plan
- $3,775 Development Review fee

Should you have any questions or need additional information, please do not hesitate to contact me at 772.888.9076.

We look forward to delivering a successful project with you.

Best regards,

Leo Giangrande, P.E.
Principal

MICHELLE R. MILLER, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 5056435 OR BOOK 4843 PAGE 2274, Recorded 06/15/2022 04:14:41 PM

Prepared by:
Robert A. Burson
Attorney at Law
Robert A. Burson, P.A.
Post Office Box 1620
Stuart, FL 34995
772-286-1616
File Number: **22-044**
MIN-O

[Space Above This Line For Recording Data]

Corrective Special Warranty Deed

This Special Warranty Deed made this 3rd day of **June, 2022** between **ALBERT RUSSO, a single man,** whose post office address is **P.O. Box 1002, Palm City, FL 34990,** grantor, and **ALEXANDER GEORGE& COMPANY CORP, a Florida corporation,** whose post office address is 14800 Indrio Rd., Fort Pierce, FL 34945, 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:

See Exhibit 1 attached hereto and made a part hereof for the legal description.

Parcel Identification Number: 2324-312-0005-000/4

This deed is recorded to correct an error in the original legal description in that deed recorded in ORB 4595, page 411, St. Lucie County, Florida, public records.

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.

DoubleTime®

Signed, sealed and delivered in our presence:

Witness Name: Audrey Perry

Witness Name: Michael Dale

Albert Russo

State of Florida
County of Martin

The foregoing instrument was acknowledged before me by means of [X] physical presence or [ ] online notarization, this 2nd day of June, 2022 by Albert Russo, a single man. He [ ] is personally known to me or [X] has produced a driver's license as identification.

[Notary Seal]

Notary Public

Printed Name: MICHAEL L. DALE

My Commission Expires: 3-26-2025

MICHAEL L. DALE
Commission # HH 090943
Expires March 26, 2025
Bonded Thru Budget Notary Services

DoubleTime®

EXHIBIT 1- LEGAL DESCRIPTION

That portion of the Southwest Quarter of Section 24, Township 35 South, Range 39 East, and a portion of Lots 3 and 6 of BOSTON AND FLORIDA ATLANTIC COAST LAND CO. SUBDIVISION of Section 24, as recorded in Plat Book 3 at page 32 of the public records of St. Lucie County, Florida, described as follows:

Commence at the Northwest corner of the Southwest Quarter of said Section 24 and run South 00°07'24" East, along the West line of the Southwest Quarter of said Section 24, for 15.00 feet;

thence run South 89°41'32" East 15.00 feet South of and parallel to the North line of the Southwest Quarter of said Section 24, along the South right of way line of Andrews Avenue (a 30 foot wide right of way) for 739.44 feet to the Point of Beginning);

thence continue South 89°41'32" E along said right of way for 919.16 feet;

thence run South 00°06'01" East for 10.00 feet;

thence run South 89°41'29" East for 226.79 feet;

thence run South 00°18'28" West for 425.04 feet;

thence run South 25°04'02" West for 226.43 feet;

thence run South 70°04'02" West for 459.41 feet;

thence run North 21°40'15" West for 344.63 feet to a point of curvature of a circular curve to the left, concave Southwesterly;

thence run Northwesterly along the arc of said curve having a radius of 855.00 feet-through a central angle of 47°21'31" for 706.71 feet to the Point of beginning, lying and being in St. Lucie County, Florida.

LESS AND EXCEPTING THEREFROM the following described real property conveyed to Sundial Homes, Inc. by deed recorded in OR Book 1150, page 2226, of the public records of St. Lucie County, Florida:

Commence at the Southeast corner of the Southwest Quarter of the Northwest Quarter of Section 24, Township 35 South, Range 39 East, St. Lucie County, Florida, said point lying on the centerline of Andrews Avenue, a 30 foot wide road right of way;

thence run South 00°06'16" East along the East line of the Northwest Quarter of the Southwest Quarter of Section 24, a distance of 15.00 feet to a point on the Southerly right of way line of Andrews Avenue and the Point of Beginning.

From the Point of Beginning thence continue South 00°06'16" East a distance of 30 feet;

thence run North 89°41'32" West, parallel to the South line of the Northwest Quarter of said Section 24, a distance of 11.88 feet to a point of curvature;

thence run along the arc of a curve concave to the South, having a radius of 220.00 feet and a central angle of 46°02'51" an arc distance of 176.81 feet to a point of tangency;

thence run South 44°15'37" West, a distance of 126.72 feet to a point of curvature;

thence run along the arc of a curve concave to the East, having a radius of 25.00 feet and a central angle of 86°25'00" an arc distance of 37.71 feet to a point on a curve on the Northerly right of way line of Crossroads Parkway as shown on the plat entitled ST. LUCIE CROSSROADS as recorded in Plat Book 30 at Pages 8 and 8A of the Public Records of St. Lucie County, Florida;

thence with a radial bearing from said point of South 47°50'37" West, run Northwesterly along the arc of a curve and the Northerly right of way line of Crossroads Parkway having a radius of 855.00 feet and a central angle of 26°52'23" an arc distance of 401.01 feet to a point of intersection with the Southerly right of way line of Andrews Avenue, being a 30 foot wide right of way and said Southerly right of way line of Andrews Avenue lying 15 feet South of the South line of the Northwest Quarter of said Section 24;

thence run South 89°41'32" East along the Southerly right of way line of Andrews Avenue and parallel to the South line of the Northwest Quarter of said Section 24, a distance of 587.48 feet to the Point of Beginning.

F:\E\REAL-EST\ALEXANDER GEORGE\22-044\LEGAL DESCRIPTION REVISED BY RAB-01

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

Property Identification

Site Address: CROSSROADS PKWY
Sec/Town/Range: 24/35S/39E
Parcel ID: 2324-312-0005-000-4
Jurisdiction: Fort Pierce

Use Type: 1000
Account #: 129733
Map ID: 23/24S
Zoning: General Co

Ownership

Alexander George & Company Corp

14800 Indrio RD
Fort Pierce, FL 34945

Legal Description

24 35 39 FROM INT OF SE COR OF SW 1/4 OF NW 1/4 AND CL OF ANDREWS AVE RUN S 00 06 16 E ALG E LI OF NW 1/4 OF SW 1/4 OF SEC 15 FT TO SLY R/W LI OF ANDREWS AVE AND POB, TH S 89 41 32 E ALG S R/W LI 331.68 FT, TH S 00 03 55 E 10 FT, TH S 89 41 29 E 226.79, TH S 00 18 28 W 420.04FT, TH S 25 04 02 W 226.43 FT, TH S 70 04 02 W 459.41 FT TO NELY R/W LI OF CROSSROADS PKWY, TH N 21 40 15 W ALG NELY R/W LI 344.63 FT TO CURVE CONCAVE SW, R OF 855 FT, TH NWLY ALG ARC 305.70FT TO CURVE CONCAVE E, R OF 25 FT, TH NLY ALG ARC 37.71 FT, TH N 44 15 37 E 126.72 FT TO CURVE CONCAVE SE, R OF 220 FT, TH NELY ALG ARC 176.81 FT, TH S 89 41 32 E 11.88 FT, TH N 00 06 16 W 30 FT TO SLY R/W LI OF ANDREWS AV AND POB (10.904 AC - 474,978 SF)

Current Values

Just/Market Value:	$585,300
Assessed Value:	$585,300
Exemptions:	$0
Taxable Value:	$585,300

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

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	10.9
Land Size (SF):	474,978

Building Design Wind Speed

Occupancy Category	I	II	III
Speed	140	150	160

Sources/links:

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Jun 3, 2022	4843 / 2274	0111	SPWD	Alexander George & Company Corp	$0
Apr 13, 2021	4595 / 0411	0001	SPWD	Russo Albert	$525,000
Feb 23, 2018	4100 / 2383	0111	WD	ALRU Holdings LLC	$100
Feb 14, 2018	4097 / 1883	0130	WD	Russo Albert	$100
Oct 28, 2011	3337 / 1026	0111	CT	Adnan Investment and Dev Inc	$100
Sep 27, 1999	1252 / 0530	XX01	WD	Harbor Federal Savings Bank	$265,700
Aug 22, 1994	0916 / 1044	XX01	CT	COMMERCE SQUARE DEV CORP	$495,000
Sep 28, 1989	0657 / 1612	XX00	WD		$1,000,000

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

Sketch Area Legend

Sub Area	Description	Area	Fin. Area	Perimeter

Special Features and Yard Items

Type	Qty	Units	Year Blt

Current Year Values

Current Values Breakdown

Building:	$0
Land:	$585,300
Just/Market:	$585,300
Ag Credit:	$0
Save Our Homes or 10% Cap:	$0
Assessed:	$585,300
Exemption(s):	$0
Taxable:	$585,300

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
1999	0041	28.8	Fort Pierce Stormwater Charge	$1,987.20

Start Year	AssessCode	Units	Description	Amount
2013	0054	10.57	North St. Lucie Water Management District	$219.33

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

Historical Values

Year	Just/Market	Assessed	Exemptions	Taxable
2022	$585,300	$585,300	$0	$585,300
2021	$598,600	$598,600	$0	$598,600
2020	$598,600	$598,600	$0	$598,600
2019	$598,600	$598,600	$0	$598,600

Permits

Number	Issue Date	Description	Amount	Fee
C52693	Jun 26, 1990	Slab	$2,500	$2,500
C53031	Jun 26, 1990	Commercial New Construction	$55,000	$55,000

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

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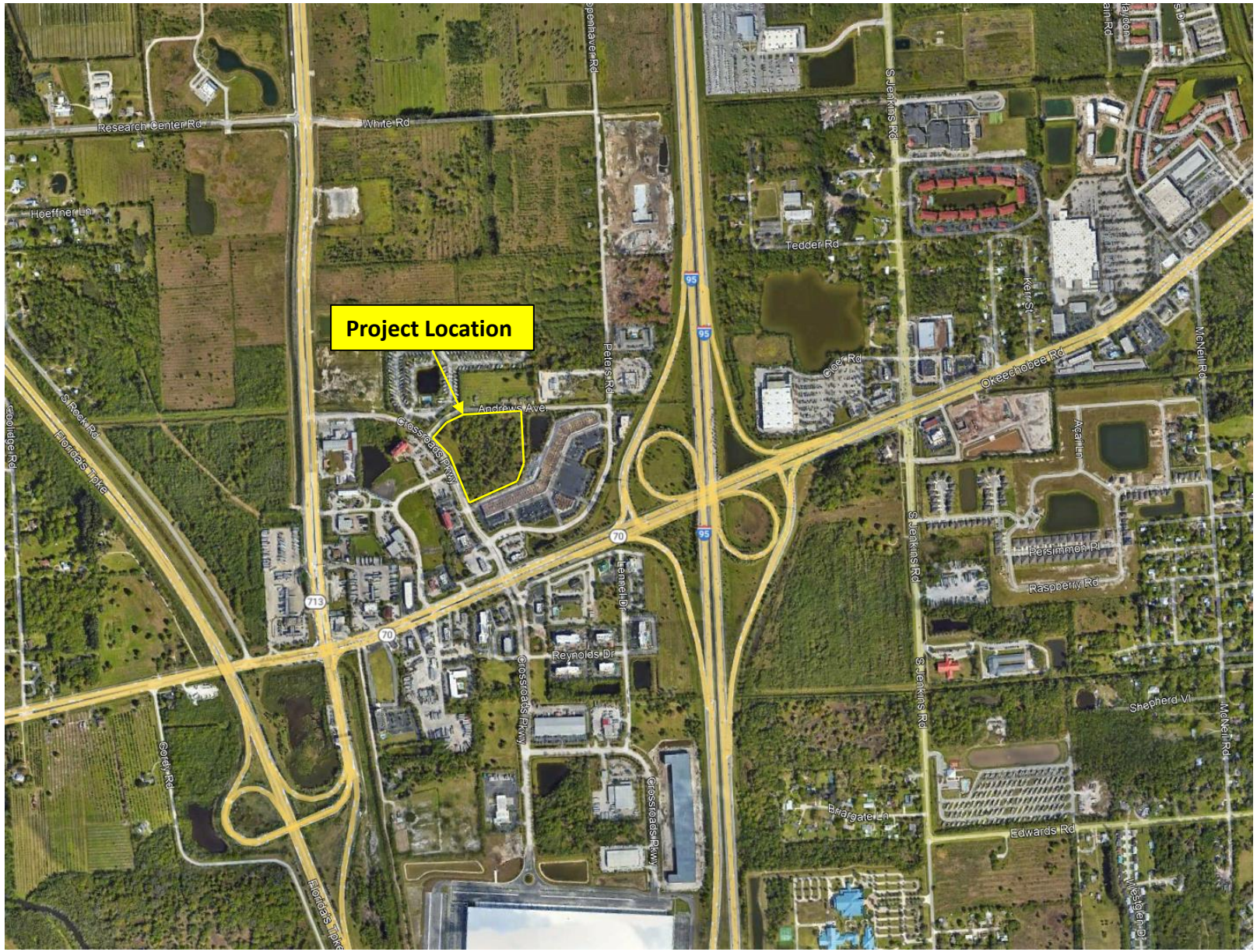
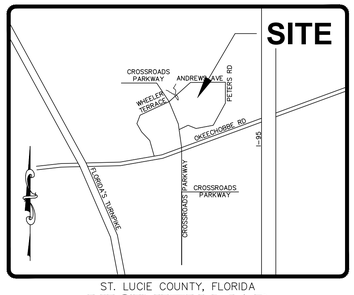

Project Location
Research Center Rd
White Rd
Hoeffner Ln
Tedder Rd
Okeechobee Rd
Andrews Ave
Crossroads Pkwy
Peters Rd
S Rock Rd
Florida's Turnpike
Goolsbee Rd
Gordy Rd
Reynolds Dr
Kennel Dr
Crossroads Pkwy
S Jenkins Rd
Raspberry Rd
Persimmon Pl
Shepherd Vl
Edwards Rd
Briargate Ln
McNeil Rd
Acari Ln
Kerr St
Good Rd
95
70
713

BOUNDARY & TOPOGRAPHY

FOR: ALEXANDER GEORGE & CO



ST. LUCIE COUNTY, FLORIDA

VICINITY MAP

NO SCALE

LEGAL DESCRIPTION
SOURCE (ORB 4843, PG 2274)

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 35 SOUTH, RANGE 39 EAST, AND A PORTION OF LOTS 3 AND 6 OF BOSTON AND FLORIDA ATLANTIC COAST LAND CO. SUBDIVISION OF SECTION 24, AS RECORDED IN PLAT BOOK 3 AT PAGE 32 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 24 AND RUN SOUTH 00°07'24" EAST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, FOR 15.00 FEET; THENCE RUN SOUTH 89°41'32" EAST 15.00 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, ALONG THE SOUTH RIGHT OF WAY LINE OF ANDREWS AVENUE (A 30 FOOT WIDE RIGHT OF WAY) FOR 739.44 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 89°41'32" E ALONG SAID RIGHT OF WAY FOR 919.16 FEET; THENCE RUN SOUTH 00°06'01" EAST FOR 10.00 FEET; THENCE RUN SOUTH 89°41'29" EAST FOR 226.79 FEET; THENCE RUN SOUTH 00°18'28" WEST FOR 425.04 FEET; THENCE RUN SOUTH 25°04'02" WEST FOR 226.43 FEET; THENCE RUN SOUTH 70°04'02" WEST FOR 459.41 FEET; THENCE RUN NORTH 21°40'15" WEST FOR 344.63 FEET TO A POINT OF CURVETURE OF A CIRCULAR CURVE TO THE LEFT, CONCAVE SOUTHWESTERLY; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE HAVING A RADIUS OF 855.00 FEET THROUGH A CENTRAL ANGLE OF 47°21'31" FOR 706.71 FEET TO THE POINT OF BEGINNING, LYING AND BEING IN ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THEREFROM THE FOLLOWING DESCRIBED REAL PROPERTY CONVEYED TO SUNDIAL HOMES, INC BY DEED RECORDED IN OR BOOK 1150, PAGE 2226, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA:

COMMENCE AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 35 SOUTH, RANGE 39 EAST, ST. LUCIE COUNTY, FLORIDA, SAID POINT LYING ON THE CENTERLINE OF ANDREWS AVENUE, A 30 WIDE ROAD RIGHT OF WAY, THENCE RUN SOUTH 00°06'16" EAST ALONG THE EAST LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, A DISTANCE OF 15.00 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF ANDREWS AVENUE AND THE POINT OF BEGINNING.

FROM THE POINT OF BEGINNING THENCE CONTINUE SOUTH 00°06'16" EAST A DISTANCE OF 30 FEET; THENCE RUN NORTH 89°41'32" WEST, PARALLEL TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 11.88 FEET TO A POINT OF CURVATURE; THENCE RUN ALONG THE ARC OF A CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 220.00 FEET AND A CENTRAL ANGLE OF 46°02'51" AN ARC DISTANCE OF 176.81 FEET TO A POINT OF TANGENCY; THENCE RUN SOUTH 44°15'37" WEST, A DISTANCE OF 126.72 FEEL TO A POINT OF CURVATURE; THENCE RUN ALONG THE ARC OF A CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 25.00 FEET AND A CENTRAL ANGLE OF 86°25'00" AN ARC DISTANCE OF 37.71 FEET TO A POINT ON A CURVE ON THE NORTHERLY RIGHT OF WAY LINE OF CROSSROADS PARKWAY AS SHOWN ON THE PLAT ENTITLED ST. LUCIE CROSSROADS AS RECORDED IN PLAT BOOK 30 AT PAGES 8 AND 8A OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA; THENCE WITH A RADIAL BEARING FROM SAID POINT OF SOUTH 47°50'37" WEST, RUN NORTHWESTERLY ALONG THE ARC OF A CURVE AND THE NORTHERLY RIGHT OF WAY LINE OF CROSSROADS PARKWAY HAVING A RADIUS OF 855.00 FEET AND A CENTRAL ANGLE OF 26°52'23" AN ARC DISTANCE OF 401.01 FEET TO A POINT OF INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF ANDREWS AVENUE, BEING A 30 FOOT WIDE RIGHT OF WAY AND SAID SOUTHERLY RIGHT OF WAY LINE OF ANDREWS AVENUE LYING 15 FEET SOUTH OF THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24; THENCE RUN SOUTH 89°41'32" EAST ALONG THE SOUTHERLY RIGHT OF WAY LINE OF ANDREWS AVENUE AND PARALLEL TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 587.48 FEET TO THE POINT OF BEGINNING.

LEGEND

(P)	PLAT DATA
(C)	CALCULATED FROM FIELD MEASUREMENTS
(M)	MEASURED
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
P.L.S.	PROFESSIONAL LAND SURVEYOR
L.B.	LICENSED BUSINESS
PRM	PERMANENT REFERENCE MONUMENT
IR&C	5/8" IRON ROD & CAP
C.M.	CONCRETE MONUMENT
O.R.B.	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG	PAGE
Δ	CENTRAL ANGLE
R	RADIUS
L	ARC LENGTH
CB	CATCH BASIN
CD	CHORD DISTANCE
UGE	UNDERGROUND ELECTRIC
UG AT&T	UNDERGROUND AT&T
R/W	RIGHT OF WAY
PC	POINT OF CURVE
PRC	POINT OF REVERSE CURVE
WM	WATER MAIN
A/C	AIR CONDITIONING
BLDG	BUILDING
PT	POINT OF TANGENCY
F.F.E.	FINISHED FLOOR ELEVATION
N.A.V.D.	NORTH AMERICAN VERTICAL DATUM
N.G.V.D.	NATIONAL GEODETIC VERTICAL DATUM
NR	NON-RADIAL
NSLRWCD	NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT
————	CHAIN-LINK FENCE
℄	CENTERLINE
ℙ	PROPERTY LINE
No.	NUMBER
TYP	TYPICAL
EL	ELEVATION
CONC	CONCRETE
CATV	CABLE TELEVISION
SQ.	SQUARE
FT.	FEET
INFO.	INFORMATION
TOB	TOP OF BANK
OHW	OVERHEAD UTILITIES
HDPE	HIGH DENSITY POLYETHYLENE
LS	LIFT STATION
WW	WET WELL
L	LOT LINE
ℬ	BUILDING WALL LINE
	WOOD POWER POLE
	FIRE HYDRANT
	VALVE
	DRAINAGE MANHOLE
CLF	CHAIN LINK FENCE
RCP	REINFORCED CONCRETE PIPE
	POWER RISER
(D)	BENCHMARK
(D)	DEED
INV	INVERT
	SANITARY MANHOLE
	HAND HOLE
	SANITARY CLEAN OUT
	WOOD POWER POLE
	CONCRETE POWER POLE
	GUY WIRE AND ANCHOR
	WELL
	CABLE TV JUNCTION BOX
	SIGN
	LIGHT POLE
BW	BARBED WIRE
OHW	OVERHEAD WIRE
TOB	TOP OF BANK
TOE	TOE OF SWALE

SURVEYORS NOTES AND REPORT:

1. THIS BOUNDARY SURVEY WAS PERFORMED FOR THE PURPOSE OF MAPPING EXISTING FEATURES AND CONDITIONS, AS SHOWN AND DEPICTED HEREON. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS IS A TRUE AND ACCURATE DEPICTION OF A FIELD SURVEY PERFORMED UNDER MY DIRECTION AND COMPLETED ON OCTOBER 4, 2021. I FURTHER CERTIFY THAT SAID DRAWING IS IN COMPLIANCE WITH THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS, IN CHAPTER 5J–17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027, FLORIDA STATUTES.
2. THIS SURVEY MAP AND REPRODUCTIONS THEREOF ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY CANNOT BE TRANSFERRED OR ASSIGNED WITHOUT THE SPECIFIC WRITTEN PERMISSION OF ENGINEERING, DESIGN AND CONSTRUCTION, INC. IT IS A VIOLATION OF CHAPTER 5J–17, FLORIDA ADMINISTRATIVE CODE, TO ALTER THIS SURVEY WITHOUT THE EXPRESS PRIOR WRITTEN CONSENT OF THE SURVEYOR. ADDITIONS AND/OR DELETIONS MADE TO THE FACE OF THIS SURVEY WILL MAKE THIS SURVEY INVALID.
3. THE LAST DATE OF FIELD WORK (AND DATA ACQUISITION) WAS OCTOBER 18, 2021.
4. CURRENT DESCRIPTION(S) SHOWN HEREON PROVIDED BY: THE CLIENT. A TITLE SEARCH FOR THIS PROPERTY HAS NOT BEEN ABSTRACTED TO SHOW MATTERS OF RECORD SUCH AS EASEMENTS OR OTHER ENCUMBRANCES OR RESTRICTIONS.
5. PARCELS CONTAIN A TOTAL OF 10.904 ACRES, MORE OR LESS.
6. THIS BOUNDARY SURVEY HAS BEEN REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM–EAST ZONE, NAD 83 (1990).
7. SUB–SURFACE IMPROVEMENTS INCLUDING UNDERGROUND UTILITIES, UTILITY SERVICES, WERE NOT LOCATED AS PART OF THIS SURVEY.
8. REVISIONS SHOWN HEREON DO NOT REPRESENT A "FIELD SURVEY UPDATE" UNLESS OTHERWISE NOTED.
9. BEARINGS SHOWN HERON ARE BASED UPON GRID BEARINGS AND REFERENCE TO THE LINE LABELED HERON AS (BEARING BASIS) AND ALL OTHER BEARINGS ARE RELATIVE THERETO. DISTANCES ARE IN U.S. SURVEY FEET AND DECIMAL PARTS THEREOF.
10. ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE BASED ON THE FLORIDA PERMANENT REFERENCE NETWORKS (FPRN) USING GPS REAL TIME KINEMATIC (RTK) OBSERVATION WITH AND ACCURACY OF ±0.06'–0.10'. SITE BENCHMARKS UTILIZED ARE SHOWN HEREON.
11. THIS SITE WAS SURVEYED UTILIZING TRIMBLE/SPRECTRA HARDWARE TOGETHER WITH SPECTRA SURVEY PRO REALTIME PROCESSING AND WAS BASED ON TRIMBLES "VRS NOW" NETWORK AND/OR THE FLORIDA PERMANENT REFERENCE NETWORK (FPRN). THE PROCEDURES AND NETWORK DESIGN MEETS THE GEODETIC ACCURACY STANDARDS AND SPECIFICATIONS FOR USING GPS RELATED POSITIONING AS SET FORTH BY THE FEDERAL GEODETIC CONTROL COMMITTEE IN THE MOST CURRENT PUBLICATION FOR 3RD ORDER CLASS ONE FOR HORIZONTAL CONTROL SURVEYS.
12. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS AND SYMBOLS SHOWN HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE THE RELATIONSHIP BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. THE DIMENSIONS SHOWN SHALL CONTROL THE LOCATION, OF THE IMPROVEMENTS, OVER THE SCALED POSITIONS.
13. THE OWNERSHIP OF PERIMETER FENCES, WALLS, HEDGES AND LANDSCAPING, IF ANY, SHOWN HEREON ARE NOT KNOWN AND ARE NOT LISTED AS ENCROACHMENTS. THEIR RELATIVE LOCATION IS SHOWN IN RELATION TO THE BOUNDARY LINES SHOWN.
14. THE SURVEY MAP SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK OR RESEARCH.
15. THE PROPERTY WHICH IS THE SUBJECT OF THIS SURVEY APPEARS TO BE SITUATE IN AN AREA OF MINIMAL FLOOD HAZARD AT THIS TIME PURSUANT TO F.E.M.A. FIRM NUMBER 12111C0167F, HAVING AN EFFECTIVE DATE OF FEBRUARY 16, 2012. FOR APPROXIMATE DELINEATION OF THE FLOOD ZONE LIMITS, REFER TO AFOREMENTIONED FIRM PANELS.

LIDAR FLIGHT NOTES & ACCURACY REPORT:

1. THIS SITE WAS FLOWN DURING OCTOBER 7, 2021 UTILIZING A DJI MATRICE 300 UAV.
2. FLIGHT PLANNING WAS PERFORMED WITH DJI PILOT FOR FLIGHT PLANNING AND POST–PROCESSED USING TRIMBLE BUSINESS CENTER AND/OR PIX4D SURVEY.
3. THE FLIGHT WAS OBSERVED BY CERTIFIED REMOTE PILOT NO. 4064815.
4. GROUND ELEVATIONS WHERE SPOT CHECKED WITH GPS REAL TIME KINEMATIC (RTK) OBSERVATION.
5. MEASUREMENTS OF DISTANCE, AREA AND VOLUME WITHIN THE MAP ARE ACCURATE TO WITHIN 1–3 TIMES THE GROUND SAMPLING DISTANCE. MAP MEASUREMENTS ARE WITHIN 1–3% OF GROUND–BASED MEASUREMENTS.
6. FEATURES ARE LIMITED TO THOSE VISIBLE AT TIME OF THE FLIGHT AND ARE SUBJECT TO FIELD VERIFICATION BY THE END USER. AREAS DESIGNATED AS "OBSCURED" INDICATE THE GROUND IS OBSCURED BY VEGETATION AND/OR SHADOWS. MAPPING WITHIN THESE AREAS MAY NOT MEET STANDARD ACCURACY.
7. RELATIVE ACCURACY:
   - VERTICAL ACCURACY IS ± 0.25' FOR OPEN AREAS
   - VERTICAL ACCURACY IS ± 0.50' AREAS OF DENSE VEGETATION.

MICHAEL T. OWEN PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION #5556

SIGNATURE DATE:

ENGINEERS & SURVEYORS ENVIRONMENTAL
10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 9935
L.B. CERTIFICATE OF AUTHORIZATION 8098

DRAWN BY	AV
CHECKED BY	MTO
FIELD CREW	JM
FILENAME	21-456_SURV REV1.dwg
SCALE	AS SHOWN
DATE	October 4, 2021

DATE	
08/11/22	REVISE LEGAL DESCRIPTION & SKETCH_AV
2/8/1122	REVISION COMMENTS

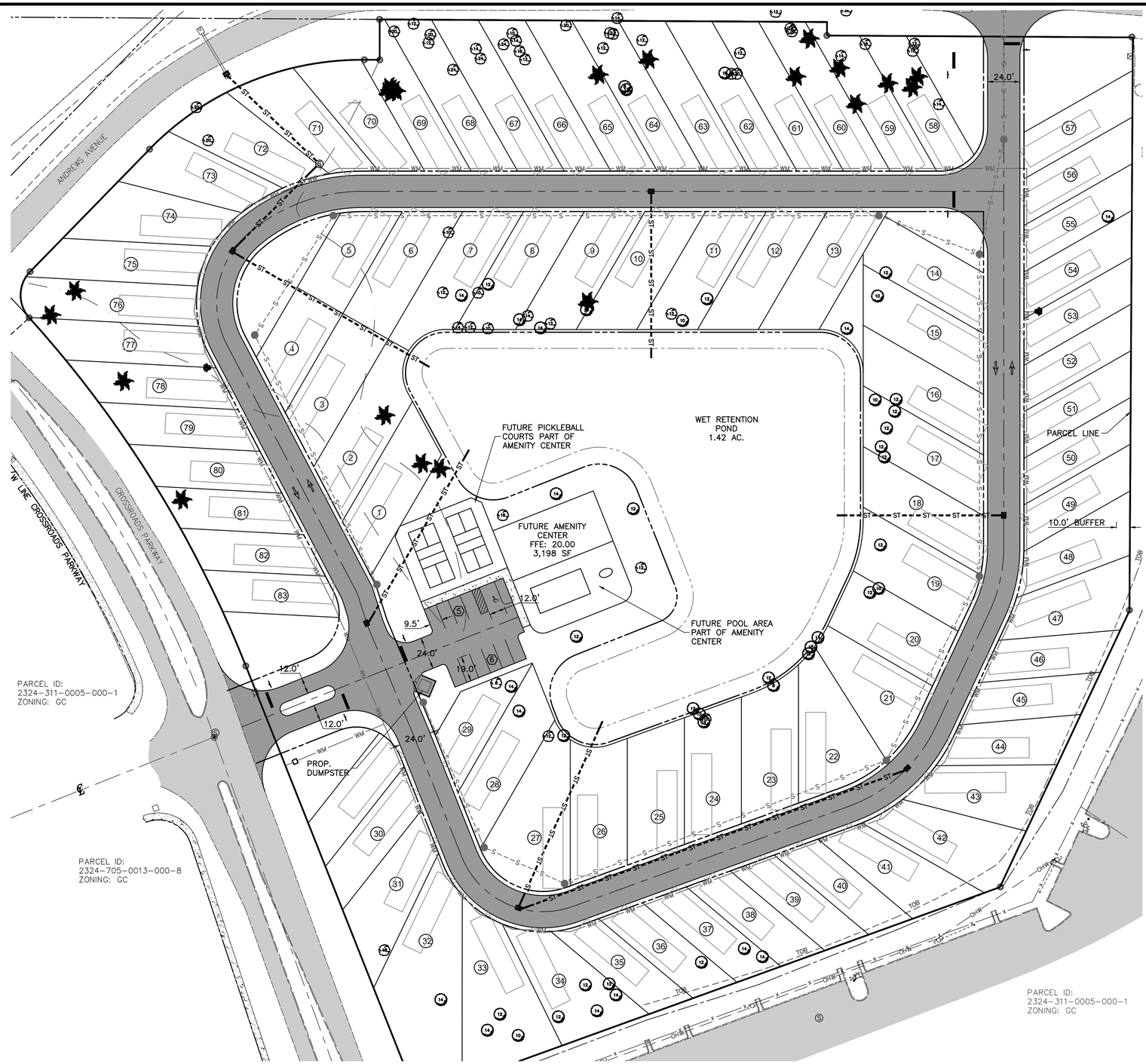
BOUNDARY AND TOPOGRAPHIC SURVEY
FOR: ALEXANDER GEORGE AND CO.
PORTION OF
SEC. 24, TWNSHP. 34 SOUTH, RGE. 35 EAST
ST. LUCIE COUNTY, FLORIDA

10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
772-462-2455

21-456

1 OF 1

Z:\EDC-2021\21-456\ - George - Crossroads Parkway FP\SURVEY\dwg - PDF\Survey\21-456_SURV REV1.dwg, 8/11/2022 1:44 PM
COPYRIGHT 2020 BY EDC,INC. THIS FIRM EXPRESSLY RESERVES THEIR EXCLUSIVE COMMON LAW COPYRIGHT AND INTELLECTUAL PROPERTY RIGHTS TO THESE DRAWINGS WHICH MAY NOT BE EXPRESSED, REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER, NOR ARE THEY TO BE ASSIGNED TO ANY PARTY WITHOUT IT THE WRITTEN CONSENT OF THIS FIRM.
ANY UNAUTHORIZED USE, CHANGE OR COPYING OF THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION AND APPROPRIATE COMPENSATION TO EDC, INC. WILL BE STRICTLY ENFORCED AND PROSECUTED TO THE FULLEST EXTENT OF THE LAW. ALL RIGHTS RESERVED.



0 40' 80'

SCALE: 1" = 40'

LOCATION MAP

SITE PLAN SUMMARY

1. PROJECT NAME: CROSSROADS RV PARK
2. PARCEL ID: 2324-312-0005-000-4
3. LOCATION: INTERSECTION OF CROSSROADS PKWY, & ANDREWS AVE.
4. SECTION/TOWNSHIP/RANGE: 24 35S 39E
5. OWNER: ALEXANDER GEORGE & COMPANY
   14800 INDRIO RD.
   FORT PIERCE, FL 34945
6. TYPE OF PROJECT: SITE PLAN (DEVELOPMENT REVIEW)
7. ZONING: GC
8. FUTURE LAND USE: GC
9. FLOOD ZONE:
10. TOTAL PROJECT AREA: 474,804 S.F. (10.90 AC.)
11. LOT COVERAGE OF STRUCTURES: 3,198 S.F.
12. IMPERVIOUS/PERVIOUS:
    SURFACE COVERAGE
    PERVIOUS:
    OPEN SPACE: 269,007 S.F./6.18 AC./57.3%
    IMPERVIOUS:
    RV PADS: 74,700 S.F./1.71 AC./15.7%
    ROADWAY: 57,874/1.33 AC./12.2%
    AMENITY CENTER/POOL/PICKLEBALL AREA: 11,368 S.F./0.26 AC./1.8%
    WET POND: 61,855 S.F./1.42 AC./13.0%
    TOTAL AREA: 474,804 S.F. (10.90 AC.)
13. MINIMUM BUILDING SETBACKS

LOT LINES	REQUIRED	PROVIDED
FRONT	25'	47'
REAR	20'	22'
SIDE	10'	23'

14. PARKING SUMMARY
    10 REGULAR SPACES
    1 ACCESSIBILITY SPACE
    TOTAL: 11 SPACES

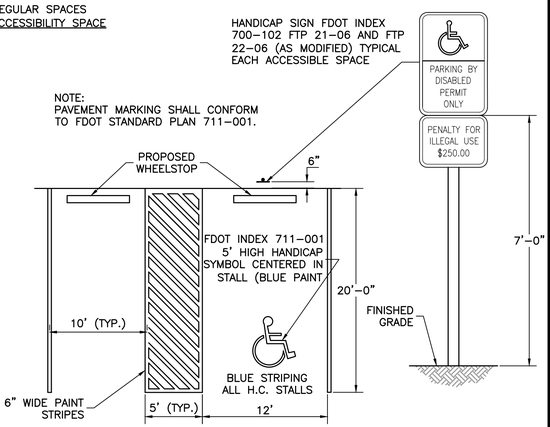
NOTE: REFER TO GENERAL NOTES FOR LEGAL DESCRIPTION

LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- EX. OVERHEAD ELECTRIC
- PROP. STORMWATER PIPE
- PROP. WATER MAIN
- PROP. FORCEMAIN
- PROP. SANITARY SEWER
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. ASPHALT MILLINGS
- PROP. CONCRETE
- EX. GUY WIRE
- EX. POWER POLE
- PROP. MITERED END SECT.

HANDICAP SIGN FDOT INDEX 700-102 FTP 21-06 AND FTP 22-06 (AS MODIFIED) TYPICAL EACH ACCESSIBLE SPACE

NOTE:
PAVEMENT MARKING SHALL CONFORM TO FDOT STANDARD PLAN 711-001.



HANDICAP PARKING DETAIL

N.T.S

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=40'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

SITE PLAN

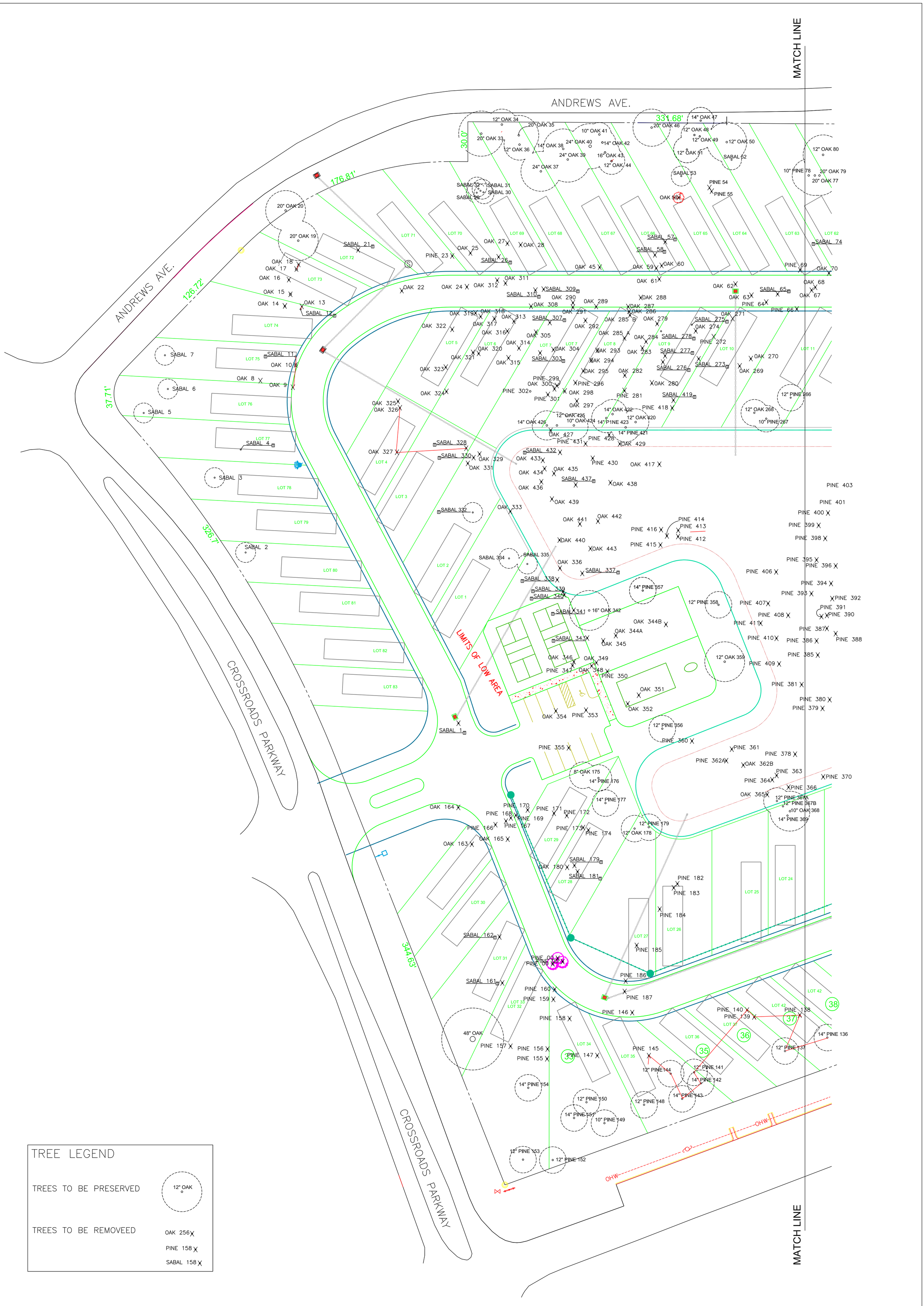
GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO D. GIANGRANDE, P.E.
License No: 66387

PROJECT #: 22-024

S-1

Drawing Name: S:\Shared Folders\GEP projects\2022\22-024 Crossroads Site Plan\Design\22-024 Site Plan.dwg Layout Name: P-1 - Plotted by: Devin Curran - Date: 1/3/2024 - 10:33 AM - Giangrande Engineering & Planning

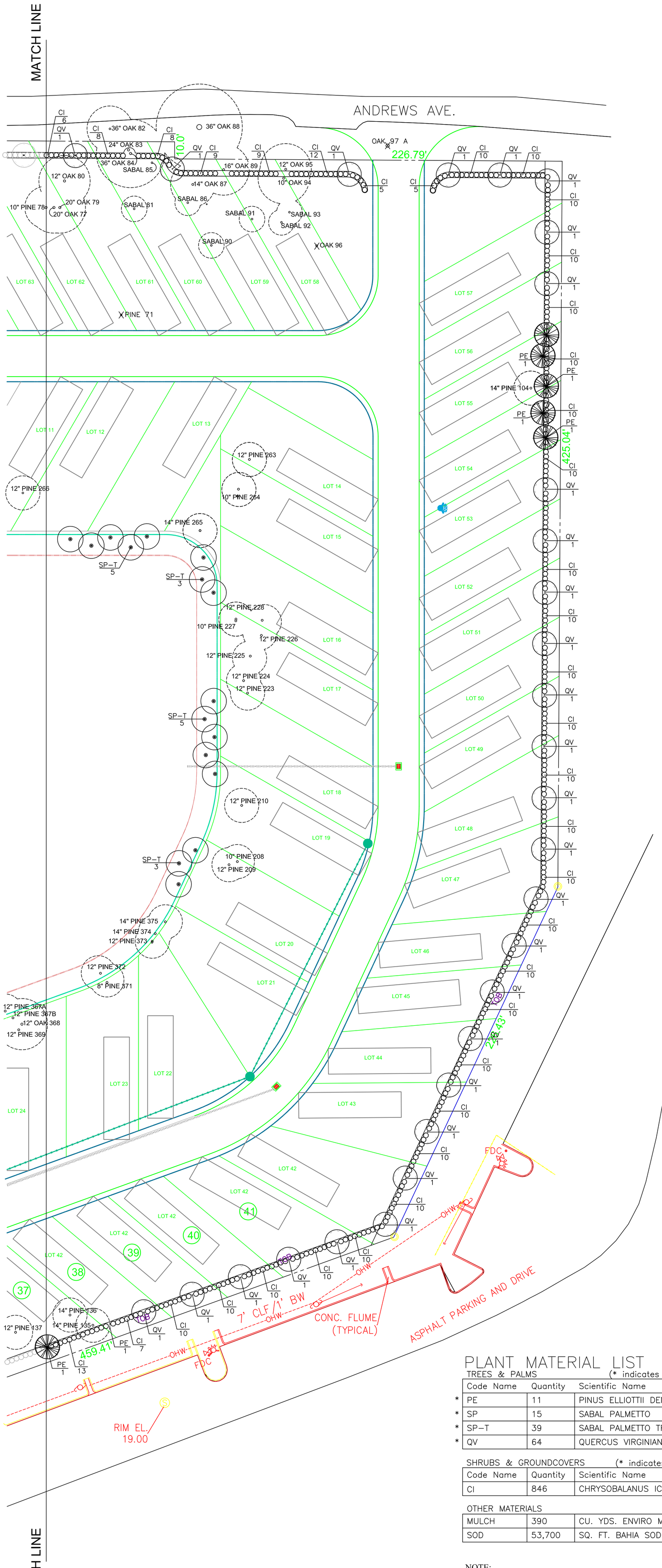


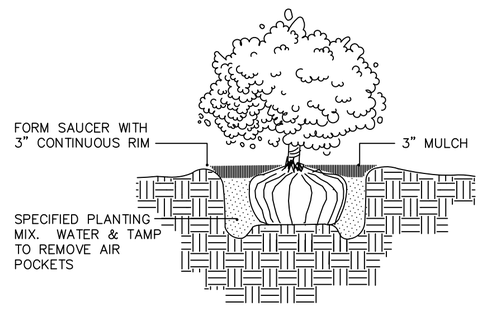
TREE LEGEND

TREES TO BE PRESERVED — 12" OAK

TREES TO BE REMOVEED — OAK 256X, PINE 158X, SABAL 158X

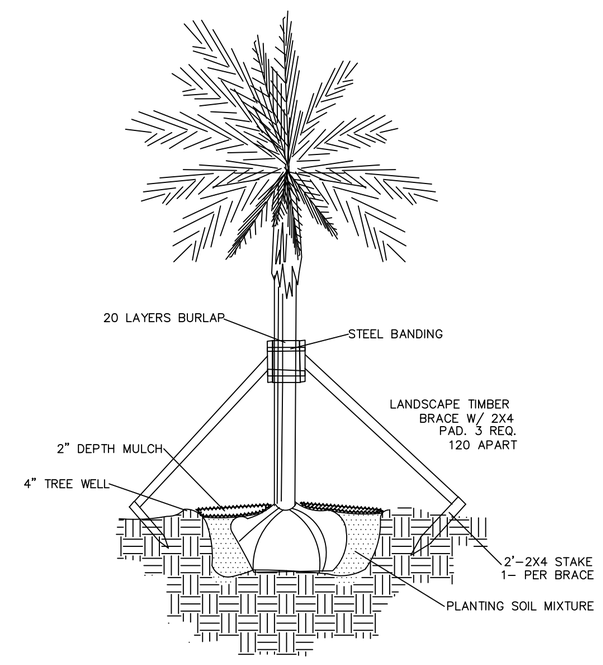
SHEET TM – 1 OF TWO	CROSSROADS RV PARK	TREE MITIGATION	DANIEL J. SUGG LANDSCAPE ARCHITECT / SITE PLANNER POST OFFICE BOX 335, JENSEN BEACH, FL 34958 PHONE: (772) 485–1776 danlandarch@gmail.com	SCALE: 1" = 30" DATE: 10/7/23





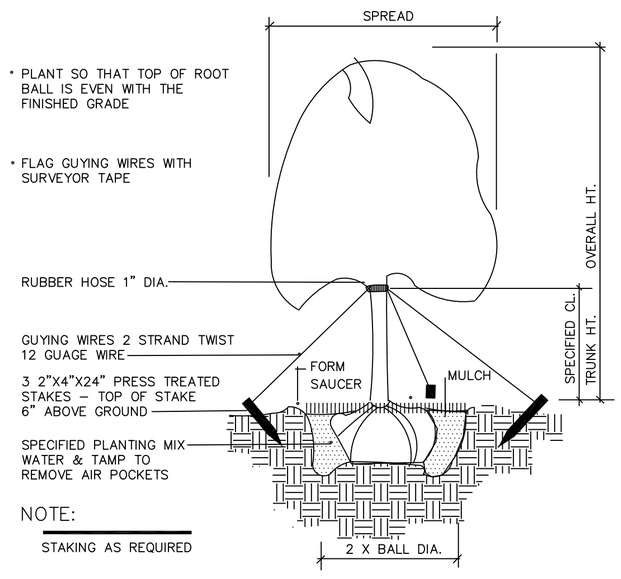
SHRUB PLANTING

SCALE: NOT TO SCALE



PALM PLANTING

SCALE: NOT TO SCALE



TREE PLANTING – GUY WIRES

SCALE: NOT TO SCALE

REQUIRED TREE DATA

PERIMETER LANDSCAPE BUFFER 2,721.92 L. FT.–41' ACCESS WAY=2,680.92 L. FT. DIVIDED BY 30 L. FT. – 89.36 TREES = 90 TREES REQUIRED

PERIMETER TREES

PROPOSED		EXISTING		TOTAL	
PINES	13	PINES	1	PINES	14
SABAL PALMS	2	SABAL PALMS	1	SABAL PALMS	3 = 1
LIVE OAKS	64	LIVE OAKS	12	LIVE OAKS	75
				TOTAL PERIMETER TREES	90

PLANT MATERIAL LIST

TREES & PALMS (* indicates native tree)

	Code Name	Quantity	Scientific Name	Common Name	Planting Size
*	PE	11	PINUS ELLIOTTII DENSA	SOUTH FLORIDA SLASH PINE	12' X 5', 4' CT 2 1/2"DBH
*	SP	15	SABAL PALMETTO	CABBAGE PALM	10'–15' OF CLEAR TRUMK
*	SP–T	39	SABAL PALMETTO TRANSPLANTS	CABBAGE PALM TRANSPLANTS	TRANSPLANTS FROM ON SITE
*	QV	64	QUERCUS VIRGINIANA	LIVE OAK	12' X 6', 4' CT 2 1/2"DBH

SHRUBS & GROUNDCOVERS (* indicates native shrub or ground cover)

Code Name	Quantity	Scientific Name	Common Name	Planting Size
CI	846	CHRYSOBALANUS ICACO	COCCOPLUM	12" X 12" #3, 18" OC

OTHER MATERIALS

MULCH	390	CU. YDS. ENVIRO MULCH (EST.)
SOD	53,700	SQ. FT. BAHIA SOD (EST.)

NOTE:

1. LANDSCAPED AREAS SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM OF SUFFICIENT CAPACITY TO MAINTAIN THE LANDSCAPING IN A HEALTHY GROWING CONDITION. THE IRRIGATION SYSTEM SHALL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH A MANNER AS NOT TO BE A PROBLEM OR NUISANCE TO ADJACENT PROPERTIES AND T0 THE GENERAL PUBLIC.
2. DESIGN PLANS FOR THE IRRIGATION SYSTEN MUST BE SUBMITTED WITH THE REQUIRED LANDSCAPE PLAN FOR THE REVIEW AND APPROVAL BY THE DEVELOPMENT DEPARTMENT.
3. THE IRRIGATION SYSTEM MUST INCLUDE A RAIN SWITCH TO MONITOR RAIN LEVELS AND IRRIGATION NEEDS.

SHEET L–2 OF TOW

CROSSROADS RV PARK

LANDSCAPE PLAN

DANIEL J. SUGG
LANDSCAPE ARCHITECT / SITE PLANNER
POST OFFICE BOX 335, JENSEN BEACH, FL 34958
PHONE: (772) 485–1776 danlandarch@gmail.com

SCALE: 1" = 30"

DATE: 10/7/23

MATCH LINE

ANDREWS AVE.

ANDREWS AVE.

CROSSROADS PARKWAY

CROSSROADS PARKWAY

MATCH LINE

331.68'

176.81'

126.72'

37.71'

326.7'

344.63'

30.0'

BAHIA SOD

4473 SQ. FT.

OHW

OHW

CROSSROADS RV PARK

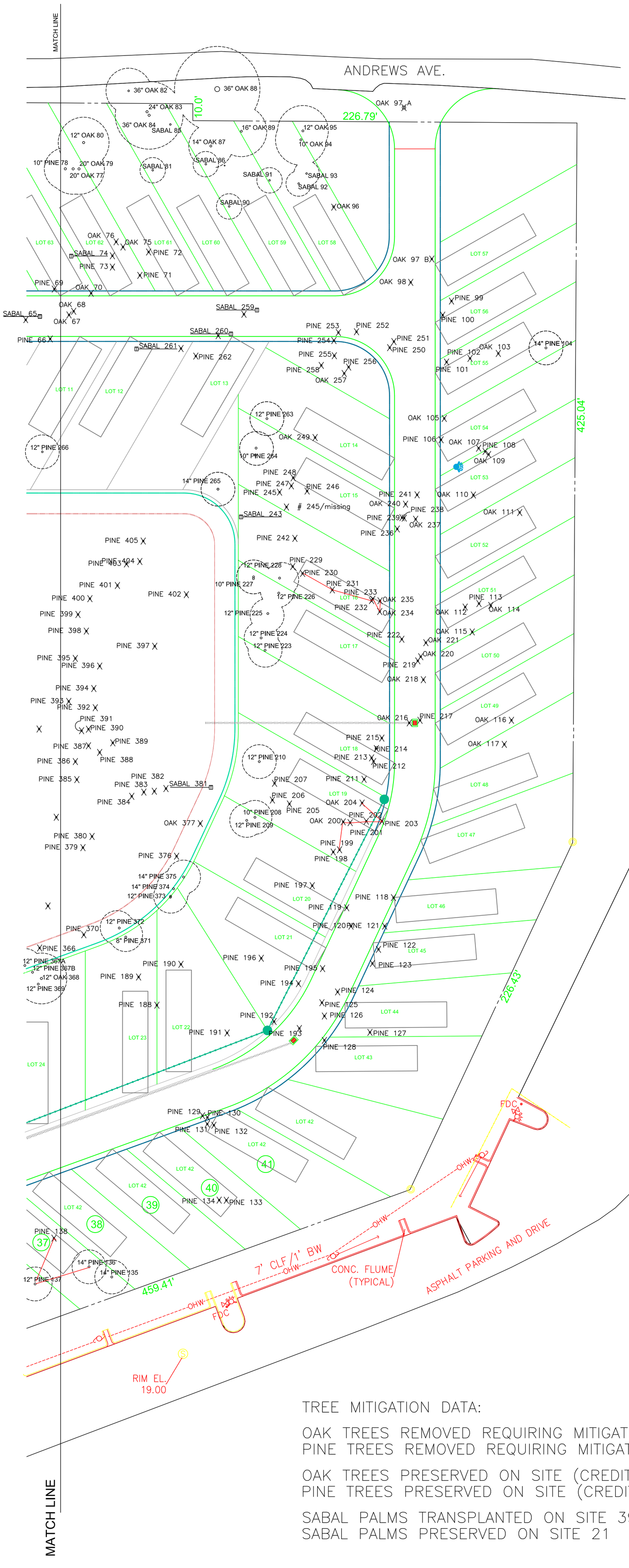
LANDSCAPE PLAN

DANIEL J. SUGG
LANDSCAPE ARCHITECT / SITE PLANNER
POST OFFICE BOX 335, JENSEN BEACH, FL 34958
PHONE: (772) 485-1776 danlandarch@gmail.com

SCALE: 1" = 30"

DATE: 10/7/23

SHEET L-1 OF TWO



TREE MITIGATION DATA:

OAK TREES REMOVED REQUIRING MITIGATION	1006 INCHES
PINE TREES REMOVED REQUIRING MITIGATION	448 INCHES
OAK TREES PRESERVED ON SITE (CREDIT)	722 INCHES
PINE TREES PRESERVED ON SITE (CREDIT)	520 INCHES

SABAL PALMS TRANSPLANTED ON SITE 39
SABAL PALMS PRESERVED ON SITE 21

TREE LEGEND

TREES TO BE PRESERVED — 12" OAK; 12" PINE 263; SABAL 53

TREES TO BE REMOVED — OAK 256; PINE 158; SABAL 158

NOTE: A TEN PAGE TREE MITIGATION SUMMARY ACCOMPANIES THESE TWQ SHEETS

SHEET TM-2 OF TOW

CROSSROADS RV PARK

TREE MITIGATION

DANIEL J. SUGG
LANDSCAPE ARCHITECT / SITE PLANNER
POST OFFICE BOX 335, JENSEN BEACH, FL 34958
PHONE: (772) 485-1776 danlandarch@gmail.com

SCALE: 1" = 30"

DATE: 10/7/23

March 7, 2022

Alex George
Alexander George & Co.
14800 Indrio Road
Fort Pierce, FL 34945
(772) 940-1723

Via email: alexgeorge5845@gmail.com

Reference: Phase I Environmental Site Assessment
Crossroads Parkway – 10.57 acres
Fort Pierce, Florida

EDC, Inc. has completed this Phase I Environmental Site Assessment (ESA) Report in compliance with the American Society for Testing and Materials (ASTM) format E 1527-13 for the above-referenced property. The purpose of this evaluation was to identify recognized environmental conditions as defined in ASTM E 1527-13.

Based on the results of the Phase I ESA conducted at the subject property, no unresolved recognized environmental conditions have been identified on the subject property. Known contamination does exist within the search radius, but was not identified on the subject property.

Further, please note that an environmental liens or activity and use limitations search was not performed for the subject property. In accordance with ASTM E 1527-13, it is the responsibility of the User of this report to undertake a review of reasonable ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or relating to the subject property. In the event that any are identified, please contact EDC, Inc. immediately for further evaluation.

EDC, Inc. appreciates this opportunity to provide environmental services to you. Please contact me if you have any questions regarding this report.

Respectfully submitted,
EDC Inc.

Anthony A. Adams, BS
Sr. Biologist | Certified Arborist

ENGINEERS ◆ SURVEYORS ◆ ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Date: March 7, 2022
Project #: 21-456

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1.0 SUMMARY

The subject property evaluated as part of this Environmental Assessment consists of one (1) tax parcels (Parcel ID #2324-312-0005-000-4) totaling an approximate 10.57 acres. The subject parcel is classified by the St. Lucie County Property Appraiser with a current Land Use Designation of 1000 – Vacant Commercial. The parcel is located just east of the FL Turnpike and just west of Interstate 95 in the City of Fort Pierce, Florida. The subject property is further located within Section 24, Township 35 South, and Range 39 East, St. Lucie County, Florida. Please refer to the Site Location Map presented in **Appendix A** for a visual explanation of the subject property**.**

[NOTE: Please review this report in its entirety for a full description of our evaluation, procedures, and findings.]

Based on the findings of this Phase I ESA conducted in accordance with American Society for Testing and Materials (ASTM) format E1527-13, we conclude the following:

1. We found no evidence of unresolved recognized environmental conditions with respect to past uses of the subject property based on our field observations, historical research, and public records review.

2. We found no indications of hazardous waste dumping or disposal, underground storage tanks (USTs), septic systems, seeps, unusual odors, stressed vegetation, or roads/paths with no outlet likely to have been used for disposal of hazardous wastes or petroleum products at the subject property.

3. We found three (3) Underground Storage Tank (UST) facilities within the minimum search distance as specified by ASTM-E standards. All facilities were found to be in compliance. Please refer to **Table 3** for further details.

4. We found four (4) Aboveground Storage Tank (AST) facilities within the minimum search distance as specified by ASTM-E standards. Two of the facilities were found to be in compliance and one was found to be in minor out of compliance. Please refer to **Table 3** for further details.

5. We found four (4) Leaking Underground Storage Tank (LUST) facilities within the minimum search distance as specified by ASTM-E standards. Please refer to **Table 3** for further details.

6. We found one SWF/LF withing the minimum search distance as specified by ASTM-E standards. Please refer to **Table 3** for further details.

Based on the conclusions of the Phase I ESA conducted at the referenced site, EDC, Inc. did find evidence of unresolved recognized environmental conditions and further assessment is warranted at this time.

Please note that an environmental liens or activity and use limitations search was not performed for the subject property. In accordance with ASTM E 1527-13, it is the responsibility of the User of this report to undertake a review of reasonable ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or relating to

the subject property. In the event that any are identified, please contact EDC, Inc immediately for further evaluation and we will run the environmental liens search.

It is important to note that in order to remain eligible for CERCLA liability protections, continuing obligations will need to be followed at the subject property. The User has the continuing obligation not to impede the integrity and effectiveness of activity and land use limitations, the duty to take reasonable steps to prevent releases, and the duty to comply with legally required release reporting obligations.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this assessment is to conduct an evaluation of the past and current uses of the subject property and surrounding properties to identify recognized environmental conditions in connection with the subject property.

The term “recognized environmental conditions” means the presence of likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the subject property or into the ground, groundwater, or surface water of the subject property. This environmental assessment was conducted in accordance with the guidelines of the ASTM E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. This assessment was also intended to identify potential off-site contaminant sources within the search distances set forth in ASTM E 1527-13.

2.2 DETAILED SCOPE OF SERVICES

The contracted scope of services consists of the preparation of a Phase I ESA of the subject property in accordance with the guidelines set forth in ASTM E 1527-13. The purpose of the ASTM E 1527-13 Standard Practice for Environmental Site Assessments is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products.

The scope of work does not include soil or groundwater sampling; contamination assessment/delineation; an evaluation of asbestos, lead-based paint, radon, wetlands, lead in drinking water, environmental compliance, threatened & endangered species, cultural resources, industrial hygiene, health and safety, ecological resources, indoor air quality; site geotechnics (soils, foundations, site retention, etc.) or construction materials testing. If necessary, EDC, Inc. can provide these additional services.

2.3 SIGNIFICANT ASSUMPTIONS

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a Phase I ESA in conformance with ASTM E 1527-13 is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property.

This assessment is site-specific, and all appropriate inquiry does not mean an exhaustive assessment of a clean property.

2.4 LIMITATIONS AND EXCEPTIONS

The findings of this report represent our professional judgment. These findings are relevant to the dates of our site work and the information cited herein. This report should not be relied upon to represent property conditions on other dates or at locations other than those specifically cited within this report.

The following limitations were encountered during completion of this Phase I ESA:

- Data gaps were encountered in the historical aerial photograph review due to the lack of available photographs in five-year intervals as preferred by ASTM-E standards. Based on our review of the available aerial photographs (1944) along with additional historical information found during review of other sources, the data gap does not appear to be significant to the findings of this report and does not appear to constitute as a data failure.

- The chain-of-title documentation or recorded land title records for environmental liens or activity and use limitations currently recorded against or relating to the subject property were not provided to EDC, Inc. during completion of this Phase I ESA.

2.5 SPECIAL TERMS AND CONDITIONS

Any special terms and conditions associated with this Phase I ESA are included in the Environmental Consulting Services Agreement and the Addendum to Contractual Agreements between EDC, Inc. and Alex George.

In addition, EDC shall not be held liable for any incorrect advice, judgment or decision based on any inaccurate information supplied by the user, current owner, or their designees.

2.6 USER RELIANCE

This report is intended for the sole use of EDC Inc. and Alex George. Its contents may not be relied upon by other parties without the explicit written consent of EDC, Inc.

In accepting this report, all parties herein mentioned agree to the Environmental Consulting Services Agreement and the Addendum to Contractual Agreements between EDC, Inc. and Alex George.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located within Section 24, Township 35 South and Range 39 East, St. Lucie County Florida. It can also be described as one (1) tax parcel located east of the FL Turnpike and just west of Interstate 95 in Fort Pierce, St. Lucie County, Florida. More specifically, the subject property consists of 10.57 acres of vacant commercial property. Legal descriptions for the tax parcels are as follows;

2324-312-0005-000-4: 24 35 39 FROM INT OF SE COR OF SW 1/4 OF NW 1/4 AND CL OF ANDREWS AVE RUN S 00 06 16 E ALG E LI OF NW 1/4 OF SW 1/4 OF SEC 45 FT TO SLY R/W LI OF ANDREWS AVE AND POB, TH S 89 41 32 E ALG S R/W LI 558.38 FT, TH S 00 18 28 W 420.04FT, TH S 25 04 02 W 226.43 FT, TH S 70 04 02 W 459.41 FT TO NELY R/W LI OF CROSSROADS PKWY, TH N 21 40 15 W ALG NELY R/W LI 344.63 FT TO CURVE CONCAVE SW, R OF 855 FT, TH NWLY ALG ARC 305.70FT TO CURVE CONCAVE E, R OF 25 FT, TH NLY ALG ARC 37.71 FT, TH N 44 15 37 E 126.72 FT TO CURVE CONCAVE SE, R OF 220 FT, TH NELY ALG ARC 176.81 FT, TH S 89 41 32 E 11.88 FT, TH N 00 06 16 W 30 FT TO SLY R/W LI OF ANDREWS AV AND POB (10.57 AC)

Visual representation of the property boundary, aerial photographs, and property appraiser cards are presented in **Appendix A**.

3.2 PROPERTY AND VICINITY CHARACTERISTICS

At the time of this assessment, the subject property consisted of 10.57 acres of vacant commercial land. The property vicinity is characterized primarily by various commercial properties. Please refer to the Site Location Map in **Appendix A**.

3.3 CURRENT USE OF THE PROPERTY

At the time of the site reconnaissance, the subject property consisted of 10.57 acres of vacant, yet maintained commercial property.

3.4 STRUCTURES, ROADS, AND/OR OTHER IMPROVEMENTS WITHIN THE PROPERTY

Structures, roads, and improvements were not observed on the subject property at the time of the site visit. Pine trees were the most prevalent.

3.5 CURRENT USE OF ADJOINING PARCELS

Currently, the parcels adjoining the site are used as follows:

TABLE 1
Description of Adjoining Parcels

Direction From Site	Description of Current Use
North	R.O.W. – Andrews Ave.
East	Crossroads Plaza – Commercial Retail
South	Crossroads Plaza – Commercial Retail.....
West	R.O.W. – Crossroads Parkway

None of the current uses of the adjoining properties appear likely to indicate the presence of recognized environmental conditions in connection with the subject property.

4.0 USER PROVIDED INFORMATION

The User did not provide EDC with information pertaining to the following sections. This information was collected by EDC, Inc.

4.1 TITLE RECORDS

According to the St. Lucie County Property Appraiser's Report, the current owner of the subject property is Alexander George and Company Group.

The User did not contract EDC, Inc. to acquire a chain-of-title for the parcels comprising the subject property, which typically contains information regarding historical site ownership.

The last known sale of the subject property occurred on April 13, 2021 and can be found in Appendix A.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

The User did not provide information on any environmental liens or activity and use limitations on the subject property that are filed or recorded under federal, tribal, state, or local laws.

Please note that an environmental liens or activity and use limitations search report was not acquired by EDC, Inc. for the parcel comprising the subject property. In order to qualify for due diligence, the User of this report may be required to contact a title company to confirm that there are no environmental liens or activity and use limitations filed for the parcel comprising the subject property. In the event that any are identified, please contact EDC, Inc. immediately for further evaluation.

4.3 SPECIALIZED KNOWLEDGE

The User did not provide any specialized knowledge or experience that may pertain to recognized environmental conditions in connection with the subject property.

4.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User did not provide any information on the purchase price being paid for the subject property. Information pertaining to the assessed value of the subject property is included in the Saint County Property Appraiser's Report presented in **Appendix A**.

4.5 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

According to the St. Lucie County Property Appraiser's Report, the current owners of the subject property are Alexander George and Company Corporation. Please refer to the St. Lucie County Property Appraiser's Report included in **Appendix A**.

4.6 REASON FOR PERFORMING PHASE I ESA

The User stated the reason for requesting this Phase I ESA was for Due Diligence associated with development of the property. Therefore, the User contracted EDC, Inc. to perform this Phase I ESA in conjunction with a real estate transaction for the prospective owner to satisfy one of the requirements to qualify for the innocent purchaser defense, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability.

4.7 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION ABOUT THE PROPERTY

The User did not provide any information regarding any specific chemicals that are present or were once present at the subject property, spills or other chemical releases that have taken place at the subject property, or any environmental cleanups that have taken place at the subject property.

5.0 RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the site. Accuracy and completeness of record information varies among information sources, including government sources. Record information is often inaccurate or incomplete. Standard sources that are reasonably ascertainable were reviewed by EDC, Inc. for this Phase I ESA.

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

As part of this assessment, we reviewed information sources to obtain existing information pertaining to a release of hazardous substances or petroleum products on or near the site. EDC, Inc. obtained an ASTM radius map report through Environmental Data Resources, Inc. (EDR). A copy of the EDR report is contained in **Appendix B**. EDC, Inc. also reviewed other available standard environmental record sources at the Florida Department of Environmental Protection (FDEP), as needed. The following state, county, and federal sources were consulted during this record review:

State, County, and Tribal Database Review (FDEP and MCHD)

- FDEP, Leaking Underground Storage Tanks (LUST)
- FDEP, Leaking Aboveground Storage Tanks (LAST)
- FDEP, Registered Underground Storage Tanks (UST)
- FDEP, Registered Aboveground Storage Tanks (AST)
- FDEP, State Hazardous Waste Sites (SHWS)
- FDEP, Solid Waste Facility/Landfill Sites (SWL/LF)
- FDEP, State Brownfield Areas (BROWNFIELDS)
- FDEP, Voluntary Cleanup Sites (VCP)
- FDEP, Institutional Controls & Engineering Controls Registry (IC & EC)

Federal Database Review [United States Environmental Protection Agency (EPA)

- EPA, National Priorities List (NPL), including Delisted and Proposed NPL Sites and Federal Superfund Liens
- EPA, Comprehensive Environmental Response Compensation and Liability Act Information System (CERCLIS)
- EPA, CERCLIS No Further Remedial Action Planned (CERCLIS-NFRAP)
- EPA, RCRA Treatment, Storage, and Disposal Facilities (RCRA-TSDF)
- EPA, RCRA Corrective Action Report Facilities (CORRACTS)
- EPA, RCRA Generators List (RCRA), including Large Quantity Generators (LQG), Small Quantity Generators (SQG) and Conditionally Exempt Small Quantity Generators (CESQG)

- EPA, Institutional Controls & Engineering Controls Registry (US IC & US EC)
- EPA, Emergency Response Notification System List (ERNS)

Table 2 lists the approximate minimum search distances used during this assessment as set forth in ASTM E 1527-05.

TABLE 2 **Approximate Minimum Search Distances – ASTM E 1527-05**	
Source	**Search Distance**
Federal NPL Site List	1.0 mile
Federal Delisted NPL Site List	0.5 mile
Federal CERCLIS List	0.5 mile
Federal CERCLIS NFRAP Site List	0.5 mile
Federal RCRA CORRACTS Facilities List	1.0 mile
Federal RCRA non-CORRACRS TSD Facilities List	0.5 mile
Federal RCRA Generators List	Site and adjoining properties
Federal Institutional Control/Engineering Control Registries	Site only
Federal ERNS List	Site Only
State and Tribal Lists of Hazardous Waste Sites identified for investigation or remediation: State- and Tribal- equivalent NPL State- and Tribal- equivalent CERCLIS	1.0 mile 0.5 mile
State and Tribal Landfill and/or Solid Waste Disposal Site Lists	0.5 mile
State and Tribal Leaking Storage Tank Lists	0.5 mile
State and Tribal Registered Storage Tank Lists	Site and adjoining properties
State and Tribal Institutional Control/Engineering Control Registries	Site only
State and Tribal Voluntary Cleanup Sites	0.5 mile
State and Tribal Brownfield Sites	0.5 mile

5.1.1 FEDERAL, FLORIDA STATE, AND ST. LUCIE COUNTY RECORDS REVIEW

According to information provided by EDR and/or the FDEP Web-Based Map Application for Waste Management Division Facilities, the subject property is not listed in the federal, state or county databases. Please refer to **Table 3** for a summary of information regarding these facilities. Please refer to the FDEP and groundwater flow maps in **Appendix A**, EDR report in **Appendix B**, and supplemental documents in **Appendix C** for supporting documentation.

State/Federal Database Descriptions for Table 3	
Database Abbreviation	**Description**
AIRS	
AST	Registered aboveground storage tank locations.
CLEANUP SITE	This listing includes the locations of waste cleanup sites from various programs. The source of the cleanup site data includes Hazardous Waste programs, Site Investigation Section, Compliance and Enforcement Tracking, Drycleaning State Funded Cleanup Program (possibly other state

	funded cleanup), Storage Tank Contamination Monitoring.
DWM CONTAM	A listing of active or known sites. The listing includes sites that need cleanup but are not actively being working on because the agency currently does not have funding (primarily petroleum and drycleaning).
ECHO	ECHO (Enforcement & Compliance History Information) provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.
FDEP	Florida Department of Environmental Protection is the state's lead agency for environmental management and stewardship, protecting our air, water and land.
FINDS	Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).
FINANCIAL ASSURANCE	A list of hazardous waste facilities required to provide financial assurance under RCRA.
LUST	Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.
Nexus	Nexus is a user-friendly search interface to retrieve documents from DEP's OCULUS archival database which houses permits and other publicly available documents.
NPDES	General information regarding NPDES (National Pollutant Discharge Elimination System) permits.
RCRA-VSQG	RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

SWF/LF	Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.
TIER 2	A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.
UST	Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.
SPILLS	Incidents involving spills of oil and hazardous materials.

TABLE 3
State/Federal Database Facility Identified Within Minimum Search Distance

Facility	Location	Database	File Review Summary
Crossroads USA Inc. 1001 Wheeler Ter Fort Pierce, FL 34945 EDR ID: A100229386	Approximately 0.022mi WSW of the subject property	AST	According to the EDR report and Oculus documents, the DEP issued a Return to Compliance letter on March 31, 2021. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
Chevron Products Company #200765 6900 Okeechobee Road Fort Pierce, FL 34945 EDR ID: 1000702861	Approximately 0.134mi S of the subject property	RCRA NONGEN / NLR FINDS ECHO	According to the EDR report and Oculus documents, this facility was verified as a non-generator of waste. The FINDS report is attached in **Appendix C**. Due to this, the likelihood of the subject property being adversely affected by the facility appears low.
Citgo Quick Mart MacMillan 6900 Okeechobee Road Fort Pierce, FL 34945 EDR ID: 1000737807	Approximately 0.134mi S of the subject property	UST FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, the DEP issued a Return to Compliance letter on January 29, 2021. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.

Hilliard Groves Inc. 2650 S Kings Hwy Fort Pierce, FL 34945 EDR ID: 1000698915	Approximately 0.164mi W of the subject property	LUST UST RCRA NONGEN / NLR FINDS ECHO CLEANUP SITES DWM CONTAM	According to the EDR report and Oculus documents, the DEP issued a letter inviting the owners of this facility to participate in the LSSI Program in 2017. This program assists owners of contaminated properties return to compliance. In 2013, efforts were being put forth to clean up the site from a discharge that occurred on December 22, 1992. The work order was being followed up until this time. This facility is not in compliance at the time of this investigation. Due to this, further investigation may be required via soil boring and samplings as the groundwater flow does traverse the subject property from this facility.
Denny's Restaurant 6501 Darter Court Fort Pierce, FL 34945 EDR ID: U000130116	Approximately 0.202mi SE of the subject property	LUST UST	According to the EDR report and Oculus documents, the current owner in 1993 had no knowledge of the tank removal prior to their time of ownership. The tank was removed in 1991, no violations were identified. Due to this, the likelihood of the subject property being adversely affected by the facility appears low.
Falcon Oil Citgo 7045 Okeechobee Road Fort Pierce, FL 34945 EDR ID: 1000886575	Approximately 0.220mi SSW of the subject property	LUST UST SPILLS RCRA NONGEN / NLR FINDS ECHO CLEANUP SITES DWM CONTAM FINANCIAL ASSURANCE	According the EDR report and Oculus documents, the DEP issued an In Compliance letter on March 30, 2021. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
Sunshine Food Mart 7049 Okeechobee Road Fort Pierce, FL 34945 EDR ID: U001373010	Approximately 0.222mi SSW of the subject property	LUST UST CLEANUP SITES DWM CONTAM FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, the DEP issued a No Cleanup Required letter on August 4, 1992 for a discharge that occurred on November 1, 1990. Due to this, the likelihood of the subject property being adversely affected by the facility appears low. Please refer to **Appendix C** for supporting documentation.

Pilot Travel Center #327 7150 Okeechobee Road Fort Pierce, FL 34945 EDR ID: S117360787 Love's Travel Stop #415 7150 Okeechobee Road Fort Pierce, FL 34945 EDR ID: U003343094	Approximately 0.228mi SW of the subject property	DWM CONTAM RESP PARTY LUST UST SPILLS CLEANUP SITES DWM CONTAM FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, the DEP issued an In Compliance letter on April 15, 2021. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
Chevron #47314 7100 Okeechobee Road Fort Pierce, FL 34945 EDR ID: U001372909	Approximately 0.231mi SSW of the subject property	LUST UST	According to the EDR report and Oculus documents, the DEP issued a Site Rehabilitation Completion Order on November 6, 1991, which addressed two discharges that occurred on September 15, 1989 and March 26, 1991. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
BP Oil Co #24539 7131 Okeechobee Road Fort Pierce, FL 34945 EDR ID: 1000703120 BP Fort Pierce 7131 Okeechobee Road Fort Pierce, FL 34945 EDR ID: U001372930	Approximately 0.248mi SSW of the subject property	RCRA NONGEN / NLR FINDS ECHO LUST UST FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, the DEP issued an In Compliance letter on January 25, 2021. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
Boudrias Groves 2898 S Kings Highway Fort Pierce, FL 34945 EDR ID: U001372802	Approximately 0.305mi SW of the subject property	LUST UST CLEANUP SITES DWM CONTAM FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, on August 18, 2022 the DEP issued communication offering assistance to the facility manager on joining the Petroleum Cleanup Participation Program (PCPP). The northwest portion of this facility was identified as the area with the highest concentration of contaminants. Any construction conducted within this area must be done according to DEP rules. In addition, the groundwater flow from this facility does travel across the subject property. Further action is recommended via soil testing and monitoring on the subject property. Please refer to **Appendix C** for supporting documentation.

Pilot Travel Center #090 7300 Okeechobee Road Fort Pierce, FL 34945 EDR ID: U003699251	Approximately 0.339mi WSW of the subject property	LUST UST CLEANUP SITES DWM CONTAM FINANCIAL ASSURANCE	According to the EDR report and Oculus documents, the DEP issued a Return to Compliance letter on November 13, 2020. Due to this, the likelihood of the subject property being adversely affected by the facility appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
John Mart Truck Accident State Rd 70 at Turnpike Entry Fort Pierce, FL 34945 EDR ID: S117360380	Approximately 0.341mi SW of the subject property	DWM CONTAM RESP PARTY	According to the EDR report and Oculus documents, an Interim Remedial Action Report was submitted post-incident that occurred on October 5, 1994. The saddle tank ruptured, and absorbents were used. Soil was excavated under direction of FDOT. This case was closed. In addition, the incident took place outside of groundwater flow that may affect the subject property. Due to this, the likelihood of the subject property being adversely affected by this incident appears low due to the facility being in compliance. Please refer to **Appendix C** for supporting documentation.
FL Dept of Transportation Hwy 70 & Kings Hwy Fort Pierce, FL 34945	Approximately 0.391mi SW of the subject property	LUST UST CLEANUP SITES DWM CONTAM	According to the EDR report and Oculus documents, cleanup was required for a discharge that occurred on July 22, 1991. 160 gallons of diesel product were removed along with contaminated soils. No further work has occurred at this site. Due to this, the likelihood of the subject property being adversely affected by this incident appears low. Please refer to **Appendix C** for supporting documentation.

In addition to reviewing the EDR report, EDC, Inc. performed reconnaissance of the property vicinity to identify any sites not mapped by EDR due to inadequate or inaccurate address information and to look for unregistered facilities. No facilities of concern were observed within the vicinity of the subject property during field reconnaissance performed by EDC, Inc.

5.2 ADDITIONAL ENVIRONMENTAL RECORDS

The following is a list of some of the additional environmental records that were searched as part of the EDR Radius Map Report: Priority Ranking List (PRIORITYCLEANERS), Formerly Used Defense Sites (FUDS), Records of Decision (ROD), Mines Master Index File (US MINES), Toxic Chemical Release Inventory System (TRIS), Risk Management Plans (RMP), Underground Injection Wells Database Listing (UIC), Drycleaning Facilities (DRYCLEANERS), and PCB Transformer Registration Database (PCB TRANSFORMER).

EDC searched the FDEP Consolidated Web-Based Map Application for Waste Management Division facilities (e.g., solid waste facilities, storage tanks, dry cleaning sites, hazardous waste generators, etc.) located on the subject property and adjoining properties. The map is available

for review in **Appendix A**. The search included the Storage Tank Regulation, Solid Waste, Site investigation, Hazardous Waste Program, and the Waste Cleanup database, among others. Any new findings revealed on the database are included in **Table 3**.

EDC reviewed the Florida Department of Community Affairs (DCA) Florida Radon Protection Map for Large Buildings and New Single Family Homes and Duplexes. More than 5% of new large buildings in St. Lucie County are expected to have annual average radon levels above the EPA action level and fewer than 5% new homes are expected to have elevated radon levels. The map indicated that the general area where the site is located (St. Lucie County) is designated as Federal EPA Radon Zone 3. This criteria states that the counties within this zone are those with a predicted radon level less than 2 pCi/L or otherwise known as low risk.

5.3 PHYSICAL SETTING SOURCES

According to the EDR report, USGS topographic quadrangle map, soil survey, and regulatory files available regarding properties of environmental concern in the property vicinity were reviewed as sources for obtaining information regarding the physical setting of the subject property and surrounding vicinity.

Based on our site reconnaissance, review of USGS maps, aerial photographs, the location of the subject property, and the present environmental related conditions of adjacent and nearby properties, there is little to no potential for migration of petroleum product or hazardous waste contamination from off-site sources.

5.3.1 TOPOGRAPHY

The USGS topographic quadrangle map set titled “Fort Pierce”, and “Fort Pierce NW’ was referenced as a source for obtaining information regarding the physical setting of the subject property and surrounding vicinity. The subject property is located at an elevation of approximately 25 feet above sea level.

According to the EDR Report, the groundwater within the minimum search distances is flowing southeast towards Tenmile Creek. A copy of the USGS Quadrangle Map is provided as **Appendix B**.

5.3.2 SOILS/GEOLOGY

The general geology of St. Lucie County is characterized by the Caloosahatchee Marl which underlies the entire area, is of Pliocene age, and consists mainly of sand and varying amounts of shell. The Fort Thompson Formation rests uncomfortably on the Caloosahatchee Marl; dips from west to east; is of Pleistocene age; and consists of a series of alternating beds of limestone, shells, sand, and marl. The Anastasia Formation which is of Pleistocene age and rests uncomfortably on the Fort Thompson Formation forms the backbone of the coastal ridge, is exposed in several places along the ocean shoreline, and consists of sand and shell beds and thin, discontinuous layers of sandy limestone and sandstone. Pamlico Sand of the late Pleistocene age mantles the entire area and is the basic material in which most of the mineral soils have formed.

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, surficial soils at the subject property are classified as the following:

Nettles sand- is a poorly drained, nearly level soil found in areas of broad flatwoods. Typically, the surface layer is 11 inches thick. Black sand comprises the upper 5 inches, very dark gray sand in the next three inches and dark gray sand in the lower 3 inches. Subsurface layer is light gray sand 22 inches thick. The water table is typically at a depth of 10 inches for 2 to 4 months during wet seasons, and at a depth of 10 to 40 inches for 6 months of longer in most years. Natural vegetation includes slash pine, cabbage palm, saw palmetto, wax myrtle, inkberry, fetterbush, creeping bluestem, chalky bluestem, Florida threeawn, and pineland threeawn. This soil has severe limitations for cultivated crops unless water control and other food management practices are provided. This soil has potential for improved pasture grasses and high potential for dwellings without basements, small commercial buildings, and roads.

Oldsmar fine sand- This poorly drained soil is found typically in broad areas in the flatwoods. Typically, the surface layer is black fine sand about 5 inches thick. The water table is at a depth of less than 10 inches for 2 to 4 months during the wet season and within a depth of 40 inches for more than 6 months. Natural vegetation consists of slash pine, saw palmetto, inkberry, rusty lyonia, black root, penny royal, pineland threeawn, chalky bluestem, panicum and various grasses. The soil is well suited for pasture and hay crops.

Wabasso sand- This soil is a nearly level, poorly drained soil in broad open areas of the flatwoods. The surface layer is sand about 8 inches thick. The upper 4 inches is black and the lower 4 inches is dark grey. The water table is typically at a depth of less than 10 inches for 1 to 4 months during the wet season, and at a depth of 10 to 40 inches for 6 to 9 months in most years. Natural vegetation is slash pine, cabbage palm, saw palmetto, running oak, inkberry and fetterbush. Common grasses are threeawn and bluestem. The soil has severe limitations for cultivated crops and citrus due to wetness. The soil has high potential for dwellings without basements, small commercial buildings, local roads and streets.

5.3.3 HYDROGEOLOGY

The general hydrogeology of St. Lucie County includes two aquifer systems, the surficial and the Floridan aquifer systems. Both aquifer systems are multilayered and are variable in physical and chemical properties. The surficial aquifer system is the most widely used source of drinking water in St. Lucie County. In most parts of the county, the aquifer system contains freshwater that is easily obtainable for low-cost domestic supply. The surficial aquifer system within St. Lucie County consists of undifferentiated sediments that overlie the greenish-gray clayey sands of the intermediate confining unit (Hawthorn Formation). The surficial aquifer system consists of a relatively thin unit of undifferentiated sand, silt, and shell of Pleistocene to Holocene age overlying more permeable zones composed of thin layers of sand, silt, and clay inter-bedded with layers of limestone, coarse sand, and shell of Pliocene age. In some places, the permeable beds are absent and wells are drilled into the deeper sand, shell, and silt layers of Late Miocene age. These deeper wells also are classified as surficial aquifer system wells.

According to the Hydrological Gradient map in the EDR report, the direction of groundwater flow in the vicinity of the subject property appears to flow northeast toward the St. Lucie River.

5.4 HISTORICAL USE INFORMATION ON THE PROPERTY

According to the earliest available aerial photograph (1944), the subject property and general vicinity are undeveloped. There are wetlands directly to the southeast of the subject property as well as within the general vicinity of the subject property. There appears to be agriculture

operations surrounding the subject property. Kings Highway and Okeechobee Road can be observed. In the 1958 aerial image, a portion of the subject property is used for agricultural purposes, a citrus grove can be observed. Residential development can be seen to the south of the subject property, Wetlands in the vicinity remain the same. In 1969, fuel stations can be observed at the intersection of Kings Hwy and Hwy 70. In 1980, Interstate 95 can be observed to the east of the subject property. The surrounding vicinity still remains utilized for Citrus growing operations. The 1992 historical aerial image shows the construction of the commercial retail and hotels in the surrounding vicinity. In 2007, a large trailer park can be observed directly north of the subject property. From 2007 to 2021, the aerials do not show any significant changes.

Reasonably ascertainable aerial photographs are available for the time period back to 1944 until the present, but not necessarily or consistently in five-year intervals as preferred by ASTM E standards, or as early as 1940 as preferred by ASTM-E standards. The lack of aerial photographs in consistent five-year intervals is noted as a data gap. Based on the review of available aerial photographs and other standard historical sources, the use of the subject property during the timeframe of the data gap has been adequately ascertained. Therefore, the data gap does not materially impact the performance of this Phase I ESA and is not regarded as a data failure.

5.4.1 AERIAL PHOTOGRAPHY REVIEW

In order to evaluate the previous land uses of the subject property and surrounding area, reasonably ascertainable aerial photographs were reviewed. The aerial photographs provide a progressive overview of the subject property and surrounding properties. We reviewed the 1940 to 2021 aerial photographs obtained from the Florida Department of Transportation, the State University System of Florida, EDR aerial report, the St. Lucie County Property Appraiser's Website, and Google Earth. Please note that copies of the aerial photographs reviewed during completion of this Phase I ESA are included within this report and can be found in **Appendix A and B**. Descriptions of EDC, Inc. observations are outlined in **Table 4**.

TABLE 4
Summary of Aerial Photograph Observations

Photograph Date	Photograph Quality	Remarks
1944	Fair (EDR)	The subject property is undeveloped at this time. Kings Highway and Okeechobee Road can be observed, along with surrounding citrus agricultural operations.
1950	Very Poor (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
1958	Fair (EDR)	A portion of the subject property is used for agricultural purposes, a citrus grove can be observed. Residential development can be seen to the south of the subject property, Wetlands in the vicinity remain the same.
1969	Fair (EDR)	The subject property remains vacant. Fuel stations can be observed at the intersection of Hwy 70 and Kings Hwy. No other significant changes are observed at this time.
1970	Very Poor (EDR)	No other significant changes to the subject property or its vicinity were observed since the previous aerial photograph.

1980	Fair (EDR)	Interstate 95 can be observed directly to the east of the subject property. No additional significant changes since the previous aerial photograph.
1992	Fair (EDR)	Significant development of hotels, commercial retail, and trailer parks can be seen in the vicinity of the subject property.
1994	Poor (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
1999	Poor (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
2007	Good (EDR)	A trailer park can be observed directly north of the subject property. No other significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
2010	Good (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
2013	Good (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
2017	Good (EDR)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.
2021	Very Good (Google Earth)	No significant changes to the subject property, adjoining properties, or the vicinity of the subject property were observed since the previous aerial.

5.4.2 PROPERTY OWNERSHIP RECORDS

The current owner of the subject property is Alexander George and Company Corporation. This is confirmed by the St. Lucie County Property Appraiser's Report, which is presented in **Appendix A**.

The User did not contract EDC, Inc. to acquire a chain-of-title for the parcel comprising the subject property, which typically contains information regarding historical site ownership.

5.4.3 SANBORN FIRE INSURANCE MAP REVIEW

According to information provided by EDR, fire insurance maps generated by the Sanborn Map Company are not available for review for the subject property. The Certified Sanborn Map Report is provided in **Appendix B** following the EDR database report.

5.4.4 CITY DIRECTORY REVIEW

Historical street directories listing the former businesses at the street addresses of the subject property and adjoining properties were reviewed by EDC, Inc. during completion of this Phase I ESA. Business names listed in the directories were reviewed to try to determine if businesses generated, used, stored, or disposed of hazardous waste materials. The review did not produce any properties that represented an environmental concern.

5.4.5 LAND USE RECORDS

According to the St. Lucie County Property Appraiser's Report, the Future Land Use for the subject property is New Community Development (NCD). The subject property is located within a Master Planned Unit Development. The table below (**Table 5**) details the structures that are located on the adjoining parcels that surround the subject property according to the St. Lucie County Property Appraiser's Report:

TABLE 5
Description of Adjoining Parcels

Parcel ID #	No. of Structures	Type of Structure	Size (Sq. Ft)	Year Built
2324-311-0005-000-1	2	Commercial Retail Commercial Retail	146,954 11,346	1988 1989

5.4.6 OTHER HISTORICAL SOURCES

A Historical Topographic Map Report was obtained from EDR during completion of this Phase I ESA. The USGS topographic quadrangle map titled "Fort Pierce" and "Fort Pierce NW", which includes the subject property, was available for the following years: 1948, 1950, 1970, 1972, 1983, and 2012 descriptions of our review of the historical topographic maps are outlined in **Table 6**. The Historical Topographic Map Report is provided in **Appendix B** following the EDR database report.

TABLE 6
Summary of Historical Topographic Map Observations

Map Date	Remarks
1950	Kings Highway and Highway 70 can be observed.
1970	The subject property and general vicinity are undeveloped. The FL Turnpike can be observed.
1983	The subject property shows signs of agriculture use on the topographical map. In addition, Interstate 95 can be observed.
2012	No significant changes to the subject property, areas to the west and southeast are unmapped.
2015	No significant changes to the subject property. In the vicinity of the subject property, an increase in residences can be observed since the previous topographic map, as well as residential roads.
2018	An increase in residential and public roads can be observed connecting development in the area. No significant changes to the subject parcel.

No other historical sources were reviewed during this assessment.

5.5 HISTORICAL USE INFORMATION ON ADJOINING PARCELS

None of the past uses of the parcels adjoining the subject property appear likely to indicate recognized environmental conditions in connection with the subject property.

6.0 INFORMATION FROM SITE RECONNAISSANCE

The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the subject property. On a visit to the subject property, the property shall be visually and/or physically observed, and any

structure(s) located on the subject property to the extent not obstructed by bodies of water, adjacent buildings, or other obstacles shall be observed.

On Feb,1 2022, a site reconnaissance of the subject property was completed by a representative of EDC, Inc. The purpose was to evaluate the current conditions of the subject property and to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the subject property.

6.1 METHODOLOGY AND LIMITING CONDITIONS

The site reconnaissance included visually and/or physically observing the periphery of the subject property and the periphery of the structures located on the subject property. Aerial photographs are included in **Appendix A and B**. Site photographs are included in **Appendix D**.

6.2 GENERAL SITE SETTING

The subject property consists of one (1) tax parcels (Parcel ID #2324-312-0005-000-4) totaling an approximate 10.57 acres. The subject parcel is classified by the St. Lucie County Property Appraiser with a current Land Use Designation of 1000 – Vacant Commercial. The parcel is located just east of the FL Turnpike and just west of Interstate 95 in the City of Fort Pierce, Florida. The subject property is further located within Section 24, Township 35 South, and Range 39 East, St. Lucie County, Florida.

6.3 EXTERIOR OBSERVATIONS

During our site reconnaissance, the subject property consisted of 10.57 acres of vacant commercial property. The parcel is vacant of operations, but it maintained, which is mentioned in the interview provided in **Appendix E.**

We found no evidence of obvious surface discharges such as stained soil or pavement, no indication of solid or liquid waste dumping or disposal, no evidence of USTs, unusual odors, pits, stressed vegetation, or roads/paths with no outlet likely to have been used for disposal of hazardous wastes or petroleum products on the subject property. Please refer to **Appendix D** to review the site photographs.

6.4 INTERIOR OBSERVATIONS

During our site reconnaissance, there were no formal structures located on the subject property.

7 INTERVIEWS

7.1 INTERVIEW WITH SITE OWNER

EDC, Inc. provided Alex George with the Owner/User Questionnaire, to obtain information regarding their knowledge of recognized environmental conditions in connection with the subject property. A copy of the interview document has been provided in **Appendix E**.

7.2 INTERVIEW WITH SITE MANAGER

Please refer to Section 7.1 for information regarding the Owner/User Interview. Interview documentation is included in **Appendix E.**

7.3 INTERVIEW WITH OCCUPANTS

Please refer to Section 7.1 for information regarding the Owner/User Interview.

7.4 INTERVIEW WITH LOCAL GOVERNMENT OFFICIALS

City of Fort Pierce was contacted for information regarding previous spills occurring near the subject property.

7.5 INTERVIEW WITH USER

Please refer to Section 7.1 for information regarding the Owner/User Interview.

7.6 INTERVIEW WITH OTHERS

No other interviews were conducted during the completion of this Phase I ESA.

8 FINDINGS

Based on our field observations, historical research, public records review, and interviews conducted in accordance with ASTM-E, the findings of this Phase I ESA are as follows:

We found eight (8) Underground Storage Tank (UST) facilities within the minimum search distance as specified by ASTM-E standards. All facilities were found to be in compliance. Please refer to **Table 3** for further details.

We found one (1) Aboveground Storage Tank (AST) facilities within the minimum search distance as specified by ASTM-E standards. Two of the facilities were found to be in compliance and one was found to be in minor out of compliance. Please refer to **Table 3** for further details.

We found eleven (11) Leaking Underground Storage Tank (LUST) facilities within the minimum search distance as specified by ASTM-E standards. Please refer to **Table 3** for further details.

We found evidence of unresolved environmental conditions that may require further testing.

9 OPINION

The following is our opinion pertaining to the findings referenced above:

- We found evidence indicating the subject property may be adversely affected by facilities in the vicinity of the subject property.

- Further action and testing is recommended.

10 CONCLUSIONS

We have performed this Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13. The subject property consists of one (1) tax parcels (Parcel ID #2324-312-0005-000-4) totaling an approximate 10.57 acres. The subject parcel is classified by the St. Lucie County Property Appraiser with a current Land Use Designation of 1000 – Vacant

Commercial. The parcel is located just east of the FL Turnpike and just west of Interstate 95 in the City of Fort Pierce, Florida. The subject property is further located within Section 24, Township 35 South, and Range 39 East, St. Lucie County, Florida. The subject property is located between the FL Turnpike and Interstate 95. Any exception to or deletions from this practice are described in Sections 2.2, 2.3, and 2.4 of this report. This assessment has revealed evidence of unresolved recognized environmental conditions in connection with the subject property and further assessment is warranted at this time.

Please note that an environmental liens or activity and use limitations search was not performed for the subject property. In accordance with ASTM E 1527-13, it is the responsibility of the User of this report to undertake a review of reasonable ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or relating to the subject property. In the event that any are identified, please contact EDC, Inc. immediately for further evaluation.

In order to remain eligible for CERCLA liability protections, continuing obligations will need to be followed at the subject property. The User has the continuing obligation not to impede the integrity and effectiveness of activity and land use limitations, the duty to take reasonable steps to prevent releases, and the duty to comply with legally required release reporting obligations.

11 DEVIATIONS

EDC, Inc. prepared this Phase I ESA in compliance with ASTM E 1527-13.

The following data gaps were encountered during completion of this Phase I ESA:

- Data gaps were encountered in the historical aerial photograph review due to the lack of available photographs in five-year intervals as preferred by ASTM-E standards. Based on our review of the available aerial photographs along with additional historical information found during review of other sources, the data gap does not appear to be significant to the findings of this report and does not appear to constitute as a data failure.

- The chain-of-title documentation or recorded land title records for environmental liens or activity and use limitations currently recorded against or relating to the subject property were not provided to EDC, Inc. during completion of this Phase I ESA.

12 ADDITIONAL SERVICES

Under the terms of the agreement between EDC, Inc. and Alexander George, no additional services are being provided in association with this Phase I ESA.

13 REFERENCES

References reviewed during the Phase I ESA are documented in **Appendix F**.

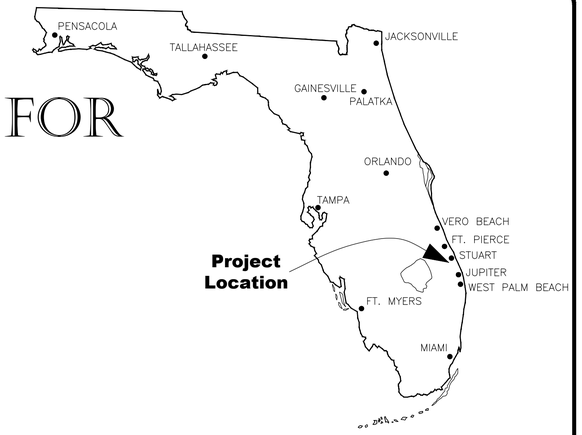
14 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Please refer to the title page for signatures of the environmental professionals who prepared and reviewed this Phase I ESA.

15 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

This assessment was completed by Anthony A. Adams, BS, Project Scientist, and reviewed by Tobin R. Overdorf, MS, MBA, Vice President, both employees of EDC, Inc. We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and we have specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. We have developed and performed the all-appropriate inquiries in conformance with the standards and practices outlined in 40 CFR Part 312. Qualifications of personnel participating in this assessment are provided in **Appendix G**.

CONSTRUCTION PLANS & SPECIFICATIONS FOR CROSSROADS ST. LUCIE COUNTY, FLORIDA



THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS, LATEST EDITION.

GOVERNING SPECIFICATIONS:
FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION

THE FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITION.

THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (GREENBOOK), LATEST EDITION.

THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), LATEST EDITION.

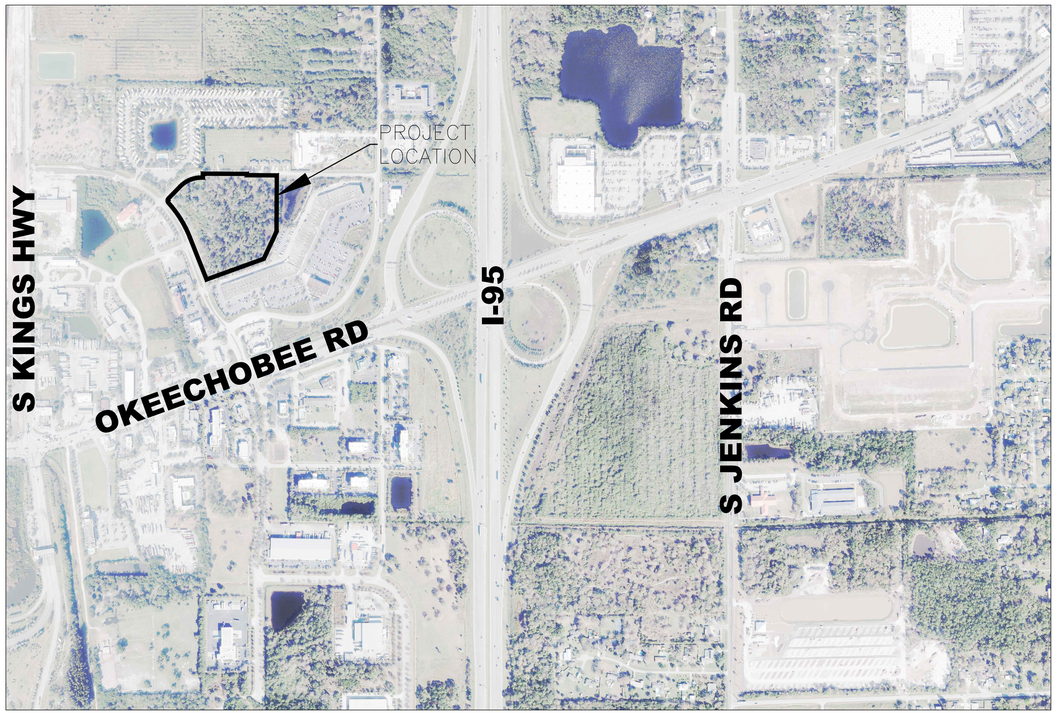
AND THE ST. LUCIE COUNTY LAND DEVELOPMENT REGULATIONS, LATEST EDITIONS AND STANDARDS SET FORTH BY THE CITY OF FORT PIERCE

CLIENT AND PROPERTY OWNER:
ALEXANDER GEORGE AND COMPANY
14800 INDRIO RD
FORT PIERCE, FL 34945

DESIGN TEAM:
SITE PLANNER AND CIVIL ENGINEER
GIANGRANDE ENGINEERING & PLANNING
2081 SE OCEAN BLVD, SUITE 1A
STUART, FL 34996
(772) 888-9076

SURVEYOR:
EDC, INC.
10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
(772) 462-2455

LANDSCAPE ARCHITECT:
SUGG DESIGN STUDIO
2336 SE OCEAN BLVD
STUART, FL 34996
(772) 979-5696



VICINITY MAP
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
G-1	COVER SHEET
G-2	GENERAL NOTES
S-1	SITE PLAN
P-1	PAVING, GRADING, & DRAINAGE PLAN
E-1	EROSION CONTROL PLAN
W-1	WATER & WASTEWATER PLAN
CS-1	TYPICAL SECTIONS
D-1	DETAILS
D-2	DETAILS
D-3	DETAILS
D-4	DETAILS
D-5	DETAILS
D-6	DETAILS

811 Know what's below. Call before you dig.

OCTOBER 2023
DEVELOPMENT REVIEW PLANS

FOR PERMITTING AND REVIEW PURPOSES

GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD
STUART, FLORIDA 34994
PH. (772) 888-9076
Cert. No. 30901

LEO GIANGRANDE No. 68387 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET C-1

SUPPLEMENTAL CONDITIONS

SCOPE OF WORK: THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, SUPERVISION, TRANSPORTATION AND INCIDENTALS NECESSARY TO CONSTRUCT THE PAVING, DRAINAGE, UTILITIES AND ASSOCIATED IMPROVEMENTS, IN ACCORDANCE WITH THE PROVISIONS OF THESE SUPPLEMENTAL CONDITIONS, SPECIFICATIONS AND THE DRAWINGS, ENTITILED, "CONSTRUCTION PLANS & SPECIFICATIONS FOR "DERECKTOR FT. PIERCE SITE DEVELOPMENT", PREPARED BY GIANGRANDE ENGINEERING AND PLANNING, LLC, 2081 SE OCEAN BLVD., STUART, FLORIDA 34996, (772) 888-9076. IT IS THE OBJECTIVE OF THESE DOCUMENTS TO ASSURE THE TOTAL COMPLETION OF THE WORK REQUIRED TO PROVIDE PAVING, GRADING, AND DRAINAGE IMPROVEMENTS FOR THE "ST LUCIE COUNTY SITE DEVELOPMENT."

PERMITS AND LICENSES: CONSTRUCTION PERMITS FOR CERTAIN ELEMENTS OF THE PROJECT WORK ARE REQUIRED, AND THE DESIGN AND CONSTRUCTION REQUIREMENTS OF THE PROJECT REFLECT CONSTRAINTS AND CONDITIONS IMPOSED BY THESE PERMITS. THESE INCLUDE CONSTRUCTION PERMITS FROM THE CITY OF FORT PIERCE, AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

THE CONTRACTOR SHALL PERFORM HIS WORK AND SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF THESE "DESIGN" PERMITS AND APPROVALS, COPIES OF WHICH ARE AVAILABLE FOR REVIEW AND USE FROM THE ENGINEER, UPON REQUEST. THE CONTRACTOR SHALL SECURE ALL WORK PERMITS, APPROVALS AND LICENSES REQUIRED TO PERFORM THE WORK, AND HE SHALL PERFORM THE WORK IN STRICT ACCORDANCE WITH THOSE PERMITS, APPROVALS AND LICENSES.

REFERENCE TO OTHER DOCUMENTS: FOR BREVITY, REFERENCE MAY BE MADE TO OTHER SPECIFICATIONS OR DOCUMENTS WHICH WILL BE USED TO SPECIFY OR CONTROL THE MATERIALS PLACED IN THE WORK, THE CONSTRUCTION METHODS TO BE USED, THE TOLERANCES THAT WILL BE ACCEPTABLE, AND CONTRACTUAL OR LEGAL OBLIGATIONS. THE SPECIFICATIONS OR DOCUMENTS SHALL INCLUDE:

1. "STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT." THE LATEST EDITION, PREPARED BY THE ENGINEER'S JOINT CONTRACT DOCUMENTS COMMITTEE AND PUBLISHED BY THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS. REFERENCE SHALL BE MADE: "GENERAL CONDITIONS."
2. "FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2023-2024," PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. REFERENCE SHALL BE MADE: "FDOT SPECIFICATIONS."
3. "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, 2023-2024" PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. REFERENCE SHALL BE MADE "FDOT INDEX" OR "FDOT STANDARDS."
4. "AMERICAN SOCIETY FOR TESTING AND MATERIALS SPECIFICATIONS", LATEST EDITION REFERENCE SHALL BE MADE: "ASTM."
5. "ST LUCIE COUNTY MINIMUM CONSTRUCTION STANDARDS", LATEST EDITION. REFERENCE SHALL BE MADE AS "COUNTY CODE" OR "COUNTY STANDARDS" OR "COUNTY SPECIFICATIONS."

BY REFERENCE, THE DOCUMENTS CITED ABOVE ARE MADE PART OF THESE SUPPLEMENTAL CONDITIONS AND SPECIFICATIONS. THE CONTRACTOR SHALL HAVE COPIES OF EACH IN HIS POSSESSION FOR USE THROUGHOUT THE BIDDING AND CONSTRUCTION OF THIS PROJECT WORK AND/OR BE FAMILIAR WITH THE APPLICABLE SECTIONS OF EACH DOCUMENT AND BE ABLE TO VERITY THAT ALL MATERIALS AND CONSTRUCTION METHODS ARE CONFORMANCE WITH THESE DOCUMENTS AND SPECIFICATIONS.

ADDITIONALLY, THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL OTHER APPLICABLE LOCAL, REGIONAL, STATE AND FEDERAL LAWS, REGULATIONS ANO CODES, ESPECIALLY OSHA STANDARD 29 CFR, SECTION 1926.650 SUBPART P, WHICH IS PART OF THE TRENCH SAFETY ACT AS PART OF LAWS OF FLORIDA, CHAPTER 90-96.

CONTRACT ISSUES

GENERAL CONDITIONS: UNLESS OTHERWISE STATED IN THESE SUPPLEMENTAL CONDITIONS, THE PROVISIONS OF THE "STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT," REFERENCED ABOVE, SHALL BE USED TO GOVERN ALL ISSUES ADDRESSED IN THOSE GENERAL CONDITIONS FOR THIS PROJECT.

OWNER-ENGINEER RELATIONSHIP: ANY AGREEMENT BETWEEN OWNER AND ENGINEER SHALL NOT BE CONSTRUED TO PROVIDE ANY OBLIGATION FROM THE ENGINEER TO ANY THIRD PARTIES INCLUDING, BUT NOT LIMITED TO, ARCHITECTS, OTHER ENGINEERS, ANY CONTRACTORS (GENERAL OR SUB), NOR TO ANY SUCCESSORS TO THE OWNER. THE RIGHTS UNDER ANY AGREEMENT BETWEEN OWNER AND ENGINEER INURE ONLY TO THOSE TWO PARTIES.

ERRORS OR OMISSIONS IN THE DRAWINGS OR SPECIFICATIONS: PRIOR TO INITIATION OF THE WORK, THE CONTRACTOR SHALL CHECK DIMENSIONS, GRADES, ELEVATIONS AND THE SUMMARY OF ESTIMATED QUANTITIES SHOWN ON THE DRAWINGS TO ASSURE HIMSELF THAT THEY ARE CORRECT AND THAT THE WORK CAN BE ACCOMPLISHED AS INTENDED. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY APPARENT ERROR OR OMISSION WHICH HE MIGHT DISCOVER, BUT SHALL IMMEDIATELY NOTIFY THE ENGINEER OF SUCH DISCOVERY, WHO WILL THEN MAKE SUCH CORRECTIONS AND INTERPRETATIONS AS HE DEEMS NECESSARY FOR REFLECTING THE ACTUAL SPIRIT AND INTENT OF THE DRAWINGS AND SPECIFICATIONS.

BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION WAS PROVIDED BY CULPEPPER & TERPENING, INC. , (772) 464-3537.

HORIZONTAL AND VERTICAL CONTROL: THE CONTRACTOR SHALL CONSTRUCT THE REQUIRED IMPROVEMENTS IN THE LOCATIONS SHOWN ON THE DRAWINGS, AND SHALL USE AS HORIZONTAL CONTROL POINTS THE EXISTING PROPERTY CORNERS AS SHOWN ON THE PLAN SHEET. THE HORIZONTAL CONTROL POINTS WERE PROVIDED BY CULPEPPER & TERPENING, INC. , (772) 464-3537. AS VERTICAL CONTROL, BENCHMARKS SHALL BE PROVIDED AT THE SITE, FOR USE IN ESTABLISHING THE NECESSARY ELEVATIONS AND GRADES AT THE LOCATIONS SHOWN ON THE PLANS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL CONTROL POINTS AND TO RE-ESTABLISH SAID POINTS AS NECESSARY. REMAINING HORIZONTAL AND VERTICAL CONTROL WORK SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND DETAILS.

WRITTEN DIMENSIONS ARE PROVIDED FOR CLARITY. WHERE WRITTEN AND SCALED DIMENSIONS CONFLICT, WRITTEN DIMENSIONS SHALL GOVERN.

COORDINATION OF WORK WITH OTHERS: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OR IMPROVEMENTS OF OTHERS WITH REGARD TO NEW CONSTRUCTION, OR FOR THE NEED OF REMOVAL, RELOCATION OR ALTERATION OF EXISTING IRRIGATION AND DRAINAGE FACILITIES. THIS INCLUDES, BUT IS NOT LIMITED TO, THE OWNER, HIS CONTRACTORS, SUBCONTRACTORS OR AGENTS.

THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PUBLIC AGENCIES PRIOR TO COMMENCING THE WORK WITHIN THEIR JURISDICTION.

SHOP DRAWINGS: ONE DIGITAL COPY OF SIGNED SHOP DRAWINGS AND SIGNED AND SEALED DESIGN DATA SHALL BE SUBMITTED PRIOR TO ORDERING MATERIALS. ALLOW 10 WORK DAYS TURNAROUND FOR SUBMITTALS.

STANDARDS FOR QUALITY AND WORKMANSHIP: ALL MATERIALS, EQUIPMENT AND SUPPLIES FURNISHED BY THE CONTRACTOR FOR PERMANENT INCORPORATION IN THE WORK SHALL BE NEW AND OF THE QUALITY STANDARDS SPECIFIED. WORKMANSHIP SHALL BE FIRST-CLASS AND THE FINISHED PRODUCT EQUAL TO THE BEST ACCEPTED STANDARDS OF THE TRADE FOR THE CATEGORY OF WORK PERFORMED.

TEMPORARY UTILITIES: ALL ARRANGEMENTS AND COSTS FOR TEMPORARY POWER, WATER AND WASTEWATER FACILITIES DURING CONSTRUCTION SHALL BE RESPONSIBILITY OF THE CONTRACTOR.

OBSERVING THE WORK: THE PROGRESS AND QUALITY OF THE WORK WILL BE OBSERVED BY THE OWNER'S ENGINEER OR ENGINEER'S APPOINTED EMPLOYEE. NO OBSERVER IS AUTHORIZED TO CHANGE ANY PROVISIONS OF THE SPECIFICATIONS WITHOUT WRITTEN AUTHORIZATION OF THE OWNER'S ENGINEER, NOR SHALL THE PRESENCE NOR THE ABSENCE OF AN OBSERVER RELIEVE THE CONTRACTOR FROM ANY REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTICE PRIOR TO REQUIRED INSPECTIONS, AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.

IN ADDITION TO THE REQUIREMENTS PREVIOUSLY REFERENCED, THE FOLLOWING MINIMUM CONSTRUCTION CONTROL CHECKPOINTS SHALL BE ADHERED TO, AND THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE FOR OBSERVATION:

1. PRIOR TO ANY DEVIATION FROM THE DRAWINGS;
2. PRIOR TO ANY BACKFILLING TRENCHES CONTAINING HYDRAULIC CONDUITS, SO THAT JOINTING MAY BE INSPECTED;
3. PRIOR TO TESTING OF ALL HYDRAULIC CONDUITS.
4. PRIOR TO PLACEMENT OF ROADWAY BASE MATERIAL, CONCRETE OR ASPHALTIC CONCRETE.
5. UPON COMPLETION OF CONSTRUCTION FOR FINAL INSPECTION WITH THE CONTRACTOR OR HIS REPRESENTATIVE.

TESTING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE INDEPENDENT TESTING LABORATORY DESIGNATED BY THE OWNER, THE TESTING AND RETESTING NECESSARY TO ASSURE THAT THE WORK HAS BEEN PERFORMED IN STRICT COMPLIANCE WITH THE SPECIFICATIONS. COST FOR THE INITIAL TESTING SHALL BE BORNE BY THE OWNER. ANY RETESTS REQUIRED DUE TO FAILURE TO MEET THE MINIMUM REQUIREMENTS SHALL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR. THE NAME OF OWNER'S TESTING LABORATORY SHALL BE SUPPLIED AT THE PRECONSTRUCTION MEETING.

EXISTING UTILITIES AND STRUCTURES: EXISTING UTILITIES, STRUCTURES AND FACILITIES SHOWN ON THE DRAWINGS WERE LOCATED AS ACCURATELY AS POSSIBLE FROM THE RECORDS EXAMINED. NO GUARANTEE IS MADE THAT ALL EXISTING FACILITIES ARE SHOWN OR THAT THOSE SHOWN ARE ENTIRELY ACCURATE. THE CONTRACTOR SHALL ASSURE HIMSELF OF THE ACTUAL LOCATION OF THE UTILITIES, STRUCTURES OR FACILITIES PRIOR TO PERFORMANCE OF ANY WORK IN THE VICINITY. THE UTILITY COMPANIES OR UTILITY AGENCIES WILL CO-OPERATE WITH THE CONTRACTOR IN LOCATING UNDERGROUND UTILITIES THAT MAY BE SUBJECT TO DAMAGE OR INTERRUPTION OF SERVICES DURING THE CONTRACTOR'S OPERATIONS. PRIOR TO START OF THE WORK, THE CONTRACTOR SHALL REQUEST THAT EACH UTILITY AGENCY ADVISE HIM OF THE LOCATION OF THEIR FACILITIES IN THE VICINITY. THE OWNER WILL ASSUME NO LIABILITY FOR DAMAGES SUSTAINED OR COSTS INCURRED BECAUSE OF THE CONTRACTOR'S OPERATION IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, OR TO THE TEMPORARY BRACING AND SHORING OF SAME. IN THE EVENT THAT IT IS NECESSARY TO SHORE, BRACE OR SWING A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION SECURED AS TO THE METHOD USED FOR ANY SUCH WORK.

THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.

THE CONTRACTOR SHALL NOTIFY UTILITY OWNER THROUGH SUNSHINE STATE ONE CALL OF FLORIDA (800-432-4770) AND UTILITY OWNERS LISTED BELOW AT LEAST TWO BUSINESS DAYS (OR 10 DAYS IF ON THE JOB SITE).

RESTORATION OF DAMAGED STRUCTURES OR UTILITIES: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REBUILD OR RESTORE TO ITS FORMER CONDITION, ANY AND ALL PORTIONS OF EXISTING UTILITIES, STRUCTURES, EQUIPMENT, APPURTENANCES OR FACILITIES. OTHER THAN THOSE TO BE PAID FOR UNDER THIS CONTRACT, WHICH MAY BE DISTURBED OR DAMAGED DUE TO THIS CONSTRUCTION OPERATION, AT NO COST TO THE OWNER.

FINAL CLEANUP: UPON COMPLETION OF THE WORK BUT BEFORE FINAL PAYMENT WILL BE MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE PROJECT AREA, ALL FALSE WORK, EQUIPMENT, SURPLUS AND DISCARDED MATERIALS, RUBBISH AND TEMPORARY STRUCTURES WHICH RESULT FROM THE WORK UNDER THIS AGREEMENT, AND SHALL RESTORE IN AN ACCEPTABLE MANNER ALL PROPERTY WHICH HAS BEEN DAMAGED DURING THE EXECUTION OF THE WORK.

TECHNICAL SPECIFICATIONS

MATERIALS, CONSTRUCTION METHODS, TESTING AND TOLERANCES FOR ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS, AND WITH THE SPECIFICATIONS REFERENCED UNDER THE "SUPPLEMENTAL CONDITIONS." IN THE EVENT OF CONFLICT, THE MORE STRINGENT PROVISION SHALL APPLY.

1. MOBILIZATION/DEMOBILIZATION: THE WORK SPECIFIED IN THIS SECTION CONSISTS OF THE PREPARATORY WORK AND OPERATIONS IN MOBILIZING FOR BEGINNING WORK ON THE PROJECT, INCLUDING, BUT NOT LIMITED TO, THOSE OPERATIONS NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE, AND FOR THE ESTABLISHMENT OF TEMPORARY OFFICES, BUILDINGS, SAFETY EQUIPMENT AND FIRST AID SUPPLIES, SANITARY AND OTHER FACILITIES, AS REQUIRED BY THESE SPECIFICATIONS, THE SPECIAL PROVISIONS, AND STATE AND LOCAL LAWS AND REGULATIONS. ALL COSTS FOR BONDS, PERMITS AND ANY REQUIRED INSURANCE, AND ANY OTHER PRECONSTRUCTION EXPENSE NECESSARY FOR THE START OF THE WORK, AS WELL THE COST OF THE REMOVAL OF THE ABOVE ITEMS, SHALL ALSO BE INCLUDED IN THIS SECTION.
2. CONSTRUCTION SURVEYING: THE CONTRACTOR SHALL CONSTRUCT THE REQUIRED IMPROVEMENTS AT THE LOCATIONS SHOWN ON THE PLANS, AS OUTLINED IN THE "SUPPLEMENTAL CONDITIONS," THE OWNER SHALL PROVIDE BASIC REFERENCE POINTS FOR HORIZONTAL CONTROL AND BENCHMARKS IN THE VICINITY OF THE WORK. ALL OTHER CONSTRUCTION STAKING FOR BOTH HORIZONTAL AND VERTICAL CONTROL NEEDED BY THE CONTRACTOR FOR CONTROL OF HIS WORK SHALL BE PERFORMED BY THE CONTRACTOR.
3. DRAINAGE IMPROVEMENTS: THE CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND LABOR NECESSARY TO COMPLETE THE PROJECT WORK OF THE DRAINAGE IMPROVEMENTS AT THE LOCATION, SIZE AND TYPE SHOWN ON THE PLANS FOR THE FOLLOWING ITEMS IN ACCORDANCE WITH FDOT SPECIFICATIONS. INCLUDED IN THE UNIT COSTS FOR EACH ITEM SHALL BE THE COSTS ASSOCIATED WITH THE DESIGN AND CONSTRUCTION, BY THE CONTRACTOR, TO COMPLY WITH THE TRENCH SAFETY ACT, LAWS OF FLORIDA, CHAPTER 90-96.

   BACKFILL AND COMPACTION OF TRENCHING FOR CULVERT INSTALLATION UNDER THIS SECTION SHALL BE IN ACCORDANCE WITH SECTION 125-8.3, FDOT SPECIFICATIONS. DENSITY TESTS SHALL BE PROVIDED AT THE FOLLOWING VERTICAL LOCATIONS:

   - TWO TESTS* AT SPRINGLINE (ONE EACH SIDE OF THE PIPE);
   - ONE TEST* AT ONE-FOOT ABOVE PIPE; AND
   - ONE TEST* AT ONE-FOOT BELOW SUBGRADE OR FINISH GRADE.
   - *DENSITY OF AT LEAST 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T -99, METHOD C.

   THE MINIMUM NUMBER OF HORIZONTAL TEST LOCATIONS IS TWO PER CULVERT INSTALLATION, ONE PER 100 LINEAL FEET OF PIPE AND/OR ONE PER 20 FEET OF PAVEMENT CROSSING WHICHEVER IS GREATER. ADDITIONAL TESTS MAY BE REQUIRED AT MORE FREQUENT INTERVALS IF DEEMED NECESSARY BY THE ENGINEER.

   A. CULVERTS: CONSTRUCTION METHODS FOR DRAINAGE CULVERTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 125 AND 430, FDOT SPECIFICATIONS. PIPE MATERIAL AS SPECIFIED ON THE PLANS.

   B. DRAINAGE STRUCTURES: PRE-CAST CONCRETE CATCH BASINS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATIONS C-478 AND FOOT STANDARD SPECIFICATION 425. CONCRETE FOR PRE-CAST BASINS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SHOP DRAWINGS ARE REQUIRED.
6. FENCING AND GATES: THE CONTRACTOR SHALL FURNISH AND CONSTRUCT CHAIN-LINK FENCE AND GATES IN ACCORDANCE WITH FPL CHAIN LINK FENCE SPECIFICATIONS AND DETAILS. MATERIALS AND LOCATION OF FENCE ARE INDICATED ON THE PLANS.
7. EROSION AND POLLUTION CONTROL: THE CONTRACTOR SHALL TAKE SUFFICIENT PRECAUTIONS TO PREVENT WATER POLLUTION WITH AQUATIC WEEDS, FUELS, OILS, BITUMINOUS, CALCIUM CHLORIDE OR OTHER HARMFUL MATERIALS. ALSO, THEY SHALL CONDUCT AND SCHEDULE HIS OPERATIONS SO AS TO AVOID POLLUTION OR SILTATION OF WATER BODIES OR TO INTERFERE WITH INDIGENOUS WILDLIFE. THE INSTALLATION OF TEMPORARY EROSION AND POLLUTION CONTROL FEATURES SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONTRACT. ANY EROSION OR SHOALING SHALL BE CORRECTED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE. DUE TO UNANTICIPATED CONDITIONS, THE ENGINEER MAY DIRECT THE USE OF CONTROL FEATURES OR METHODS OTHER THAN THOSE INCLUDED IN THE ORIGINAL CONTRACT. IN SUCH EVENT THIS ADDITIONAL WORK WILL BE PAID FOR AS UNFORESEEABLE WORK.

   1) SEDIMENT BARRIERS SHALL BE PLACED PRIOR TO ANY WORK ON THE SITE. SEDIMENT BARRIERS SHALL BE PLACED AS DEPICTED AS SHOWN ON THE CONSTRUCTION PLANS.
   2) WETLAND AND WETLAND BUFFER AREAS ARE TO REMAIN UNDISTURBED. VEHICLE AND CONSTRUCTION EQUIPMENT TRAFFIC IS PROHIBITED WITHIN THESE AREAS.
   3) DAMAGED TURBIDITY CONTROLS SHALL BE REPAIRED PROMPTLY AND BEFORE ANY SUBSEQUENT RAINFALL.
   4) TURBIDITY CONTROLS SHALL REMAIN IN PLACE AND MAINTAINED AND REMOVED ONLY AFTER UPLAND CONSTRUCTION AREAS HAVE BEEN STABILIZED AS APPROVED BY THE ENGINEER OF RECORD
   5) CONTRACTOR SHALL COMPLY WITH NPDES AND EPA DISCHARGE ELIMINATION PERMIT, IN PARTICULAR SEDIMENT AND EROSION CONTROLS AND STORM WATER MANAGEMENT MEASURES SHALL BE STRICTLY FOLLOWED.
   6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF THE NPDES AND RELATED STORM WATER PLAN FOR THE DURATION OF THE PROJECT. UPON COMPLETION THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STORM WATER MANAGEMENT MEASURES AND SHALL DISPOSE OF THEM AS REQUIRED.
   7) DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH SEED & MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THOSE AREAS. THE SEEDING SHALL FOLLOWING TYPICAL CONSTRUCTION PRACTICES TO INSURE A YEAR ROUND STABILIZED AREA.
   8) CONTRACTOR SHALL COMPLY WITH SPILL PREVENTION, CONTROL AND COUNTER MEASURES (SPEC) REQUIREMENTS PURSUANT TO EPA RULES AND REGULATIONS.
   9) ALL CONSTRUCTION WASTE MATERIAL, INCLUDING BUT NOT LIMITED TO THE EXISTING BARB WIRE FENCING AND POSTS, SHALL BE COLLECTED AND STORED IN A SECURED METAL DUMPSTER RENTED / LEASED FROM A LOCAL WASTE MANAGEMENT COMPANY. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURES FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER / CONSTRUCTION TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
   10) ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS AT A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
   11) TRUCKS / EQUIPMENT IMPORTING OR EXPORTING FILL SHALL COVER THEIR LOADS WITH A TARPAULIN TO AVOID UNNECESSARY GENERATION OF DUST.
   12) ALL HAZARDOUS WATER MATERIAL SHALL BE DISPOSED OF AS PER LOCAL / STATE REGULATIONS OR AS RECOMMENDED BY THE MANUFACTURER. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND THE CONTRACTOR IS RESPONSIBLE TO FOLLOW THESE PRACTICES.
   13) DRIVEWAY ACCESS SHALL BE CONSTRUCTED PER FDOT INDEX 106 TO MINIMIZE THE VEHICLES TRACKED SEDIMENTS TRANSPORTED OFFSITE.
   14) THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT SHALL SELECT INDIVIDUALS, TYPICALLY THREE, WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT OF INSPECTION REPORTS. PERSONNEL SELECTED SHALL RECEIVE PROPER TRAINING, AT THE CONTRACTORS EXPENSE, PRIOR TO SITE CONSTRUCTION COMMENCEMENT.
   15) ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN RAINFALL. ALL CONTROLS MUST BE IN PROPER ORDER AS REQUIRED UNTIL SITE COMPLETION.
   16) SILT FENCE SHALL BE INSPECTED FOR TEARS, DEPTH OF SEDIMENT, AND TO INSURE THE FENCE IS SECURELY FASTENED TO THE POSTS AND ALSO THAT POSTS ARE FIRMLY IN PLACE. SEDIMENT SHALL BE REMOVED IF THE DEPTH OF SEDIMENT IS GREATER THAN ONE-THIRD THE HEIGHT OF THE SILT FENCE.
   17) THE INSPECTOR SHALL RECORD ANY DAMAGES OR DEFICIENCIES IN THE TURBIDITY CONTROLS IN THE REPORT FORM FOR THIS PURPOSE. A COPY OF ALL RECORDING AND REPORTS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW.

   GENERAL SEQUENCE OF MAJOR EROSION AND POLLUTION CONTROL EVENTS:

   1) INSTALL EROSION CONTROL AT LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
   2) COMMENCE SITE CONSTRUCTION ACTIVITIES.
   3) AS PROPOSED DRAINAGE IS CONSTRUCTED, INSTALL SILT FENCE AND/OR TURBIDITY CONTROL MEASURES AT EACH.
   4) INSTALL TEMPORARY SEED AND MULCH IN AREAS WHERE CONSTRUCTION TEMPORARILY CEASES FOR AT LEAST 21 DAYS, NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES IN THAT AREA.
   5) INSTALL PERMANENT SEED/MULCH OR APPROVED STABILIZATION METHOD AND/OR PLANTING IN AREAS WHERE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITIES.
   6) REMOVE ACCUMULATED SEDIMENT.
   7) REMOVED TEMPORARY POLLUTION PREVENTION MEASURES AFTER ALL CONSTRUCTION ON SITE HAS BEEN COMPLETED AND DISPOSED OF MATERIALS ACCORDING TO APPLICABLE FDEP REGULATIONS AND/OR LOCAL GOVERNMENTAL CODES, ETC.
9. RECORD DRAWINGS: AFTER COMPLETION OF THE CONTRACT WORK, BUT PRIOR TO SUBMITTAL OF THE REQUEST FOR FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE FINAL RECORD DRAWINGS TO THE OWNER OF THE IMPROVEMENTS. THE RECORD DRAWINGS SHALL ALSO BE SUBMITTED DIGITALLY IN AUTOCAD / *.DWG FORMAT. THE RECORD DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FORT PIERCE, ST. LUCIE COUNTY, AND FDEP, AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

   THE FINAL LOCATION, BY REFERENCE TO AT LEAST TWO COMPLETED VISIBLE IMPROVEMENTS OR OTHER PERMANENT POINTS, OF ALL PAVING AND DRAINAGE ELEMENTS, AND SHALL INCLUDE ELEVATIONS OF PERTINENT POINTS IN THE PAVEMENT AND DRAINAGE IMPROVEMENTS, ALL REVISIONS TO THE ORIGINAL PLANS, VERIFICATION OF ALL DESIGN DIMENSIONS, ELEVATIONS, PIPE SLOPES, PIPE LENGTHS, INLETS AND CONTROL STRUCTURES LOCATION AND ELEVATIONS AND ALL OTHER INFORMATION NECESSARY TO HORIZONTALLY AND VERTICALLY LOCATE AND OPERATE THE IMPROVEMENTS CONSTRUCTED UNDER THIS CONTRACT.

   DRAWINGS SHALL INCLUDE:

   A. INDICATION OF ANY CHANGES OR VERIFICATIONS GET MARKED
   B. INDICATION OF ALL "PROPOSED" OR "CONSTRUCTS"
   C. CHANGES TO LOCATIONS OF PIPE, VALVES, FITTINGS OR MANHOLES, ETC.
   D. DETAIL BOX OF ANY SUBSTANTIAL CHANGES
   E. ALL ELEVATIONS FOR MANHOLES AND LIFT STATIONS
   F. ALL GRADES AND FOOTAGE ON SANITARY RUNS

   THE CONTRACTOR SHALL PROVIDE RECORD DRAWING PRINTS AND ONE COPY OF CERTIFIED FIELD NOTES TO THE OWNER THAT ARE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. PAYMENT FOR THE RECORD DRAWINGS SHALL BE ON A LUMP SUM BASIS.

DEWATERING:
CONSTRUCTION DEWATERING MAY REQUIRE A PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD). IF DEWATERING IS TO TAKE PLACE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEWATERING PERMIT FOR HIS WORK.

LEGAL DESCRIPTION SOURCE (ORB 4843, PG 2274)

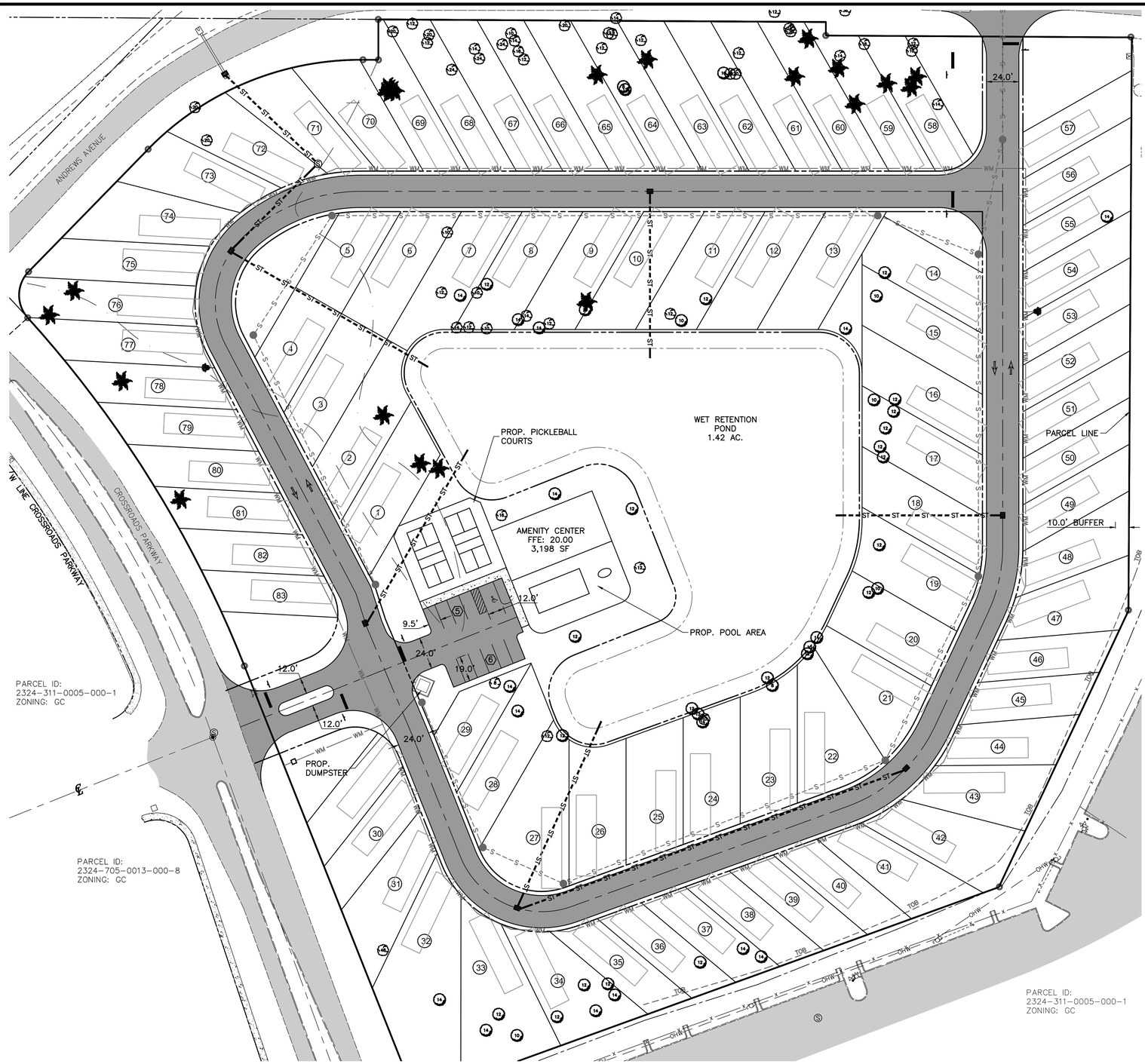
THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 35 SOUTH, RANGE 39 EAST, AND A PORTION OF LOTS 3 AND 6 OF BOSTON AND FLORIDA ATLANTIC COAST LAND CO. SUBDIVISION OF SECTION 24, AS RECORDED IN PLAT BOOK 3 AT PAGE 32 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 24 AND RUN SOUTH 00°07'24" EAST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, FOR 15.00 FEET; THENCE RUN SOUTH 89°41'32" EAST 15.00 FEET SOUTH OF AND PARALLEL TO THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, ALONG THE SOUTH RIGHT OF WAY LINE OF ANDREWS AVENUE (A 30 FOOT WIDE RIGHT OF WAY) FOR 739.44 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 89°41'32" E ALONG SAID RIGHT OF WAY FOR 919.16 FEET; THENCE RUN SOUTH 00°06'01" EAST FOR 10.00 FEET; THENCE RUN SOUTH 89°41'29" EAST FOR 226.79 FEET; THENCE RUN SOUTH 00°18'28" WEST FOR 425.04 FEET; THENCE RUN SOUTH 25°04'02" WEST FOR 226.43 FEET; THENCE RUN SOUTH 70°04'02" WEST FOR 459.41 FEET; THENCE RUN NORTH 21°40'15" WEST FOR 344.63 FEET TO A POINT OF CURVETURE OF A CIRCULAR CURVE TO THE LEFT, CONCAVE SOUTHWESTERLY; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE HAVING A RADIUS OF 855.00 FEET THROUGH A CENTRAL ANGLE OF 47°21'31" FOR 706.71 FEET TO THE POINT OF BEGINNING, LYING AND BEING IN ST. LUCIE COUNTY, FLORIDA.

LESS AND EXCEPTING THEREFROM THE FOLLOWING DESCRIBED REAL PROPERTY CONVEYED TO SUNDIAL HOMES, INC BY DEED RECORDED IN OR BOOK 1150, PAGE 2226, OF THE PUBLIC RECORDS OF ST, LUCIE COUNTY, FLORIDA:

COMMENCE AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 35 SOUTH, RANGE 39 EAST, ST. LUCIE COUNTY, FLORIDA, SAID POINT LYING ON THE CENTERLINE OF ANDREWS AVENUE, A 30 WIDE ROAD RIGHT OF WAY, THENCE RUN SOUTH 00°06'16" EAST ALONG THE EAST LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, A DISTANCE OF 15.00 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF ANDREWS AVENUE AND THE POINT OF BEGINNING.

FROM THE POINT OF BEGINNING THENCE CONTINUE SOUTH 00°06'16" EAST A DISTANCE OF 30 FEET; THENCE RUN NORTH 89°41'32" WEST, PARALLEL TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 11.88 FEET TO A POINT OF CURVATURE; THENCE RUN ALONG THE ARC OF A CURVE C



0 40' 80'

SCALE: 1" = 40'

LOCATION MAP

SITE PLAN SUMMARY

1. PROJECT NAME: CROSSROADS RV PARK
2. PARCEL ID: 2324-312-0005-000-4
3. LOCATION: INTERSECTION OF CROSSROADS PKWY, & ANDREWS AVE.
4. SECTION/TOWNSHIP/RANGE: 24 35S 39E
5. OWNER: ALEXANDER GEORGE & COMPANY
   14800 INDRIO RD.
   FORT PIERCE, FL 34945
6. TYPE OF PROJECT: SITE PLAN (DEVELOPMENT REVIEW)
7. ZONING: GC
8. FUTURE LAND USE: GC
9. FLOOD ZONE:
10. TOTAL PROJECT AREA: 474,804 S.F. (10.90 AC.)
11. LOT COVERAGE OF STRUCTURES: 3,198 S.F.
12. IMPERVIOUS/PERVIOUS:
    SURFACE COVERAGE
    PERVIOUS:
    OPEN SPACE: 269,007 S.F./6.18 AC./57.3%
    IMPERVIOUS:
    RV PADS: 74,700 S.F./1.71 AC./15.7%
    ROADWAY: 57,874/1.33 AC./12.2%
    AMENITY CENTER/POOL/PICKLEBALL AREA: 11,368 S.F./0.26 AC./1.8%
    WET POND: 61,855 S.F./1.42 AC./13.0%
    TOTAL AREA: 474.804 S.F. (10.90 AC.)
13. MINIMUM BUILDING SETBACKS

LOT LINES	REQUIRED	PROVIDED
FRONT	25'	47'
REAR	20'	22'
SIDE	10'	23'

14. PARKING SUMMARY

10 REGULAR SPACES
1 ACCESSIBILITY SPACE
TOTAL: 11 SPACES

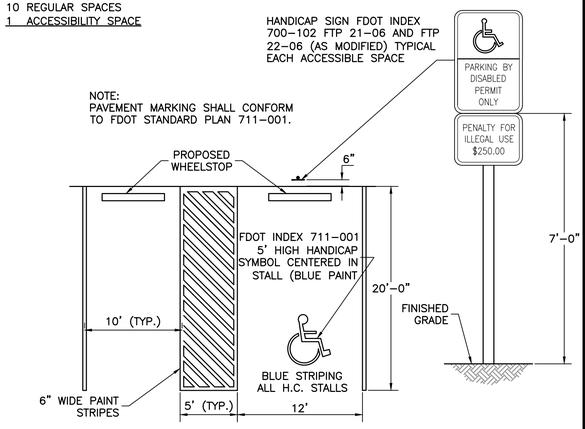
NOTE: REFER TO GENERAL NOTES FOR LEGAL DESCRIPTION

LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- OHU — EX. OVERHEAD ELECTRIC
- ST — PROP. STORMWATER PIPE
- WM — PROP. WATER MAIN
- FM — PROP. FORCEMAIN
- S — PROP. SANITARY SEWER
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. ASPHALT MILLINGS
- PROP. CONCRETE
- EX. GUY WIRE
- EX. POWER POLE
- PROP. MITERED END SECT.

HANDICAP SIGN FDOT INDEX 700-102 FTP 21-06 AND FTP 22-06 (AS MODIFIED) TYPICAL EACH ACCESSIBLE SPACE

NOTE:
PAVEMENT MARKING SHALL CONFORM TO FDOT STANDARD PLAN 711-001.



HANDICAP PARKING DETAIL

N.T.S.

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=40'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

SITE PLAN

GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE, P.E. LICENSE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER
Licensed Business No. 66387

PROJECT #: 22-024

S-1

Drawing Name: S:\Shared Folders\GEP projects\2022\22-024 Crossroads Site Plan\Design\22-024 Site Plan.dwg Layout Name: P-1 - Plotted by: Devin Curran - Date: 10/23/2023 - 3:56 PM - Giangrande Engineering & Planning

Storm MH
Rim:18.75
NW: 10.15
SW: 10.05
Bottom: 9.55

EXISTING DRAINAGE CULVERT

REPLACEMENT OF EXIST. MES WITH TYPE C INLET

PROP. 92 LF 18" RCP

PROP. SWALE

ANDREWS AVENUE

PROP. 86 LF 18" RCP

TYPICAL RV PAD, SEE DETAIL THIS SHEET

4" PVC W.M. (TYP)

INVERTED CROWN (TYP)

4" PVC W.M (TYP)

PROP. 122 LF 18" RCP

PROP. 168 LF 18" RCP

CONFLICT
BOP: 13.98
TOP: 11.45

CONFLICT
BOP: 12.76
TOP: 10.20

CONTROL ELEVATION
ELEV. 14.0

TOP OF BANK
ELEV. 17.0

PROP. 148 LF 18" RCP

PROP. DRY DETENTION AREA

CONFLICT
BOP: 12.44
TOP: 9.90

FFE: 20.00

PROP. 122 LF 18" RCP

PROP. 150 LF 18" RCP

PROP. 303 LF 18" RCP

OPEN LOT FOR STAGING

CONFLICT
BOP: 14.94
TOP: 11.00

CROSSROADS PARKWAY
(90.00' PUBLIC RIGHT-OF-WAY)
(P.B. 30, PG. 8)

CROSSROADS PARKWAY

W LINE CROSSROADS PARKWAY

PARCEL ID:
2324-311-0005-000-1
ZONING: GC

PARCEL ID:
2324-705-0013-000-8
ZONING: GC

STREET NAME
(XX.X' PUBLIC RIGHT-OF-WAY)
(XX' WIDE ASPHALT)

D-1
N: 1121539.06
E: 852317.77
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.40'
SE INVERT EL=9.95'
NE INVERT EL=10.05'
STRUCT. BOTT. EL=9.50'

D-2
N: 1121583.21
E: 852628.20
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.26'
S INVERT EL=8.70'
STRUCT. BOTT. EL=8.20'

D-3
N: 1121342.97
E: 852889.61
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.18'
W INVERT EL=8.40'
STRUCT. BOTT. EL=7.90'

D-4
N: 1121155.47
E: 852818.07
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.12'
W INVERT EL=10.00'
STRUCT. BOTT. EL=10.50'

D-5
N: 1121051.84
E: 852529.74
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.10'
NE INVERT EL=9.50'
E INVERT EL=9.60'
STRUCT. BOTT. EL=9.00'

D-6
N: 1121262.98
E: 852417.13
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.12'
NE INVERT EL=9.50'
NE INVERT EL=9.50'
STRUCT. BOTT. EL=9.00'

D-7
N: 1121670.32
E: 852313.21
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=15.00'
SE INVERT EL=10.50'
NW INVERT EL=14.50'
STRUCT. BOTT. EL=10.00'

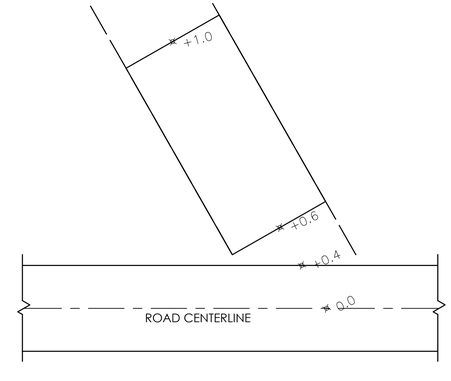
HW-1
N: 1011017.13
E: 889993.30
MITERED END SECTION (4:1)
FDOT INDEX 430-021
18" RCP FL EL = 12.00'

N

0 40' 80'
SCALE: 1" = 40'

LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- OHU — EX. OVERHEAD ELECTRIC
- ST — PROP. STORMWATER PIPE
- WM — PROP. WATER MAIN
- FM — PROP. FORCEMAIN
- S — PROP. SANITARY SEWER
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. ASPHALT MILLINGS
- PROP. CONCRETE
- EX. GUY WIRE
- EX. POWER POLE
- PROP. MITERED END SECT.



TYPICAL EXTERIOR RV PADS
N.T.S.

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=40'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

PAVING, GRADING, & DRAINAGE PLAN

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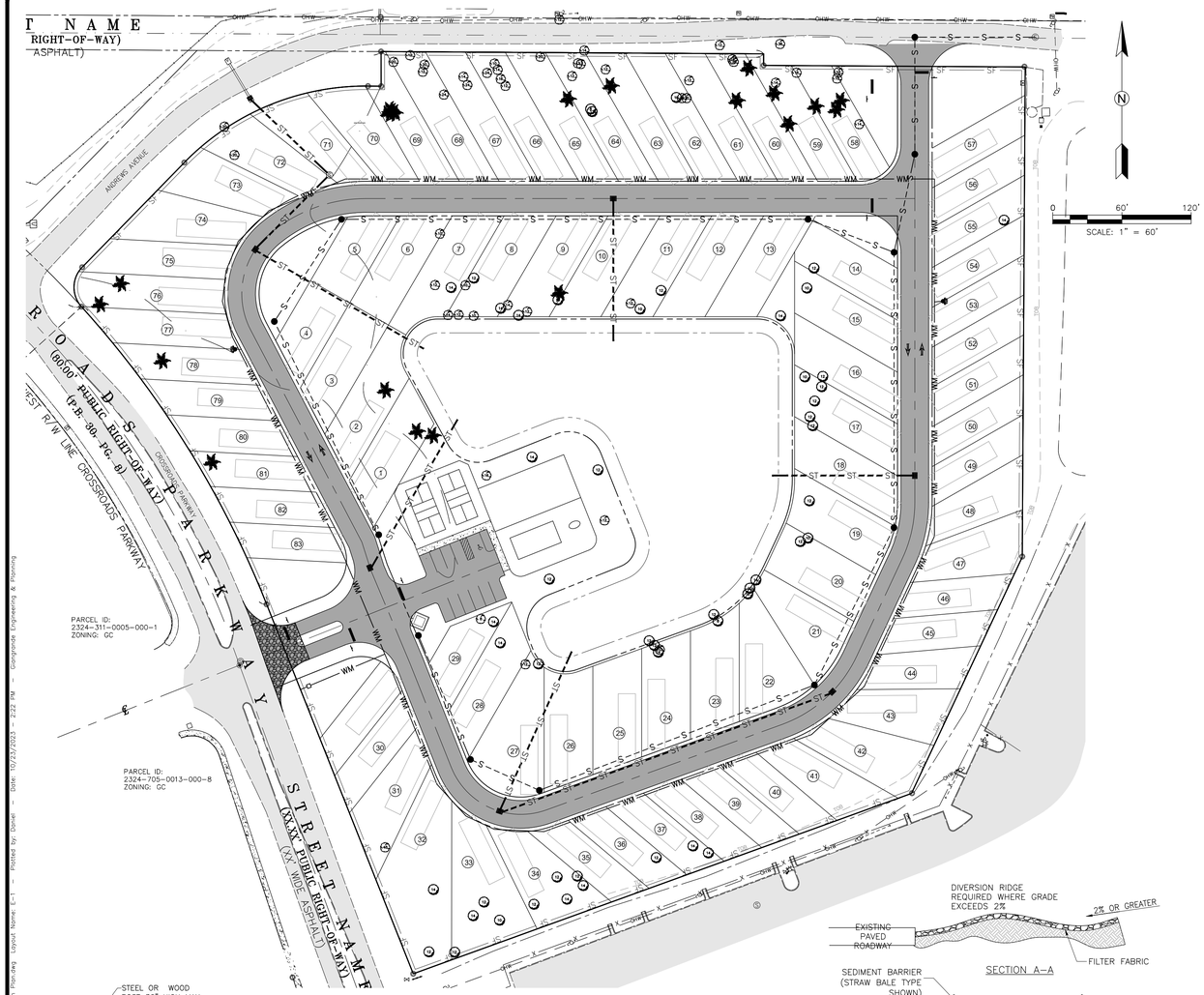
LEO GIANGRANDE
No. 65382
STATE OF FLORIDA
PROFESSIONAL ENGINEER

PROJECT #: 22-024

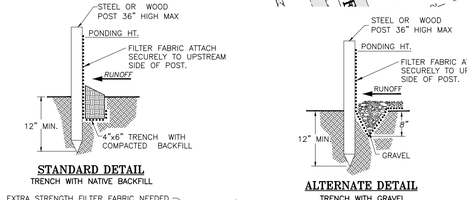
P-1

Drawing Name: S:\Shared Folders\GEP projects\2022\22-024 Crossroads Site Plan\Design\22-024 PG&D Plan.dwg Layout Name: P-1 - Plotted by: Devin Curran - Date: 10/23/2023 - 3:38 PM - Giangrande Engineering & Planning



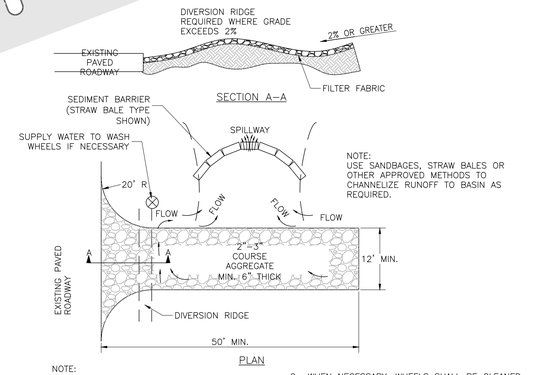
EROSION CONTROL NOTES:

1. THIS PROJECT IS SUBJECT TO ALL RELATED ENVIRONMENTAL REQUIREMENTS WHICH INCLUDE A "CONTROL OF EROSION AND SEDIMENTATION PLAN". THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY AND ADEQUATE MEASURES FOR PROPER CONTROL OF EROSION DUE TO SEDIMENTATION RUNOFF FROM THE SITE PRIOR TO CONSTRUCTION OPERATIONS IN A PARTICULAR AREA. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION. FIELD ADJUSTMENTS WITH RESPECT TO LOCATIONS AND DIMENSIONS MAY BE DIRECTED BY THE ENGINEER AS REQUIRED.
2. EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RAIN EVENT FOR DAMAGE AND GENERAL EFFECTIVENESS. ANY DAMAGED OR INEFFECTIVE CONTROLS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.
3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED, IF DEEMED NECESSARY, BY THE ON-SITE INSPECTOR.
4. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. TEMPORARY AND PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL THE AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION.
6. ALL CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON TO ANY PUBLIC RIGHT-OF-WAY. THIS SHALL REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS REQUIRE. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHT-OF-WAY OR INTO STORM DRAINS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. TURBIDITY SCREENS OR EQUIVALENT SHALL BE PROPERLY EMPLOYED AND MAINTAINED AS NECESSARY DURING CONSTRUCTION ACTIVITIES SO THAT TURBIDITY LEVELS DO NOT EXCEED 29 NTU'S ABOVE NATURAL BACKGROUND 50 FEET DOWNSTREAM OF POINT OF DISCHARGE. IF TURBIDITY LEVELS EXCEED THESE LIMITS, PROJECT ACTIVITIES SHALL IMMEDIATELY CEASE, AND WORK SHALL NOT RESUME UNTIL TURBIDITY LEVELS DROP TO WITHIN THESE LIMITS.
8. CONTRACTOR SHALL SOD GRASS AREAS DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
9. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES).
11. SEDIMENT BARRIERS SHALL BE PLACED PRIOR TO ANY WORK ON THE SITE. SEDIMENT BARRIERS SHALL PLACED AS DEPICTED AS SHOWN ON THESE CONSTRUCTION PLANS.
12. PRESERVE AREAS ARE TO REMAIN UNDISTURBED. VEHICLE AND CONSTRUCTION EQUIPMENT TRAFFIC IS PROHIBITED WITHIN THESE AREAS.
13. DAMAGED TURBIDITY CONTROLS SHALL BE REPAIRED PROMPTLY AND BEFORE ANY SUBSEQUENT RAINFALL.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF THE NPDES AND RELATED STORM WATER PLAN FOR THE DURATION OF THE PROJECT. UPON COMPLETION THE CONTRACTOR SHALL REMOVED ALL TEMPORARY STORM WATER MANAGEMENT MEASURES AND SHALL DISPOSE OF THEM AS REQUIRED.
15. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH SEED & MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREAS. THE SEEDING SHALL FOLLOWING TYPICAL CONSTRUCTION PRACTICES TO INSURE A YEAR ROUND STABILIZED AREA.
16. CONTRACTOR SHALL COMPLY WITH SPILL PREVENTION, CONTROL AND COUNTER MEASURES (SPEC) REQUIREMENTS PURSUANT TO EPA RULES AND REGULATIONS.
17. ALL CONSTRUCTION WASTE MATERIAL SHALL BE COLLECTED AND STORED IN A SECURED METAL DUMPSTER RENTED / LEASED FROM A LOCAL WASTE MANAGEMENT COMPANY. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURES FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER / CONSTRUCTION TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
18. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS AT A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
19. TRUCKS / EQUIPMENT IMPORTING OR EXPORTING FILL SHALL COVER THEIR LOADS WITH A TARPAULIN TO AVOID UNNECESSARY GENERATION OF DUST.
20. ALL HAZARDOUS WATER MATERIAL SHALL BE DISPOSED OF AS PER LOCAL / STATE REGULATIONS OR AS RECOMMENDED BY THE MANUFACTURER. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND THE CONTRACTOR IS RESPONSIBLE TO FOLLOW THESE PRACTICES.
21. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT SHALL SELECT INDIVIDUALS, TYPICALLY THREE, WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT OF INSPECTION REPORTS. PERSONNEL SELECTED SHALL BE RECEIVE PROPER TRAINING, AT THE CONTRACTORS EXPENSE, PRIOR TO SITE CONSTRUCTION COMMENCEMENT.
22. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN RAINFALL. ALL CONTROLS MUST BE IN PROPER ORDER AS REQUIRED UNTIL SITE COMPLETION.
23. SILT FENCE SHALL BE INSPECTED FOR TEARS, DEPTH OF SEDIMENT, AND TO INSURE THE FENCE IS SECURELY FASTENED TO THE POSTS AND ALSO THAT POSTS ARE FIRMLY IN PLACE. SEDIMENT SHALL BE REMOVED IF THE DEPTH OF SEDIMENT IS GREATER THAN ONE-THIRD THE HEIGHT OF THE SILT FENCE.
24. THE INSPECTOR SHALL RECORD ANY DAMAGES OR DEFICIENCIES IN THE TURBIDITY CONTROLS IN THE REPORT FORM FOR THIS PURPOSE. A COPY OF ALL RECORDING AND REPORTS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW.
25. THE REQUIREMENTS LISTED ABOVE AND DETAILS PRESENTED ON THIS SHEET SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND THE CONTRACTOR SHALL USE WHATEVER METHODS THE CONTRACTOR DEEMS NECESSARY TO PREVENT EROSION AND SILTATION AS MAY BE REQUIRED FOR THE PROJECT.
26. LOCATIONS OF ANY MATERIALS TO BE TEMPORARILY STOCKPILED TO INCLUDE LAND CLEARING DEBRIS OR EXCAVATED MATERIALS SHALL BE PER THE DIRECTION OF THE MARTIN COUNTY PROJECT MANAGER.
27. PROPERTY CORNERS SHALL BE LOCATED BY A LICENSED LAND SURVEYOR AND CLEARLY MARKED IN THE FIELD PRIOR TO THE ENGINEERING DEPARTMENT'S PRE-CONSTRUCTION MEETING FOR SITE DEVELOPMENT.
28. AUTHORIZATION TO INSTALL EROSION CONTROL DEVICES AND PRESERVE BARRICADES WILL BE GRANTED AT THE PRE-CONSTRUCTION MEETING. THIS AUTHORIZATION SHALL BE POSTED ON THE SITE, IN THE PERMIT BOX, ITS LOCATION SHOWN ELSEWHERE ON THIS PAGE.
29. NO ADDITIONAL LAND CLEARING SHALL COMMENCE UNTIL A SATISFACTORY INSPECTION OF THE REQUIRED EROSION CONTROL BARRICADES HAS BEEN OBTAINED.
30. ALL CONSTRUCTION BARRICADES AND SILT FENCES WILL REMAIN IN PLACE AND BE MONITORED FOR COMPLIANCE BY THE PERMIT HOLDER DURING THE PERMITTED DEVELOPMENT ACTIVITIES.
31. PRIOR TO SCHEDULING A FINAL ENVIRONMENTAL INSPECTION FOR THE INFRASTRUCTURE, ALL BARRICADES AND EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.



NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOUR TO MAXIMIZE PONDING EFFICIENCY.
4. OVERLAP ALL JOINTS AT LEAST 6 FEET.

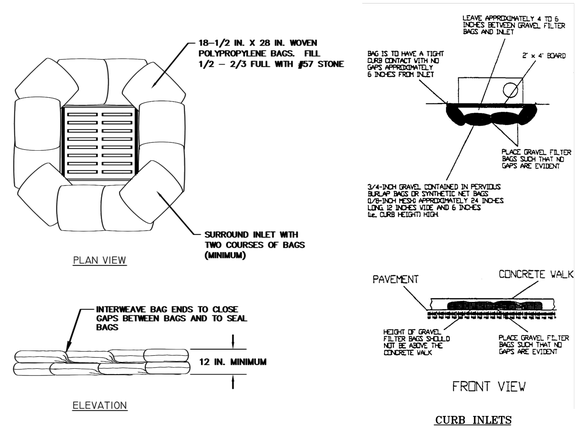
SILT FENCE DETAIL
N.T.S.



NOTE:
USE SANDBAGES, STRAW BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
N.T.S



NOTES:
1. STONE FILL BAGS SHALL BE WOVEN POLYPROPYLENE BAGS WITH APPROXIMATE DIMENSIONS OF 18-1/2 INCHES BY 28 INCHES.
2. THE BAGS SHALL BE FILLED 1/2 TO 2/3 FULL WITH FDOT NO. 57 STONE. TIE THE ENDS OF FILLED BAGS USING EITHER DRAW STRINGS OR WIRE TIES.
3. INTERWEAVE THE LOOSE ENDS OF THE BAGS SO THAT THE GAPS BETWEEN BAGS ARE FILLED AND THE ENDS OF THE BAGS ARE SEALED.
4. COMPLETELY SURROUND THE INLET WITH A MINIMUM OF TWO (2) ROWS OF BAGS TO A MINIMUM OF 12 INCHES IN HEIGHT.

GRAVEL FILTER BAGS INLET PROTECTION DETAIL
NTS

811 Know what's below. Call before you dig.

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=60'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

EROSION PLAN

GIANGRANDE ENGINEERING AND PLANNING
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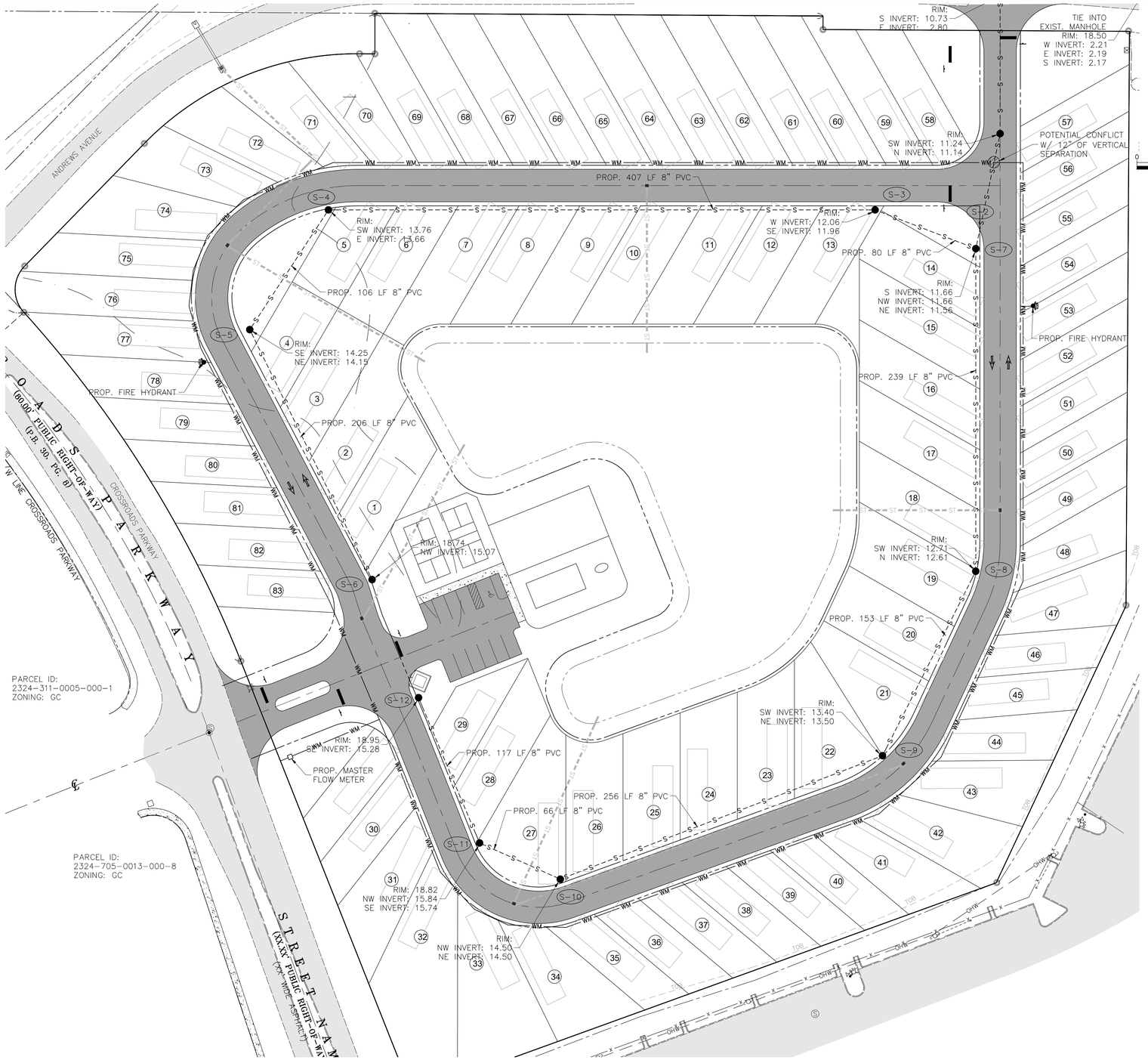
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE LICENSE NO. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT #: 22-024

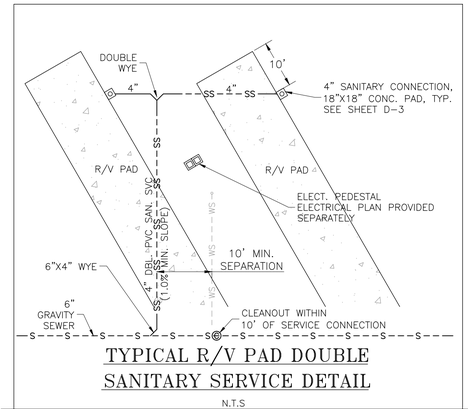
E-1

Drawing Name: S:\Shared Folders\gep projects\2022\22-024 crossroads site plan\design\22-024 Erosion Plan.dwg Layout Name: E-1 - Plotted by: Daniel - Date: 10/03/2023 - 2:22 PM - Giangrande Engineering & Planning



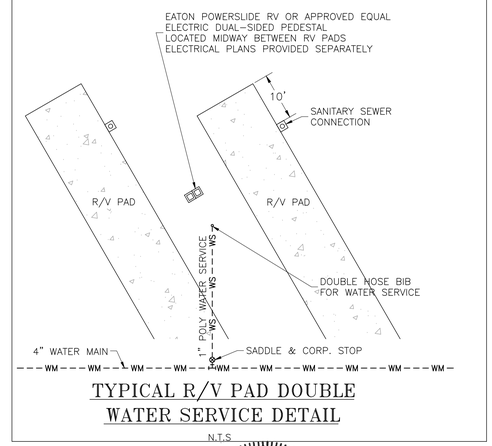
LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- EX. OVERHEAD ELECTRIC
- EX. WATER MAIN
- EX. FORCEMAIN
- PROP. STORMWATER PIPE
- PROP. WATER MAIN
- PROP. FORCEMAIN
- PROP. WATER SERVICE LINE
- PROP. SANITARY SEWER
- PROP. SANITARY SERVICE LINE
- PROP. SANITARY CLEAN OUT
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. ASPHALT MILLINGS
- PROP. CONCRETE
- PROP. BUILDING



TYPICAL R/V PAD DOUBLE SANITARY SERVICE DETAIL

N.T.S



TYPICAL R/V PAD DOUBLE WATER SERVICE DETAIL

N.T.S

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=40'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

WATER & WASTEWATER PLAN

GIANGRANDE ENGINEERING AND PLANNING
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Cert. No. 30901

LEO GIANGRANDE LICENSE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER

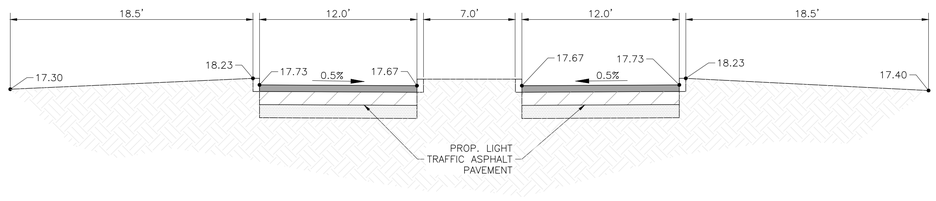
PROJECT #: 22-024

W-1

Drawing Name: S:\shared folders\gep projects\2022\22-024 crossroads ave psd\design\22-024 W&S Plan.dwg Layout Name: W-1 Plotted By: Daniel Date: 10/03/2023 2:22 PM Giangrande Engineering & Planning

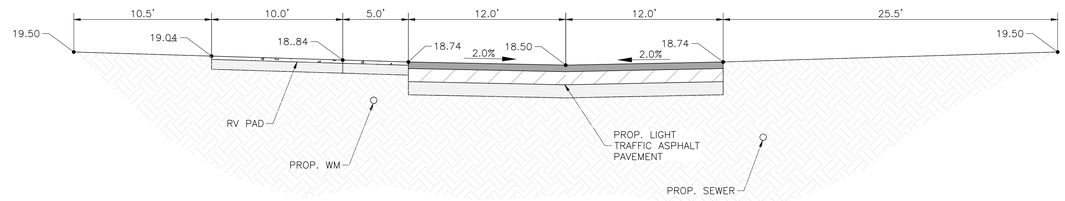
SECTION A–A

SCALE: 1"=5'



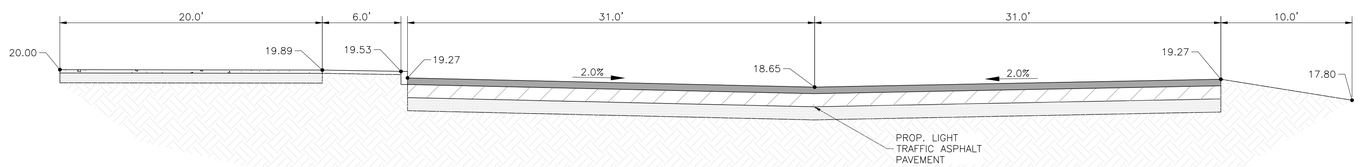
SECTION B–B

SCALE: 1"=5'



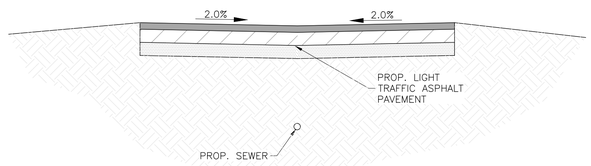
SECTION D–D

SCALE: 1"=5'



SECTION C–C

SCALE: 1"=5'



SECTION E–E

SCALE: 1"=5'

Drawing Name: S:\Shared Folders\gep projects\2022\22-024 crossroads site plan\design\22-024 Cross Sections.dwg Layout Name: CS-1 – Plotted by: Daniel – Date: 10/23/2023

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=5'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

TYPICAL SECTIONS

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LEO GIANGRANDE
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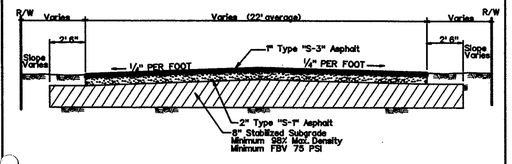
STATE OF FLORIDA
PROFESSIONAL ENGINEER

PROJECT #: 23-007

CS-1



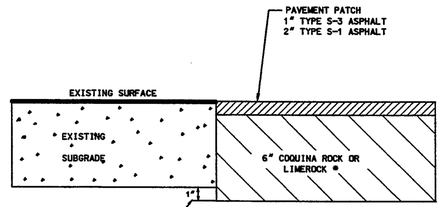
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

PAVING DETAIL WITHOUT CURB AND GUTTER

SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. PV1



* 6" LIMEROCK OR CRUSHED COQUINA COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO METHOD T-180

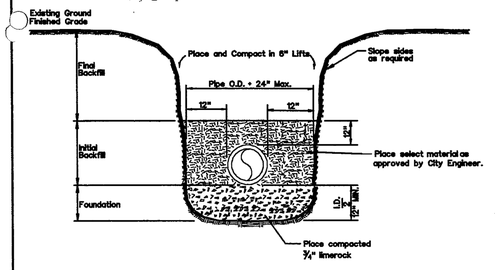
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

PAVEMENT PATCHING

SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. PV4



General Construction Notes:
1. All trenching shall comply with the requirements of the Florida Trench Safety Act.
2. Foundation -¾" LIMEROCK a minimum of 12" in depth.
3. Initial backfill - The material placed to 12" above the pipe shall be placed in six inch layers and compacted with mechanical tampers to at least 95% maximum density as determined by AASHTO T-99.
4. Final Backfill - To be placed in layers not to exceed one foot in thickness and compacted with appropriate equipment to at least 95% maximum density as determined by AASHTO T-99

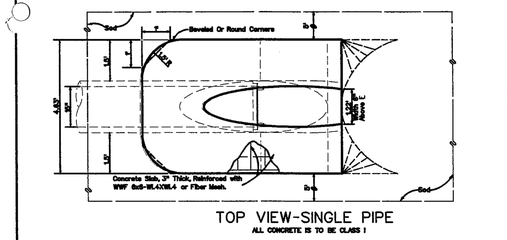
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

TRENCH DETAIL

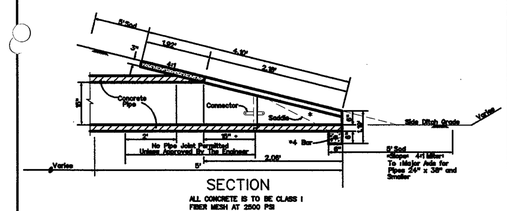
SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. DRA 4



TOP VIEW-SINGLE PIPE
ALL CONCRETE IS TO BE CLASS I



SECTION
ALL CONCRETE IS TO BE CLASS I
FIBER MESH AT 2500 PSI

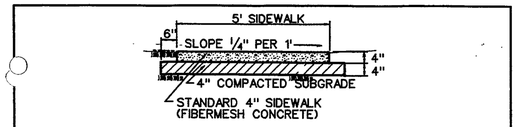
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

MITERED END DETAIL

SCALE: N.T.S. | ISSUED AUGUST 1998

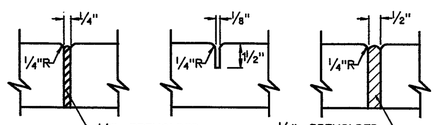
REVISIONS

SHEET No. DRA 5



STANDARD 4" SIDEWALK
(FIBERMESH CONCRETE)

General Construction Notes:
1. Concrete strength to be 2500 P.S.I. at 28 days.
2. Tooled dummy contraction joints every 5' (Type 'B' Joints)
3. Expansion joints w/premolded filler at 100' o/c (Type 'C' Joints)
4. Subbase to be 98% Density F.B.V. 75 P.S.I.
5. The concrete shall be given a broom finish and the edges of the sidewalk shall be finished with an edging tool having a radius of ½ inch



'A' At P.C. & P.T. of curves and at junction of existing and new sidewalks.
'B' 5' center to center on new sidewalks and 10' center to center on new curb and gutter
'C' Where new sidewalk abuts concrete curbs, driveway and similar structures.

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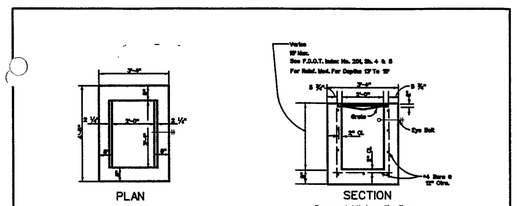
TECHNICAL SPECIFICATIONS AND DETAILS

TYPICAL 4" SIDEWALK DETAIL

SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. SW2



GENERAL NOTES
1. These inlets are suitable for bicycle and pedestrian areas and are to be used in ditches, medians and other areas not subject to frequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads.
2. Inlets subject to ribbed debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Skirted inlets located within roadway clear zones and in areas accessible to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to Inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended minimum pipe sizes shown are for concrete pipe. Pipe sizes larger than those recommended must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered ¾".
6. Pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for on inlets partial, and shall include the cost for slot openings, paving and any required replacement grates.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Sodding SY.
9. For supplementary details see F.D.O.T. Specifications Index No. 201.

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TECHNICAL SPECIFICATIONS AND DETAILS

TYPE "C" INLET

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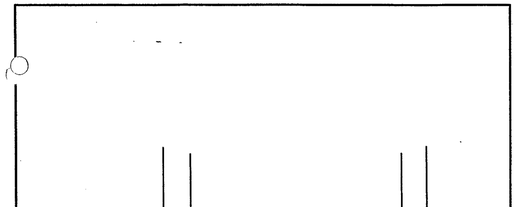
REVISIONS

SHEET No. DRA 6



Note: Grout to consist of 3:1 Sand-Cement Mixture or any Class Concrete.

FOR ALL STRUCTURES UNLESS EXCLUDED BY SPECIAL DETAIL

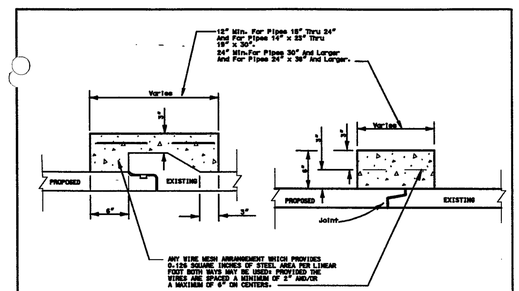
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

DRAINAGE STRUCTURE INVERT

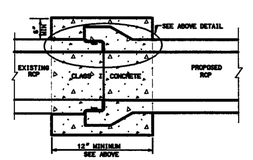
SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. DRA 20



BELL AND SPIGOT TONGUE & GROOVE



CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

CONCRETE COLLAR JOINT DETAIL

SCALE: N.T.S. | ISSUED AUGUST 1998

REVISIONS

SHEET No. DRA 3

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: AS NOTED
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

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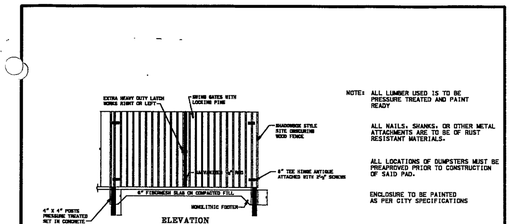
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT #: 22-024

D-1

Drawing Name: S:\Shared folders\gep projects\2022\22-024 crossroads rv park\design\22-024 Details.dwg Layout Name: D-1 -- Plotted by: Daniel -- Date: 10/03/2023 -- 2:23 PM -- Giangrande Engineering & Planning

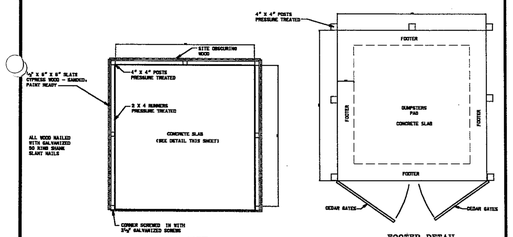


NOTE: ALL LUMBER USED IS TO BE PRESSURE TREATED AND PAINT READY

ALL NAILS, SHANKS, OR OTHER METAL ATTACHMENTS ARE TO BE OF RUST RESISTANT MATERIALS.

ALL LOCATIONS OF DUMPSTERS MUST BE PREAPPROVED PRIOR TO CONSTRUCTION OF SAID PAD.

ENCLOSURE TO BE PAINTED AS PER CITY SPECIFICATIONS



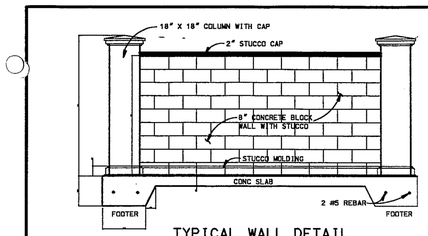
CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

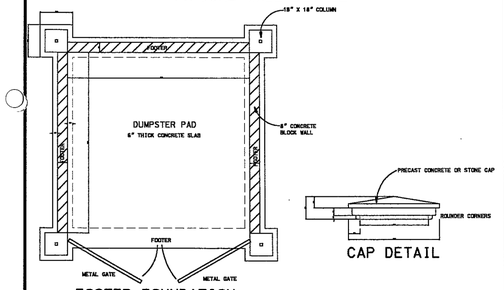
DUMPSTER PAD DETAILS

REVISIONS

SHEET No. 003

SCALE: N.T.S. | ISSUED AUGUST 1999





CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING
TECHNICAL SPECIFICATIONS AND DETAILS

DUMPSTER PAD DETAILS

REVISIONS

SHEET No. 003

SCALE: N.T.S. | ISSUED AUGUST 1999

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DATE	BY	REVISIONS

Date: 10/03/2023
Scale: AS NOTED
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

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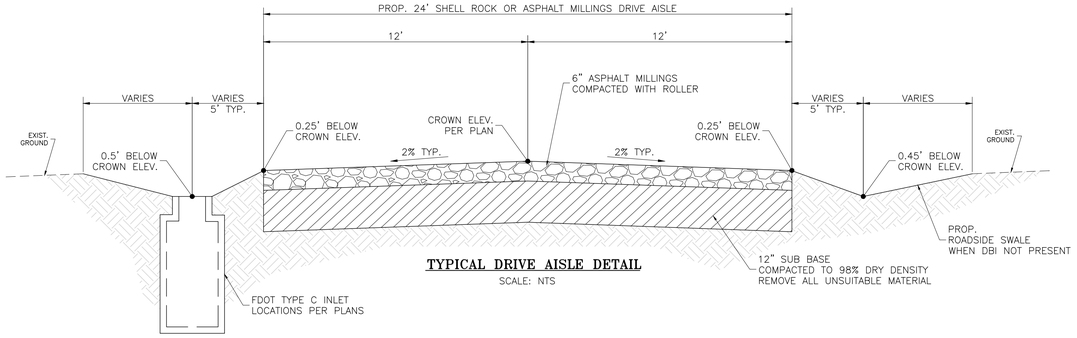
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE LICENSE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER

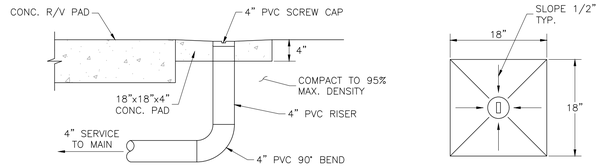
PROJECT #: 22-024

D-2



TYPICAL DRIVE AISLE DETAIL

SCALE: NTS

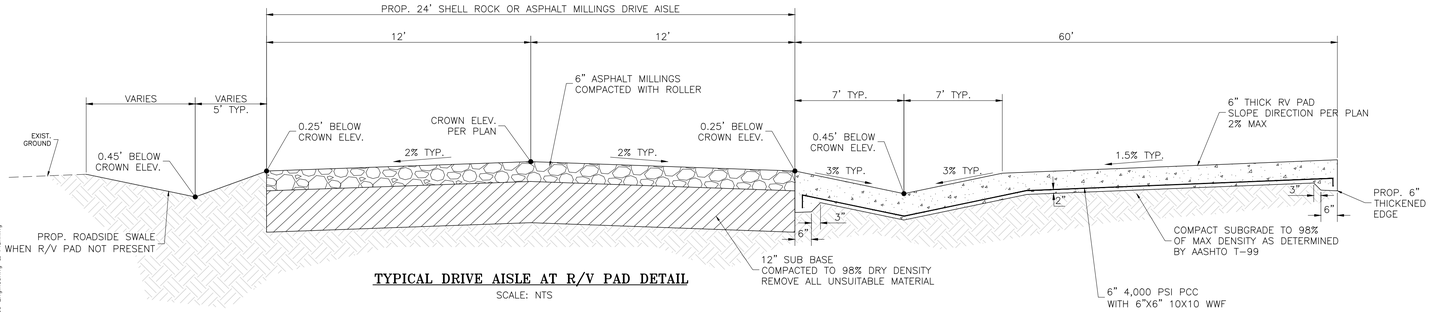


SECTION

PLAN VIEW

R/V PAD SANITARY CONNECTION DETAIL

N.T.S



TYPICAL DRIVE AISLE AT R/V PAD DETAIL

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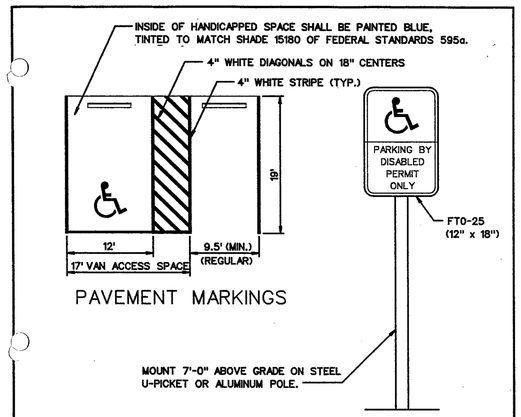


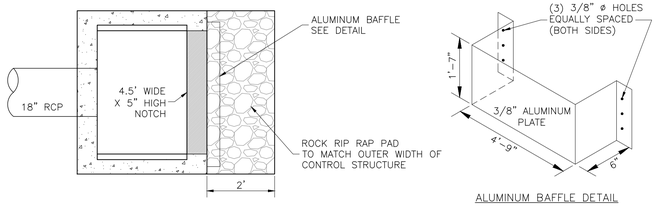
PAVEMENT MARKINGS

HANDICAPPED PARKING SIGN

NOTE:

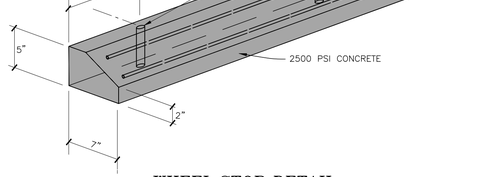
FOR PARKING REQUIREMENTS SEE FORT PIERCE CODE.

CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING TECHNICAL SPECIFICATIONS AND DETAILS		
HANDICAPPED AND REGULAR PARKING DETAIL		REVISIONS
		SHEET No.
SCALE: N.T.S.	ISSUED AUGUST 1998	PL2



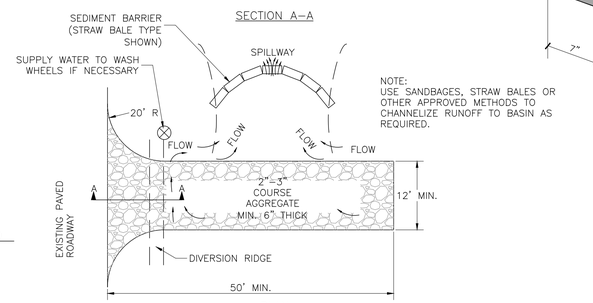
PLAN VIEW

ALUMINUM BAFFLE DETAIL



WHEEL STOP DETAIL

N.T.S.

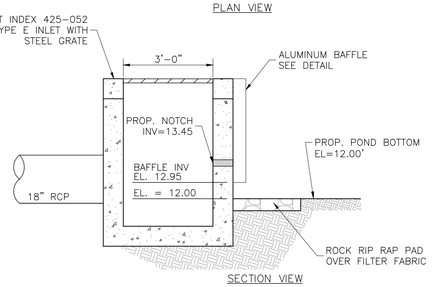


NOTE:
USE SANDBAGES, STRAW BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

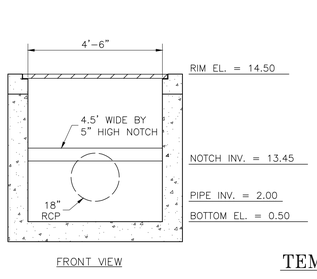
NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING. REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

N.T.S



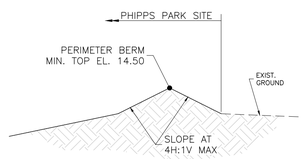
SECTION VIEW



FRONT VIEW

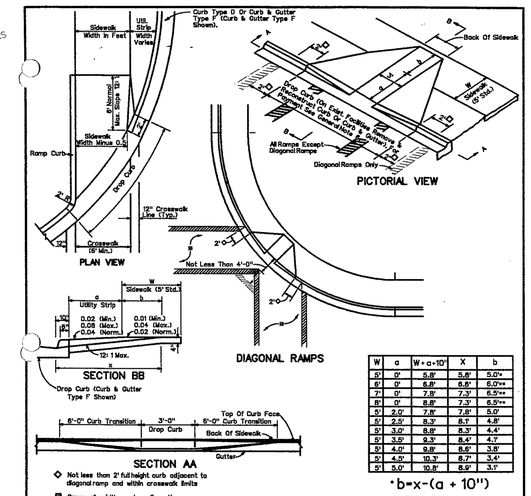
CS-1 CONTROL STRUCTURE DETAIL

N.T.S.



SECTION A
TYPICAL PERIMETER BERM DETAIL

SCALE: NTS



◇ Not less than 2' full height curb adjacent to diagonal ramp and within crosswalk limits

■ Crosswalk widths and configuration vary.

b=Distance from front edge of sidewalk to back point of 12:1 slope.
=Back of sidewalk drop required for all sidewalk slopes.
=Back of sidewalk drop required for sidewalk slopes 0.04 and part 0.02.

W	a	W+a+10'	X	b
5'	0"	5.8'	5.8'	5.0'*
6'	0"	6.8'	6.8'	6.0'**
7'	0"	7.8'	7.3'	6.5'**
8'	0"	8.8'	7.3'	6.5'**
5'	2.0"	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.6'
5'	3.5'	9.3'	8.4'	4.7'
5'	4.0"	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

*b=x-(a + 10")

CITY OF FORT PIERCE • DEPARTMENT OF ENGINEERING TECHNICAL SPECIFICATIONS AND DETAILS		
HANDICAP RAMPS		REVISIONS
		BAR 4/10/01
		SHEET No.
SCALE: N.T.S.	ISSUED AUGUST 1998	SW5

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: AS NOTED
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

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leo@gep.llc
Cert. No. 30901
LEO GIANGRANDE — LIC. NO. 66387 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

PROJECT #: 22-024

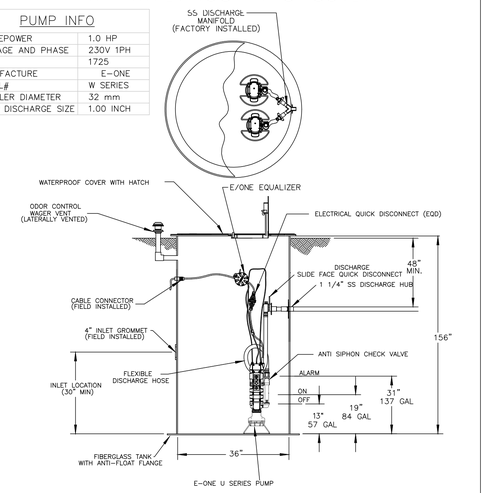
D-3

Drawing Name: S:\Shared folders\GEP projects\2022\22-024 crossroads site plan\design\22-024 Details.dwg Layout Name: D-3 Plotted By: Daniel Date: 10/03/2023 2:23 PM Giangrande Engineering & Planning

36"X156" FIBERGLASS DUPLEX

WITH WATERPROOF HATCH COVER

PUMP INFO	
HORSEPOWER	1.0 HP
VOLTAGE AND PHASE	230V 1PH
RPM	1725
MANUFACTURE	E-ONE
MODEL#	W SERIES
IMPELLER DIAMETER	32 mm
PUMP DISCHARGE SIZE	1.00 INCH

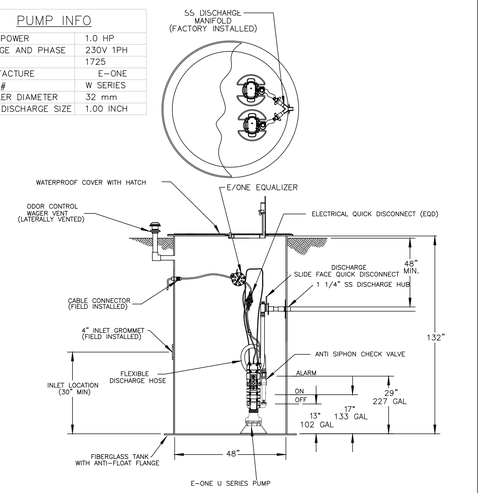


FJ NUGENT & ASSOCIATES, INC. 411 WYLLY AVENUE SANFORD, FL 32773 PHONE: 407-474-7800	36" X 156" FIBERGLASS DUPLEX DETAIL	DRAWN BY: EDS DATE: 03/12/2018 REVISION: 01 SCALE: NTS

48"X132" FIBERGLASS DUPLEX

WITH WATERPROOF HATCH COVER

PUMP INFO	
HORSEPOWER	1.0 HP
VOLTAGE AND PHASE	230V 1PH
RPM	1725
MANUFACTURE	E-ONE
MODEL#	W SERIES
IMPELLER DIAMETER	32 mm
PUMP DISCHARGE SIZE	1.00 INCH



FJ NUGENT & ASSOCIATES, INC. 411 WYLLY AVENUE SANFORD, FL 32773 PHONE: 407-474-7800	48" X 132" FIBERGLASS DUPLEX DETAIL	DRAWN BY: EDS DATE: 03/12/2018 REVISION: 01 SCALE: NTS

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. WATER MAINS WHERE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL CONFORM TO AWWA C-900 OR C-905, PRESSURE CLASS 150, DR (18). WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO AWWA C-901 OR C-906, STANDARD CODE DESIGNATION PE3408, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
3. WATER MAIN, WHERE SPECIFIED AS DUCTILE IRON PIPE , SHALL CONFORM TO ANSI/AWWA C151/A21.51 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
4. POLYVINYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE, ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE AND THHN WIRE.
5. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C-110/A21.10, CLASS 250 MIN., CEMENT LINED AND FACTORY COATED
6. GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNDY KEN-SEAL, AMERICAN OR APPROVED EQUAL. VALVES SHALL CONFORM TO AWWA C-509.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY, COUNTY, FDOT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPUA ENGINEER AND CITY/COUNTY/FDOT ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY FPUA ENGINEERING AND CITY/COUNTY/FDOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPUA, AND CITY/ COUNTY/FDOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/ COUNTY/FDOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AWWA C-651 FOR DISINFECTION.

FORT PIERCE UTILITIES AUTHORITY	WATER DISTRIBUTION	G-1 NOTES
02-08 DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJM	COMPUTER FILE # DETAIL NOTES 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: AJM	SCALE: N.T.S.	
APPROVED: AJC	DATE: 2010	SHEET 1 OF 2

FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES
CONTINUED

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
17. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOFFS, AIR RELEASE VALVES, AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
18. THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE FORT PIERCE UTILITIES AUTHORITY ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING VALVE AND SLEEVE.
19. WATER MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THHN MULTI STRANDED WIRE (BLUE IN COLOR) AND IDENTIFICATION TAPE WITH "WATER" MARKED ON TAPE, PERMANENTLY ATTACHED TO THE TOP OF THE WATER MAIN IN ACCORDANCE WITH THE FORT PIERCE UTILITIES AUTHORITY SPECIFICATIONS.
20. SERVICE TAPS SHALL BE PLACED APPROXIMATELY TEN FEET AWAY FROM GATE VALVES, AS SHOWN, FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINE. CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
21. MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH MANUFACTURER'S OR ENGINEER'S RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) AND FPUA REQUIREMENTS.
22. ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO AWWA C-600. – 2 HR MINIMUM TEST

$$L = \frac{SD(P)^{1/2}}{148,000}$$

L= LEAKAGE IN GPH
S= LENGTH OF PIPE IN FEET
D= PIPE DIAMETER IN INCHES
P= TESTING PRESSURE IN PSI

23. PRIOR TO ANY TESTING, ALL MAINS 6" IN DIA. AND LARGER SHALL HAVE A SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN 1st. JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45% AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSY CAN THEN BE PLACED. WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.
24. A MINIMUM SIX FEET AND PREFERABLY TEN FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. 6 INCHES MINIMUM VERTICAL SEPARATION IF WATER MAIN IS OVER WASTEWATER AND 12 INCHES IF WATER MAIN IS UNDER SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
25. WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
26. CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

FORT PIERCE UTILITIES AUTHORITY	WATER DISTRIBUTION	G-1 NOTES
02-08 DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJM	COMPUTER FILE # DETAIL NOTES 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: AJM	SCALE: N.T.S.	
APPROVED: AJC	DATE: 2010	SHEET 2 OF 2

FORT PIERCE UTILITIES AUTHORITY
WASTEWATER CONSTRUCTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE SDR-26, GREEN OR WHITE IN COLOR, GRAVITY SEWER MAIN SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3034.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY ENGINEERING DEPARTMENT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THEN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICE TEE WYES, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
7. MAINTAIN SIX FEET AND PREFERABLY 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANCE FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPUA/CITY COUNTY/FDOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FORM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL FPUA/CITY/COUNTY/FDOT ENGINEER.
11. TRAFFIC CONTROL, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYVINYL CHLORIDE CONFORMING TO AWWA C-900, AND SHALL BE CLASS 150, DR-18.
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
15. FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANSI/AWWA C-110/A21.10 CLASS 250 MIN. AND INTERIOR EPOXY COATED.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THHN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPUA SPECIFICATIONS.
17. MINIMUM COVER SHALL BE 36 INCHES, PIPES WITH COVER LESS THAN 30 INCHES SHALL REQUIRE PRIOR APPROVAL OF THE UTILITIES ENGINEER AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
18. EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY 3M CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPUA ENGINEER.
19. ALL MANHOLES SHALL HAVE SEWER RAIN GUARDS INSTALLED AS REQUIRED BY FPUA ENGINEER.
20. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

FORT PIERCE UTILITIES AUTHORITY	WASTEWATER CONSTRUCTION NOTES FPUA REQUIREMENTS	C-2 CONSTRUCTION NOTES
02-08 DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJM	COMPUTER FILE # DETAIL NOTES 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: AJM	SCALE: N.T.S.	
APPROVED: AJC	DATE: 2010	SHEET 1 OF 1

STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.

WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) CENTERED ON THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.

ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING), AT SUCH CROSSINGS PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.

2. A MINIMUM 3-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 3-FOOT, AND PREFERABLE 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN "ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

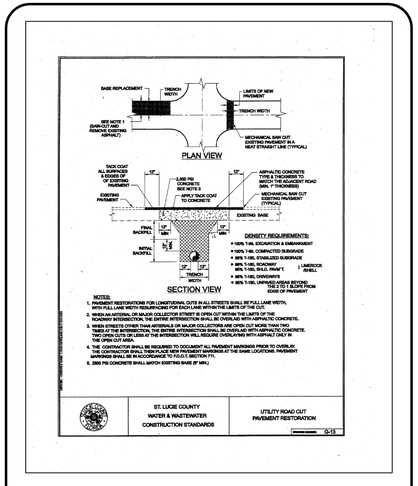
A MINIMUM 6-FOOT, AND PREFERABLE 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FOOT WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER.

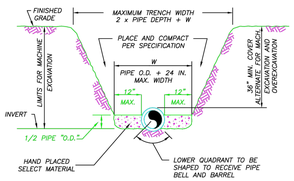
WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

3. ALL DIP SHALL BE PRESSURE CLASS 250 MIN.. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

FORT PIERCE UTILITIES AUTHORITY	STANDARD SEPARATION STATEMENT FOR WATER/SEWER CONFLICT	G-3 WATER/SEWER CONFLICT
02-08 DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJM	COMPUTER FILE # DETAIL NOTES 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: AJM	SCALE: N.T.S.	
APPROVED: AJC	DATE: 2010	SHEET 1 OF 1



FORT PIERCE UTILITIES AUTHORITY	PAVEMENT RESTORATION (COUNTY)	R-2
DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJM	COMPUTER FILE # MISC DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: AJM	SCALE: N.T.S.	
APPROVED: AJC	DATE: 2010	SHEET 1 OF 1



NOTES:

1) THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
2) INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 100% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-99.

TYPICAL TRENCH DETAIL
N.T.S.

FPUA COMMUNITY PROUD	TYPICAL TRENCH DETAIL 12-09 CONCRETE SLAB SLL AJC	M-1
DATE: REVISION: BY: APPD.		WATER/WASTEWATER ENGINEERING
DESIGNED: AJC	COMPUTER FILE # MISC DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE:	
APPROVED: AJC	DATE: 2015	SHEET 1 OF 1

DATE	BY	REVISIONS	Date: 10/03/2023 Scale: AS NOTED Design By: DC Drawn By: RF Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

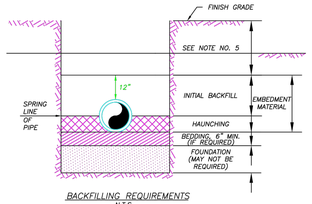
GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE, P.E. LICENSE No. 68387 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT #: 22-024

D-4

Drawing Name: S:\Unified folders\gep projects\2022\22-024 crossroads rbs psn\design\22-024 Details.dwg Layout Name: D-4 Plotted by: Daniel Date: 10/27/2023 - 2:23 PM



BACKFILLING REQUIREMENTS
N.T.S.

NOTES:

1) IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.

2) BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.

3) HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.

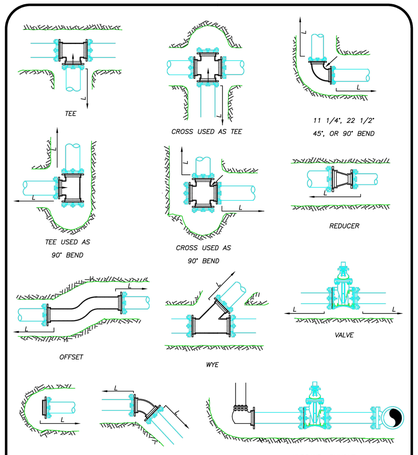
4) INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE. THE SOIL SHALL BE COMPACTED TO 100% MAX. DENSITY.(AASHTO T-99)

5) BACKFILL SHALL BE COMPACTED TO 100% OF MAX. DENSITY AS PER AASHTO T-99, TO A POINT 30" BELOW PROPOSED PROFILE GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-180.

6) DENSITY TEST SHALL BE PERFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTORS EXPENSE.

7) CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL TRENCH SAFETY REGULATIONS.

BACKFILLING REQUIREMENTS			M-2
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	



MECHANICAL JOINT ANCHORING REQUIREMENTS
N.T.S.

MECHANICAL JOINT ANCHORING REQUIREMENTS			M-3
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	

MECHANICAL JOINT RESTRAINT NOTES

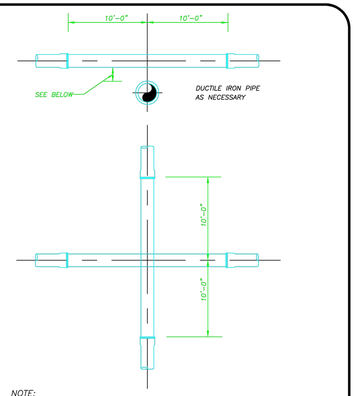
NOTES:

1) THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI, AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.

2) REQUIRED RESTRAINED LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINED LENGTH (L) OF THE BEND OR FITTING IN QUESTION.

3) EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.

MECHANICAL JOINT RESTRAINT NOTES			M-4
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	

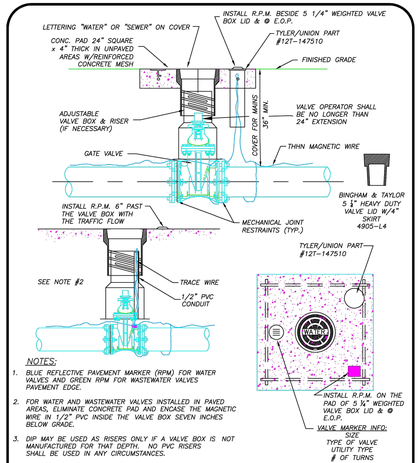


NOTE:

PLEASE REFER TO FORT PIERCE UTILITIES STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS.

UTILITY CROSSING DETAIL
N.T.S.

UTILITY CROSSING DETAIL			M-5
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	

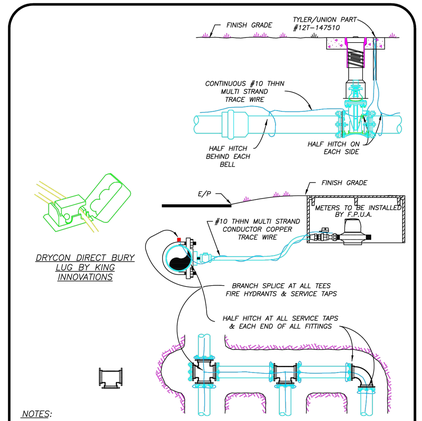


NOTES:

1. BLUE REFLECTIVE PAVEMENT MARKER (RPM) FOR WATER VALVES AND GREEN RPM FOR WASTEWATER VALVES PAVEMENT EDGE.
2. FOR WATER AND WASTEWATER VALVES INSTALLED IN PAVED AREAS, ELIMINATE CONCRETE PAD AND ENCASE THE MAGNETIC WIRE IN 1/2" PVC INSIDE THE VALVE BOX SEVEN INCHES BELOW GRADE.
3. DIP MAY BE USED AS RISERS ONLY IF A VALVE BOX IS NOT MANUFACTURED FOR THAT DEPTH. NO PVC RISERS SHALL BE USED IN ANY CIRCUMSTANCES.

TYPICAL GATE VALVE & VALVE BOX DETAIL
N.T.S.

TYPICAL GATE VALVE & VALVE BOX DETAIL			M-6
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	

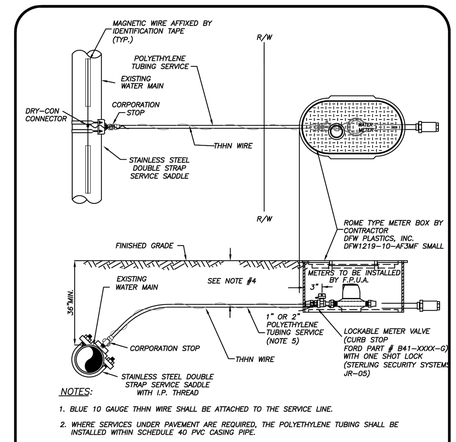


NOTES:

1) TRACE WIRE IS REQUIRED ON ALL PIPE AS NOTED BY UTILITIES ENGINEER AND SHOWN IN STANDARD DETAILS.
2) INCLUDE ALL COST OF MATERIAL & LABOR IN PRICE OF PIPE.
3) CONTRACTOR IS RESPONSIBLE FOR CONTINUITY OF ALL TRACE WIRE.

TRACE WIRE
(N.T.S.)

TRACE WIRE DETAIL			M-11
03-09 CONCRETE SLAB	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # MISC. DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: DATE: 2015	SHEET 1 OF 1	

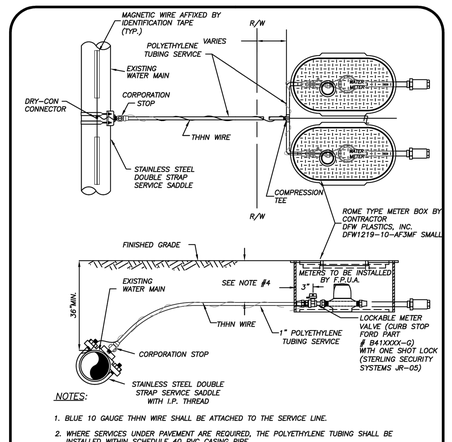


NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".
5. FOR 2" COMMERCIAL SERVICE INSTALLATIONS, FPUA WILL INSTALL ABOVE GROUND METER PER DETAIL W-8.

TYPICAL SINGLE WATER SERVICE CONNECTION
(N.T.S.)

TYPICAL SINGLE WATER SERVICE CONNECTION			W-2
03-09 DESIGN	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # WATER DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: N.T.S. DATE: 2020	SHEET 1 OF 1	



NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".

TYPICAL DOUBLE WATER SERVICE CONNECTION
(N.T.S.)

TYPICAL DOUBLE WATER SERVICE CONNECTION			W-3
03-09 DESIGN	SLL	JLC	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	DRAWN BY: SLL	COMPUTER FILE # WATER DETAILS 200602.DWG	FT. PIERCE UTILITIES AUTHORITY
APPROVED: JLC	SCALE: N.T.S. DATE: 2020	SHEET 1 OF 1	

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: AS NOTED
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

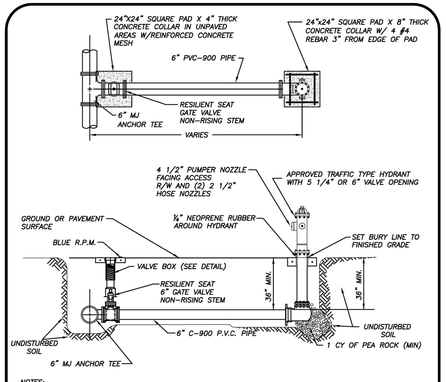
GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE License No. 68387 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROJECT #: 22-024

D-5

Drawing Name: S:\shared folders\gep projects\2022\22-024 crossroads rv\plan\design\22-024 details.dwg Layout Name: D-5 — Plotted by: Daniel — Date: 10/27/2023 - 2:23 PM — Giangrande Engineering & Planning

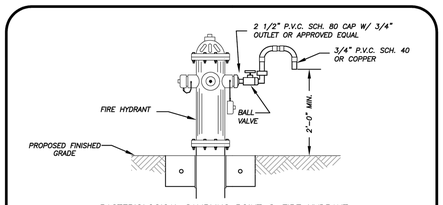


NOTES:

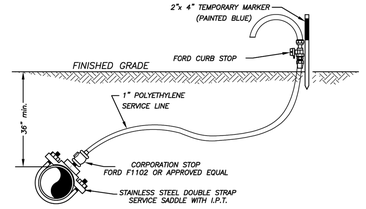
1. HYDRANT SHALL BE INSTALLED PLUMB & TRUE.
2. HYDRANT SHALL BE PAINTED CARNIVAL RED FROM FACTORY.
3. HEEL TO REST IN UNDISTURBED SOIL.
4. THE ONLY HYDRANTS ACCEPTABLE ARE: MUELLER SUPER CENTURION 250 OR AMERICAN DARLING B-84-B-5.
5. HYDRANT ASSEMBLY MUST BE RESTRAINED TO TEE.
6. ALL FITTINGS SHALL BE MECHANICAL JOINT.
7. ENTIRE ASSEMBLY TO BE MECHANICALLY RESTRAINED.
8. BLUE LOCATOR SHALL BE PLACED IN CENTER OF TRAVEL LANE CLOSEST TO HYDRANT.
9. ALL HYDRANT VALVE BOX COVERS SHALL BE PAINTED CARNIVAL RED.
10. LOCATE WIRE SHALL TERMINATE AT HYDRANT ISOLATION VALVE
11. HYDRANTS SHALL BE NO MORE THAN FIFTEEN FEET (15 FT.) FROM THE CURB OF ROADWAYS OR FROM THE EDGE OF PAVEMENT. CLEARANCES OF SEVEN AND ONE HALF FEET (7FT-6IN.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANTS, WITH FOUR FOOT (4 FT.) CLEARANCE TO THE REAR OF HYDRANTS SHALL BE MAINTAINED.

TYPICAL FIRE HYDRANT ASSEMBLY
(N.T.S.)

TYPICAL FIRE HYDRANT ASSEMBLY				W-5
03-09	DESIGN	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: WATER DETAILS 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		



BACTERIOLOGICAL SAMPLING POINT @ FIRE HYDRANT
(N.T.S.)

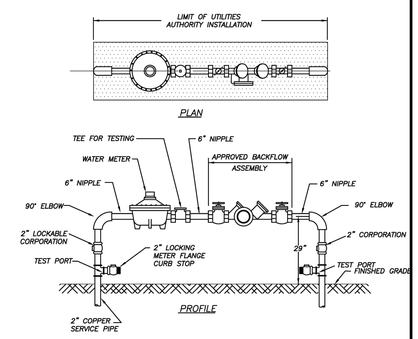


BACTERIOLOGICAL SAMPLING POINT @ WATER MAIN
(N.T.S.)

NOTE:

AFTER TESTING REMOVE 1" P.E. LINE AND CAP WITH BRASS PLUG AT CORPORATION STOP.

BACTERIOLOGICAL SAMPLING PONIT DETAIL				W-6
02-09	02-15	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: SEWER DETAIL 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		

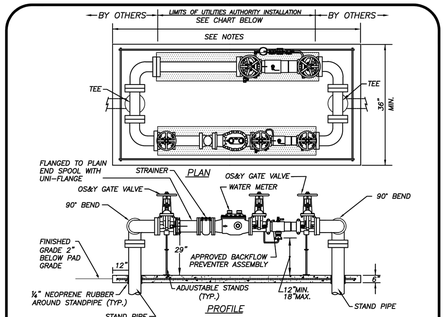


NOTES:

1. LANDSCAPING REQUIRED PER CITY OF FORT PIERCE OR ST. LUCIE COUNTY ORDINANCE. NO PLANTS OR TREES WITHIN 18" AROUND METER OR BACKFLOW. NO SOLDER JOINTS.
2. ASSEMBLY TO BE 29" FROM FINISH GRADE TO CENTERLINE OF THE FLANGED 90° BEND.

WATER METER/BACKFLOW PREVENTER ASSEMBLY
DOMESTIC SERVICE (COMMERCIAL)
(N.T.S.)

WATER METER/BACKFLOW PREVENTER ASSEMBLY-DOMESTIC SERVICES (METER SIZE 2" OR LESS)				W-8
03-09	DESIGN	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: WATER DETAILS 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		



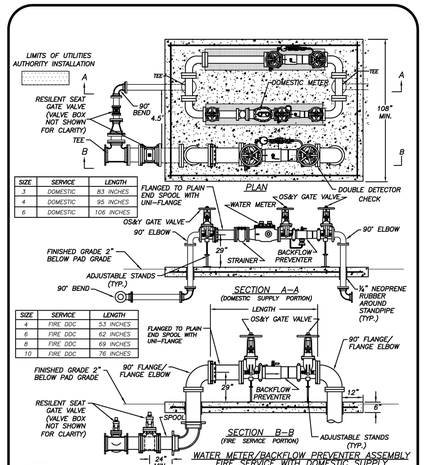
NOTES:

1. LANDSCAPING IS REQUIRED PER CITY OF FORT PIERCE OR ST. LUCIE COUNTY ORDINANCE. NO PLANTS OR TREES WITHIN 36" AROUND METER TO ALLOW MAINTENANCE WITHOUT DAMAGE TO PLANTS ETC.
2. CONTRACTOR TO INSTALL APPROPRIATE SIZED SPOOL PIECES TO FIT BETWEEN 90° BENDS UNTIL METERS ARE APPROVED FOR INSTALLATION. ALL SPOOL PIECES SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE IN ACCORDANCE WITH THE CHART BELOW.
3. PRIOR TO POURING CONCRETE PAD, VERIFY THAT THE STANDPIPES ARE PLUMB, TRUE AND ARE INSTALLED AT THE SAME ELEVATION IN THE PRESENCE OF THE FPUA INSPECTOR.
4. ALL CONCRETE SHALL HAVE FIBERGLASS MESH REINFORCEMENT WITH #4 REBAR 3" FROM THE OUTER PERIMETER.

SIZE	SERVICE	LENGTH
3	COMPOUND	83 INCHES
4	COMPOUND	95 INCHES
6	COMPOUND	106 INCHES

WATER METER/BACKFLOW PREVENTER ASSEMBLY
COMMERCIAL WATER METER SERVICES (METER SIZE ≥ 3")

WATER METER/BACKFLOW PREVENTER DOMESTIC SERVICE (METER SIZE ≥ 3")				W-9
02-09	CONCRETE SLAB	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: WATER DETAILS 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		



SIZE	SERVICE	LENGTH
3	DOMESTIC	83 INCHES
4	DOMESTIC	95 INCHES
6	DOMESTIC	106 INCHES

SIZE	SERVICE	LENGTH
4	FIRE DDC	53 INCHES
6	FIRE DDC	62 INCHES
8	FIRE DDC	69 INCHES
10	FIRE DDC	76 INCHES

WATER METER/BACKFLOW PREVENTER ASSEMBLY
FIRE SERVICE WITH DOMESTIC SUPPLY
(N.T.S.)

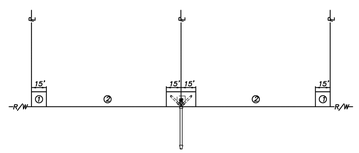
NOTES:

1. LANDSCAPING IS REQUIRED PER CITY OF FORT PIERCE OR ST. LUCIE COUNTY ORDINANCE. NO PLANTS OR TREES WITHIN 36" AROUND METER TO ALLOW MAINTENANCE WITHOUT DAMAGE TO PLANTS ETC.
2. NO SOLDER JOINTS.
3. ASSEMBLY TO BE 29" FROM FINISH GRADE TO CENTERLINE OF THE FLANGED 90° BEND.
4. DOMESTIC SERVICE 2" OR LESS, USE 2" POLY STUBBED 12" ABOVE GRADE.
5. ALL CONCRETE SHALL HAVE FIBERGLASS MESH REINFORCEMENT WITH #4 REBAR 3" FROM THE OUTER PERIMETER

WATER METER/BACKFLOW PREVENTER FIRE SERVICE WITH DOMESTIC SUPPLY				W-11
03-09	CONCRETE PAD	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: WATER DETAILS 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		

GENERAL POLICY

WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY; DEPENDING ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, REAR OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.

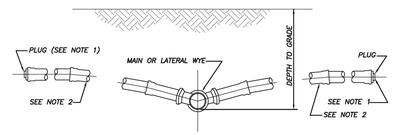


NOTES:

1. THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. SEWER LATERAL, AREA ① , SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.U.A. AS THE BEST LOCATION FOR THE LATERAL. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO LATERALS CAN BE CONNECTED IN A "Y" CONFIGURATION AS SHOWN.
2. IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. SEWER LATERAL WITHIN AREA ① , THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA ② .
3. HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF SIX FEET AND PREFERABLY 10 FEET.
4. THE WASTEWATER LATERAL SHALL BE LOCATED WITHIN RIGHT-OF-WAY AND TERMINATE AT THE PROPERTY LINE.
5. THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WASTEWATER LATERAL WITHIN THE EASEMENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

WASTEWATER SERVICE PLACEMENT
(N.T.S.)

WASTEWATER SERVICE PLACEMENT POLICY				S-1
02-06	02-15	SLL	JLC	
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: SEWER DETAIL 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		



NOTES:

1) BALL TYPE WASTEWATER LOCATOR BY 3M CORP. OR APPROVED EQUAL.
2) MINIMUM SLOPE OF 1/8" PER FOOT, USE GREATER SLOPE WHERE POSSIBLE.
3) SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT.
4) INSTALL CLEANOUT AT THE PROPERTY LINE. REFER TO DETAIL S-1 FOR SPECIFIC PROPERTY LAYOUT.

SERVICE CONNECTION
(N.T.S.)

SERVICE CONNECTION WASTEWATER				S-2
02-06				
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: SEWER DETAIL 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
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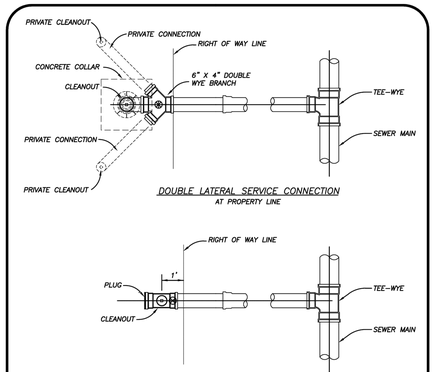
APPROVED: JLC	DATE: 2015	SHEET 1 OF 1		



◉ = BALL TYPE WASTEWATER LOCATOR INSTALLED ABOVE THIS POINT
BALL BY 3M CORP. OR APPROVED EQUAL
SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT

SERVICE CONNECTION
(N.T.S.)

SERVICE CONNECTION WASTEWATER				S-3
02-06				
DATE	REVISION:	BY:	APPD:	WATER/WASTEWATER ENGINEERING
DESIGNED: JLC	COMPUTER FILE #: SEWER DETAIL 2006D2.DWG			FT. PIERCE UTILITIES AUTHORITY
DRAWN BY: SLL	SCALE: N.T.S.			
APPROVED: JLC	DATE: 2010	SHEET 1 OF 1		

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: AS NOTED
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

DETAILS

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710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO GIANGRANDE LICENSE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER
LICENSE No. 66387

PROJECT #: 22-024

D-6

Drawing Name: S:\shared folders\gep projects\2022\22-024 crossroads rsk plan\design\22-024 details.dwg Layout Name: D-6 — Plotted by: Daniel — Date: 10/23/2023 - 2:23 PM — Giangrande Engineering & Planning

GIANGRANDE
Engineering & Planning
Consulting Civil Engineers

710 SE Ocean Blvd
Stuart, FL 34994
772.888.9076

Memorandum

Date: December 4, 2023

To: City of Fort Pierce Planning Department

From: Leo Giangrande, PE

Subject: Traffic Statement – Crossroads RV Park
GEP Project No. 22-024

Distribution: File

This traffic statement is being prepared as part of the site plan application to Saint Lucie County Growth Management.

The proposed project is a 10.90 -acre RV Park with 83 spaces located at the Intersection of Crossroads Pkwy and Andrews Ave with two driveway. Please refer to the provided site plan.

The project trips have been calculated to determine the percent impact upon the adjacent roadway Crossroads Parkway. The daily, AM, and PM peak hour trips were estimated using the ITE Trip Generation 11th Edition with an ITE Land Use Code No. 416 – Recreational Vehicle Park. ITE Trip Gen does not provide an ADT for the LU – 416. It was estimated to be 4 trips per space per day.

RV Park								
ITE Trip Generation 11th Edition - Peak Hour of Adjacent Street - Average Rate								
AM			PM			Daily		
In	Out	Total	In	Out	Total	In	Out	Total
6	10	16	14	8	22	148	148	296

The greatest peak hour peak directional impact upon the adjacent roadway is 14 entering trips during the PM peak hour. The ADT is estimated at 296 trips.

When distributed upon the roadway network, the project trips are expected to generate a de minimis impact of less than 1.0% upon the existing roadway level of service as defined in the Saint Lucie County Land Development Code Section 5.01.00. The existing roadway data was obtained from the Saint Lucie TPO Roadway Report Fall 2023.

Segment Number	Road Name	From	To	Type	2023 AADT	2023 PH (dir) Existing
1	Crossroads Pkwy	Okeechobee Rd	Kings Hwy	2	2,142	970

Annual Growth	2028 PH (dir) Growth	Project Assign.	Project Trips	2028 PH (dir) Build-out	Service Volume	Project % of Service	Concurrency Test
2.0%	1,071	100%	14	1,085	2,100	0.7%	OK

The project's first driveway is (right-in, left-in, right-out, left-out) at a median opening for the intersection of Crossroads Pkwy and Wheeler Terrace. The second driveway is (right-in, left-in, right-out, left-out) servicing access from Andrews Ave. No additional off-site improvements for capacity are found to be necessary since the existing level of service on the segment of roadway reveals that there is sufficient capacity for the de minimis project trips.

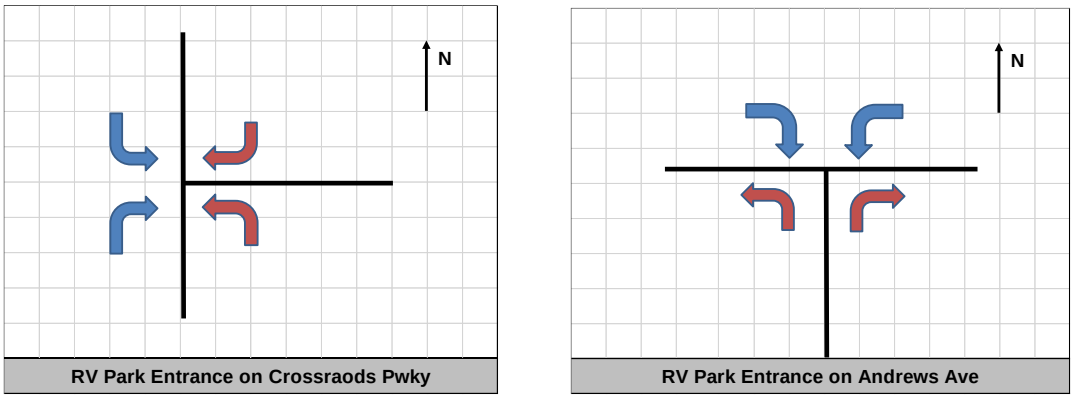


Figure 1: Driveway Movements for Crossroads Pkwy. & Andrews Ave.

In accordance with the Saint Lucie County Land Development Code Section 11.02.09 concurrency is requested for this project based upon the de minimis traffic analysis presented.

The following pages include the ITE Trip Generation 11th Edition and the Saint Lucie Roadway Report.

Should you have any questions, please contact Leo Giangrande at (772) 888-9076 or e-mail at Leo@GEP-LLC.com

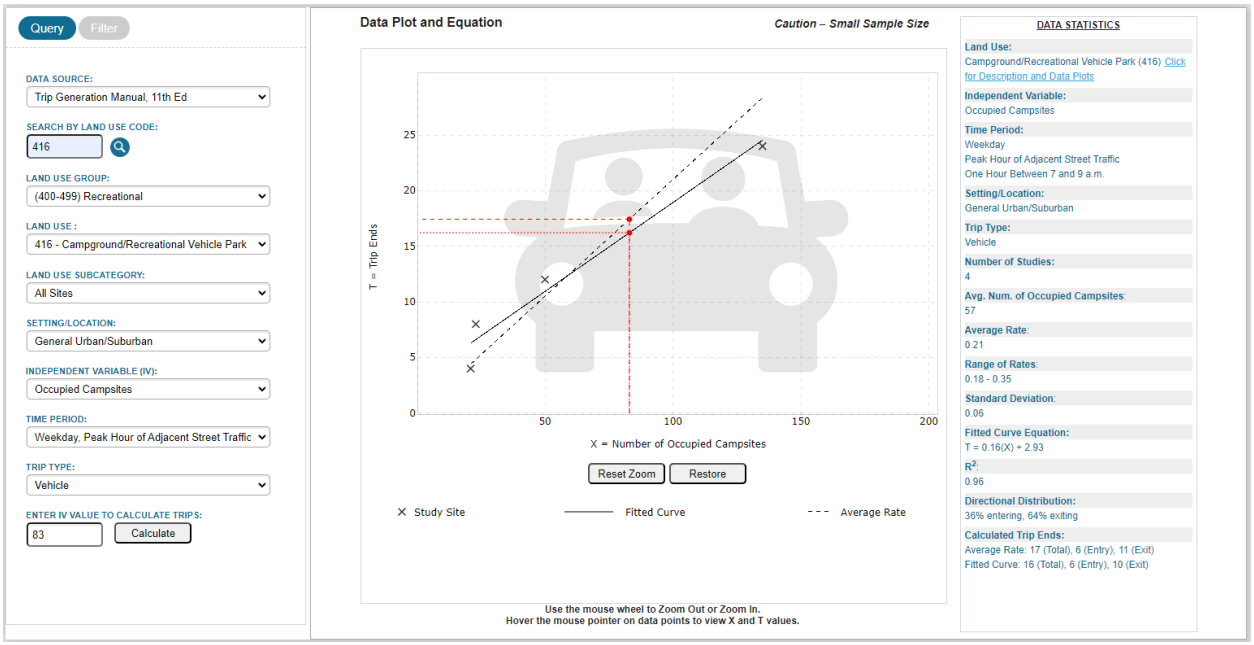


Figure 2: ITE Trip-Gen AM Peak-Hour Data

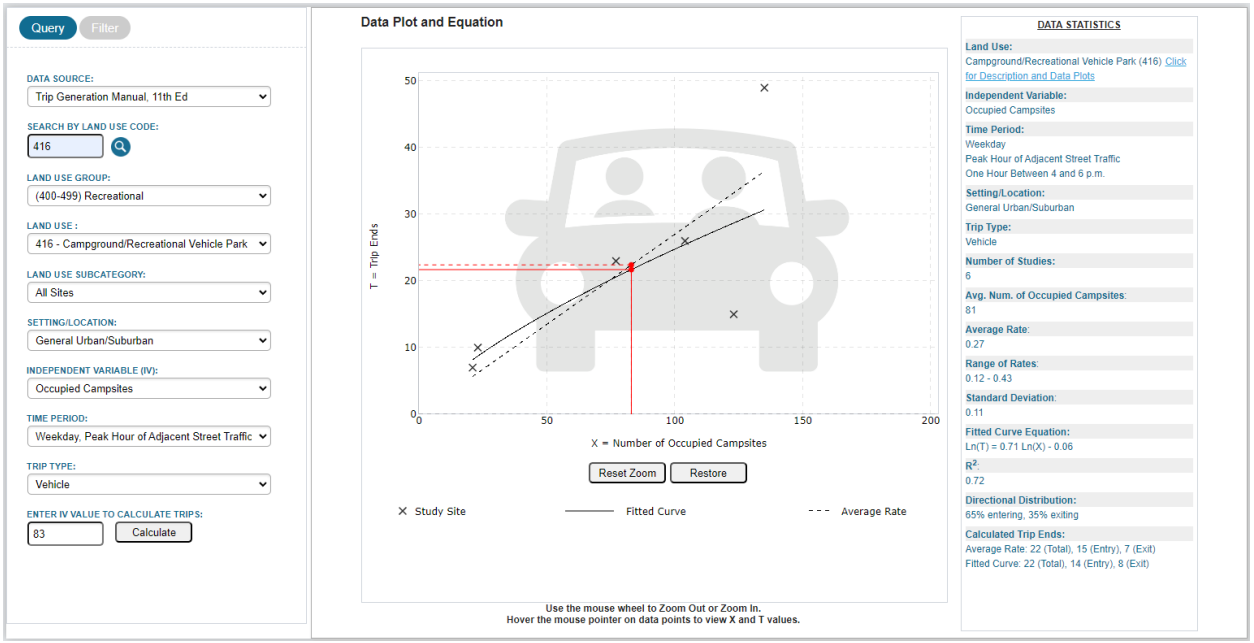


Figure 3: ITE Trip-Gen PM Peak-Hour Data

GIANGRANDE
Engineering & Planning
Consulting Civil Engineers

710 SE Ocean Blvd.
Stuart, FL 34996
772.888.9076

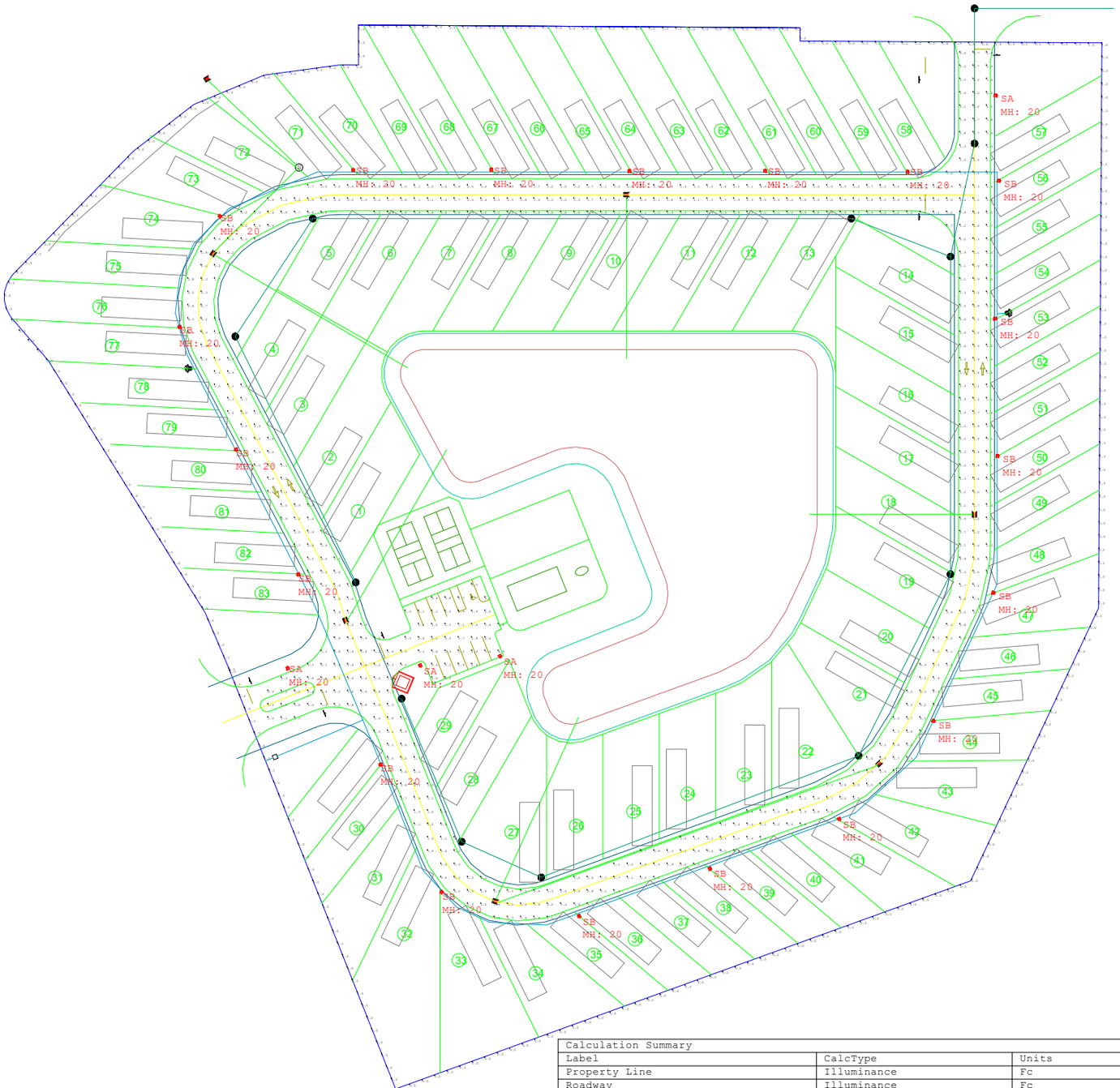
Memorandum

Date:	December 28, 2023
To:	City of Fort Pierce Development Review
From:	Leo Giangrande, PE
Subject:	Crossroads RV Park GEP Project No.: 22-024
Distribution:	Development team, file

Giangrande Engineering & Planning, LLC has prepared this memorandum to assist in the development review application for the Crossroads RV Park. The project is an 83 lot RV park located at the intersection of Crossroads Pwky. And Andrews Ave. on a 10.9 acre parcel of land. The site plan will have references to a future amenity center with a pool and pickleball courts, this will be a future project, permitted separately. The building area for these future permitted projects will be as follows.

- Amenity center building foot print: 3,200 sf
- Pool area: 3,600 sf
- Pickleball courts: 4,000 sf

Should you have any questions, please contact Leo Giangrande at (772) 888 9076 or e-mail at Leo@GEP-LLC.com



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Property Line	Illuminance	Fc	0.02	0.4	0.0	N.A.	N.A.
Roadway	Illuminance	Fc	1.83	4.8	0.5	3.66	9.60
Small Parking Lot	Illuminance	Fc	1.80	4.9	0.5	3.60	9.80

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	4	SA	Single	Cree Lighting OSQM-C-11L-40K7-4M-XX-NM-XX, Single Head	0.900	10450	68	272
	19	SB	Single	Cree Lighting OSQM-C-11L-40K7-3M-XX-NM-XX, Single Head	0.900	10450	68	1292

Stormwater Management Report

Engineering Calculations & Supplementary Documents
Supporting a Surface Water Management System Serving

Crossroads RV Park Project

Location:
Fort Pierce, FL 34
Saint Lucie County
PCN: 2324-312-0005-000-4

Prepared by:

GIANGRANDE
Engineering & Planning
Consulting Civil Engineers
2081 SE Ocean Blvd., Suite 1A
Stuart, Florida 34996
772-888-9076
FL Certification: 30901

Prepared: October 2023

LEO GIANGRANDE LICENSE No. 66387 STATE OF FLORIDA PROFESSIONAL ENGINEER

Prepared by:
By: _____
Leo D. Giangrande, PE
PE Reg #66387
Date:

Table of Contents

1. Project Description 1
2. Existing Conditions 1
3. Proposed Conditions 2

Appendices

Appendix A ..... Site Plan
Appendix B..... Stormwater Calculations- Existing
Appendix C..... Stormwater Calculations- Proposed
Appendix D ..... 2003 SFWMD Permit

1. PROJECT DESCRIPTION

This project proposes an RV Park located on Crossroads Parkway North of Okeechobee Road (PCN: 2324-312-0005-000-4). The proposed site is 10.91 acres. It is also proposed that there will be 83 camper lots with pads, a clubhouse, and a pickleball court. A location map is provided in **Figure 1** below.

Figure 1 – Location Map

2. EXISTING CONDITIONS

2.1 Existing Site

The subjected site covers 10.91 acres of land, situated to the North of SR-70 (Okeechobee Rd.). A majority of the land on the site is covered in palm, pine, and oak trees along with cabbage palm and shrubs. Stormwater sheet flows toward the lowland area in Northwest which then connects to an existing culvert running underneath Andrews Avenue. Currently, the entirety of the site sits two feet above the wet season water table except. For a comprehensive understanding of the existing site conditions, please refer to the provided aerials and existing conditions maps on Sheet EX-1.

2.2 Control Elevation

The RV Park to the northwest of the site has a control elevation of 14' NGVD based upon reflecting the control elevation from the adjacent, Treasure Coast RV Park, dated December 1, 2003, SFWMD permit (56-01855-P). Excerpts from the existing permit is provided in Appendix D.

3. PROPOSED CONDITIONS

3.1 Project Description

The proposed improvements for the 10.91 acres site will include 83 RV pads as well as a clubhouse and a pickleball court. The parking lot outside of the clubhouse will include 10 parking spaces as well an individual handicap space. The runoff generated from the areas of proposed parking/driveway and buildings/RV pads will be captured by the multiple inlets and moved to a wet detention pond in the center of the site.

3.2 Land Use

Land Use Summary			
Land Use	**Pre-Dev (ac)**	**Post-Dev (ac)**	**Difference (ac)**
Roadway Asphalt	0.00	1.33	1.33
Concrete	0.00	0.19	0.19
Building	0.00	0.07	0.07
RV Pads	0.00	1.71	1.71
Lake at Control Elevation	0.00	1.08	1.08
Slope of Lake	0.00	0.34	0.34
Open Space	10.91	6.19	(-) 4.72
Parcel Total	**10.91**	**10.91**	

3.3 Water Quality

Water quality storage is provided for the site based on the greater of 1 inch of rainfall over the project area or the total runoff of 2.5 inches times the percent impervious. The required 0.83 ac-ft of storage will be provided in the proposed wet detention pond based on the 2.5-inch times the impervious area. Calculations are provided in Appendix C.

3.4 Stormwater Runoff Volume

The proposed site conditions increase the net impervious area which will result in an increase stormwater runoff generation. The following design storms were analyzed.

- The minimum road crown elevation will be above the 5-yr / 1-day.
- The 100-year / 1-day storm was used to review pre vs. post discharge and used for the retention recovery analysis.
- The 100-year / 3-day storm was used to assist in setting the minimum finished floor elevation for all building on site.

Runoff Volume			
Design Storm	**Pre-Dev (ac-ft)**	**Post-Dev (ac-ft)**	**Difference (ac-ft)**
5-yr / 1-day	**2.76**	**3.45**	**0.69**
25-yr / 3-day	**5.74**	**6.67**	**0.93**

3.5 Stormwater Design Elevation

The proposed dry retention area is sized to contain the required water quality volume for the site. The storage area will be set at or above the peak stage from the 100-year / 1-day storm event. The existing roadway/parking area are set above the 5-year / 1-day. Table 2 below provides a summary of the design stage for this project. Proposed stormwater calculations are provided in Appendix C.

Design Elevations			
Design Storm	**Post-Development (ft NAVD)**	**Design Elev (ft NAVD)**	**Category**
Water Quality	**15.19**	**17.00**	**WQ**
5-yr / 1-day	**16.15**	**18.12**	**Road**
100-yr / 1-day	**17.87**	**18.00**	**Stored Elevation**

Additional project design information is listed as follows:

- Rainfall: The design storm for this analysis was the 100-year, 24-hour and 5-year, 24-hour rainfall event was estimated to by 11.7 inches and 5.87 inches respectively per Appendix C of SFWMD's Environment Resource Permit Applicant's Handbook Volume II.

- Outfall: Discharge from the stormwater detention areas shall be controlled by a horizontal control structure located on the north end of the detention area. The structure overflows into the existing swale system located at the front of the site.

- Geotechnical Information: The soils onsite were determined by usings the USDA soil maps. The maps show that there is a split between Nettles and Oldsmar Sands, Wabasso Sand, and a small percentage of Riviera fine sand.

APPENDICES

Appendix A
Site Plan

Storm MH
Rim:18.75
NW: 10.15
SW: 10.05
Bottom: 9.55

EXISTING DRAINAGE CULVERT

REPLACEMENT OF EXIST. MES WITH TYPE C INLET

PROP. 92 LF 18" RCP

PROP. SWALE

ANDREWS AVENUE

PROP. 86 LF 18" RCP

TYPICAL RV PAD, SEE DETAIL THIS SHEET

4" PVC W.M. (TYP)

PROP. 122 LF 18" RCP

PROP. 168 LF 18" RCP

CONFLICT
BOP: 13.98
TOP: 11.45

CONFLICT
BOP: 12.76
TOP: 10.20

CONTROL ELEVATION
ELEV. 14.0

TOP OF BANK
ELEV. 17.0

PROP. 148 LF 18" RCP

PROP. DRY DETENTION AREA

CONFLICT
BOP: 12.44
TOP: 9.90

FFE: 20.00

PROP. 122 LF 18" RCP

INVERTED CROWN (TYP)

4" PVC W.M (TYP)

CROSSROADS PARKWAY
(90.00' PUBLIC RIGHT-OF-WAY)
(P.B. 30, PG. 8)

CROSSROADS PARKWAY

PARCEL ID:
2324-311-0005-000-1
ZONING: GC

OPEN LOT FOR STAGING

PROP. 150 LF 18" RCP

PROP. 303 LF 18" RCP

PARCEL ID:
2324-705-0013-000-8
ZONING: GC

CONFLICT
BOP: 14.94
TOP: 11.00

STREET NAME
(XX.XX' PUBLIC RIGHT-OF-WAY)
(XX' WIDE ASPHALT)

D-1
N: 1121539.06
E: 852317.77
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.40'
SE INVERT EL=9.95'
NE INVERT EL=10.05'
STRUCT. BOTT. EL=9.50'

D-2
N: 1121583.21
E: 852628.20
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.26'
S INVERT EL=8.70'
STRUCT. BOTT. EL=8.20'

D-3
N: 1121342.97
E: 852889.61
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.18'
W INVERT EL=8.40'
STRUCT. BOTT. EL=7.90'

D-4
N: 1121155.47
E: 852818.07
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.12'
W INVERT EL=10.00'
STRUCT. BOTT. EL=10.50'

D-5
N: 1121051.84
E: 852529.74
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.10'
NE INVERT EL=9.50'
E INVERT EL=9.60'
STRUCT. BOTT. EL=9.00'

D-6
N: 1121262.98
E: 852417.13
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=18.12'
NE INVERT EL=9.50'
STRUCT. BOTT. EL=9.00'

D-7
N: 1121670.32
E: 852313.21
TYPE C INLET
FDOT INDEX 425-052
GRATE EL=15.00'
SE INVERT EL=10.50'
NW INVERT EL=14.50'
STRUCT. BOTT. EL=10.00'

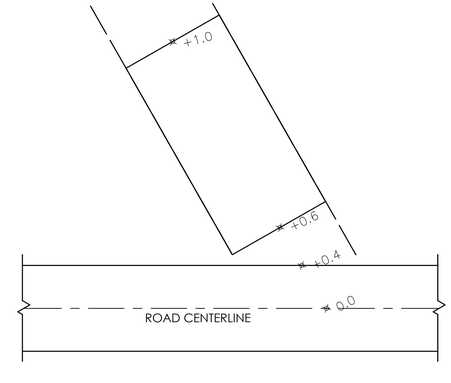
HW-1
N: 1011017.13
E: 889993.30
MITERED END SECTION (4:1)
FDOT INDEX 430-021
18" RCP FL EL = 12.00'

N

0 40' 80'
SCALE: 1" = 40'

LEGEND

- EX. EDGE OF PAVEMENT
- EX. EDGE OF CONCRETE
- OHU — EX. OVERHEAD ELECTRIC
- ST — PROP. STORMWATER PIPE
- WM — PROP. WATER MAIN
- FM — PROP. FORCEMAIN
- S — PROP. SANITARY SEWER
- PROP. TOP OF BANK
- PROP. TOE OF SLOPE
- PROP. ASPHALT MILLINGS
- PROP. CONCRETE
- EX. GUY WIRE
- EX. POWER POLE
- PROP. MITERED END SECT.



TYPICAL EXTERIOR RV PADS
N.T.S.

Drawing Name: S:\Shared Folders\GEP projects\2022\22-024 Crossroads Site Plan\Design\22-024 PG&D Plan.dwg Layout Name: P-1 – Plotted by: Devin Curran – Date: 10/23/2023 – 3:38 PM – Giangrande Engineering & Planning

DATE	BY	REVISIONS

Date: 10/03/2023
Scale: 1"=40'
Design By: DC
Drawn By: RF
Check By: LDG

ALEXANDER GEORGE AND COMPANY
CROSSROADS RV
CITY OF FORT PIERCE

PAVING, GRADING, & DRAINAGE PLAN

GIANGRANDE ENGINEERING AND PLANNING
710 SE OCEAN BLVD.
STUART, FLORIDA 34994
PH. (772) 888-9076
leo@gep.llc
Cert. No. 30901

LEO D. GIANGRANDE, P.E.
License No: 66387

PROJECT #: 22-024

P-1

Appendix B

Stormwater Calculations- Existing

Pre-Development Land Use Calculations

Project Explanation

Project Name:	**Crossroads RV Park**		
Project #:	**22-024**		
Engineer:	**DCC**	**Engineer:**	
Date:	**11/1/2022**	**Revision Date:**	

Computation Type: Land Use & Stage-Storage

Datum: NAVD

Average Ground Elevation (EL_{grnd}) = 17.05 ft-NAVD **Source:** Treasure Coast Motor Coach Resort

Control Elevation (CE) = 14.00 ft-NAVD **Source:** Permit No. 56-01855-P

Site Land Use

	Exist. Area 1	Exist. Area 2	Exist. Area 3	Exist. Area 4	Exist. Area 5	Exist. Area 6	Exist. Area 7	Exist. Area 8	Exist. Area 9	Total
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Percentage of On-Site	100.0%	0.0%	0.0%	0.00%	0.00%	0.0%	0.0%	0.00%	0.00%	
Total Areas (SF)	475,100 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	475,100 SF
Total Areas (A_t)	10.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.91
Bldg. %	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Bldg. Area (A_r)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pervious %	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	100.00%
Pervious Area (A_p)	10.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.91
Impervious %	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
Impervious Area (A_i)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open Water %	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%
Open Water Area (Ac.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pre-Development Stage-Storage Calculations
Project Explanation

Storage Type: Stage-Volume
Starting Stage = 15.00
Ending Stage = 20.00
Stage Increment = 0.10

Name	Exist. Area 1	Exist. Area 2	Exist. Area 3	Exist. Area 4	Exist. Area 5	Exist. Area 6	Exist. Area 7	Exist. Area 8	Exist. Area 9	
Area	**10.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
Start Elev	**15.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
End Elev	**18.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
Stage	Linear	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Total
Feet	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage
NAVD	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.60	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
15.70	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
15.80	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
15.90	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
16.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
16.10	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
16.20	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
16.30	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
16.40	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
16.50	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
16.60	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13
16.70	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53
16.80	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97
16.90	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45
17.00	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.96
17.10	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50
17.20	5.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.08
17.30	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.70
17.40	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.35
17.50	7.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.04
17.60	7.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.76
17.70	8.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.51
17.80	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.31
17.90	10.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.13
18.00	10.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.99
18.10	11.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.89
18.20	12.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.82
18.30	13.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.79
18.40	14.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.79
18.50	15.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.83

Pre-Development Stage-Area Calculations
Project Explanation

Storage Type:	**Stage-Area**
Starting Stage =	**15.00**
Ending Stage =	**20.00**
Stage Increment =	**0.10**

Name	**Exist. Area 1**	**Exist. Area 2**	**Exist. Area 3**	**Exist. Area 4**	**Exist. Area 5**	**Exist. Area 6**	**Exist. Area 7**	**Exist. Area 8**	**Exist. Area 9**	
Area	**10.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
Start Elev	**15.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
End Elev	**18.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
Stage	Linear	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Vert	Total
Feet	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
NAVD	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.60	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
15.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
15.80	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
15.90	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
16.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
16.10	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
16.20	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.46
16.30	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81
16.40	3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.17
16.50	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
16.60	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.87
16.70	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.22
16.80	4.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57
16.90	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.93
17.00	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28
17.10	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.63
17.20	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.98
17.30	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33
17.40	6.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.68
17.50	7.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.04
17.60	7.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.39
17.70	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.74
17.80	8.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.09
17.90	8.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.44
18.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80
18.10	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.15
18.20	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.50
18.30	9.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.85
18.40	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.20
18.50	10.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.55

PRE-Development Stormwater Calculations

Project Explanation

Revised:

Project: Crossroads RV Park **Engineer:** DCC

Project #: 22-024 **Date:** 11/1/2022

Land Use Table

Use	Imp. (ac)	Bldg. (ac)	Pervious (ac)	Total (ac)
Basin =	0.00	0.00	10.91	10.91
TOTAL =	0.00	0.00	10.91	10.91

Find Curve Number:

Avg. Pervious Ground El. =	17.05
Control Elev. =	14.00
Distance to Water Table =	3.05

Soil Storage Table

Depth to W.T. (ft)	Coastal Storage (in)	Flatwoods Storage (in)	Depression Storage (in)
0.0	0.0	0.0	0.0
1.0	0.6	0.6	0.6
1.5	1.6	1.6	1.4
2.0	2.5	2.5	2.1
2.5	4.6	4.0	3.3
3.0	6.6	5.4	4.4
3.5	8.8	7.2	5.6
4.0	10.9	9.0	6.8

Find the basin's soil classification and input below as "Soil Storage" using the above "Depth to W.T.".

Soil Type =	Flatwoods		
Max. Available Soil Storage (S_{max}) =	5.58	inches	
Compaction Factor ($F_{compact}$) =	0%		(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	5.58	inches	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	5.58	inches	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	**64**		$1000 / (S_{avail}+10)$

Notes:

1. Soil Storage Table taken from Section 5.7.4.2 of the SFWMD ERP Applicant's Handbook Volume II.
2. Curve Number determination based on method presented in USDA NRCS Technical Release 55 (TR-55) "Urban Hydrology for Small Watersheds".

Appendix C

Stormwater Calculations- Proposed

Post-Development Land Use Calculations
Project Explanation

Project Name: Crossroads RV Park
Project #: 22-024
Engineer: DCC
Engineer: BMS
Date: 11/1/2022
Revision Date: 3/22/2023

Computation Type: Land Use & Stage-Storage
Datum: NAVD

Average Ground Elevation (EL_{grnd}) = 17.96 ft-NAVD Source: Treasure Coast Motor Coach Resort
Control Elevation (CE) = 14.00 ft-NAVD Source: Permit No. 56-01855-P

Site Land Use

	Open Space	Lake	Asphalt	Concrete	Lake Slope	Building	RV Pads	Exist. Area 8	Exist. Area 9	Total
	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)	(ac)
Percentage of On-Site	56.7%	9.9%	12.2%	1.72%	3.13%	0.7%	15.7%	0.00%	0.00%	
Total Areas (SF)	269,291 SF	47,013 SF	57,874 SF	8,168 SF	14,854 SF	3,200 SF	74,700 SF	0 SF	0 SF	475,100 SF
Total Areas (A_t)	6.18	1.08	1.33	0.19	0.34	0.07	1.71	0.00	0.00	10.91
Bldg. %	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.67%
Bldg. Area (A_r)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.07
Pervious %	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	59.81%
Pervious Area (A_p)	6.18	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	6.52
Impervious %	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	29.62%
Impervious Area (A_i)	0.00	0.00	1.33	0.19	0.00	0.00	1.71	0.00	0.00	3.23
Open Water %	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	9.90%
Open Water Area (Ac.)	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08

Post-Development Stage-Storage Calculations
Project Explanation

Storage Type: Stage-Volume
Starting Stage = 14.00
Ending Stage = 22.00
Stage Increment = 0.10

Name	Open Space	Lake	Asphalt	Concrete	Lake Slope	Building	RV Pads	Exist. Area 8	Exist. Area 9	
Area	6.18	1.08	1.33	0.19	0.34	0.07	1.71	0.00	0.00	
Start Elev	16.20	14.00	18.12	18.80	14.00	20.00	18.70	0.00	0.00	
End Elev	20.00	0.00	19.57	20.00	17.00	0.00	19.10	0.00	0.00	
Stage	Linear	Vert	Linear	Linear	Linear	Vert	Linear	Vert	Vert	Total
Feet	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage	Storage
NAVD	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft
14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.10	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
14.20	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
14.30	0.00	0.32	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.33
14.40	0.00	0.43	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.44
14.50	0.00	0.54	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.55
14.60	0.00	0.65	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.67
14.70	0.00	0.76	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.78
14.80	0.00	0.86	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.90
14.90	0.00	0.97	0.00	0.00	0.05	0.00	0.00	0.00	0.00	1.02
15.00	0.00	1.08	0.00	0.00	0.06	0.00	0.00	0.00	0.00	1.14
15.10	0.00	1.19	0.00	0.00	0.07	0.00	0.00	0.00	0.00	1.26
15.20	0.00	1.30	0.00	0.00	0.08	0.00	0.00	0.00	0.00	1.38
15.30	0.00	1.40	0.00	0.00	0.10	0.00	0.00	0.00	0.00	1.50
15.40	0.00	1.51	0.00	0.00	0.11	0.00	0.00	0.00	0.00	1.62
15.50	0.00	1.62	0.00	0.00	0.13	0.00	0.00	0.00	0.00	1.75
15.60	0.00	1.73	0.00	0.00	0.15	0.00	0.00	0.00	0.00	1.87
15.70	0.00	1.83	0.00	0.00	0.16	0.00	0.00	0.00	0.00	2.00
15.80	0.00	1.94	0.00	0.00	0.18	0.00	0.00	0.00	0.00	2.13
15.90	0.00	2.05	0.00	0.00	0.21	0.00	0.00	0.00	0.00	2.26
16.00	0.00	2.16	0.00	0.00	0.23	0.00	0.00	0.00	0.00	2.39
16.10	0.00	2.27	0.00	0.00	0.25	0.00	0.00	0.00	0.00	2.52
16.20	0.00	2.37	0.00	0.00	0.28	0.00	0.00	0.00	0.00	2.65
16.30	0.01	2.48	0.00	0.00	0.30	0.00	0.00	0.00	0.00	2.79
16.40	0.03	2.59	0.00	0.00	0.33	0.00	0.00	0.00	0.00	2.95
16.50	0.07	2.70	0.00	0.00	0.36	0.00	0.00	0.00	0.00	3.13
16.60	0.13	2.81	0.00	0.00	0.38	0.00	0.00	0.00	0.00	3.32
16.70	0.20	2.91	0.00	0.00	0.41	0.00	0.00	0.00	0.00	3.53
16.80	0.29	3.02	0.00	0.00	0.45	0.00	0.00	0.00	0.00	3.76
16.90	0.40	3.13	0.00	0.00	0.48	0.00	0.00	0.00	0.00	4.01
17.00	0.52	3.24	0.00	0.00	0.51	0.00	0.00	0.00	0.00	4.27
17.10	0.66	3.35	0.00	0.00	0.55	0.00	0.00	0.00	0.00	4.55
17.20	0.81	3.45	0.00	0.00	0.58	0.00	0.00	0.00	0.00	4.85
17.30	0.98	3.56	0.00	0.00	0.61	0.00	0.00	0.00	0.00	5.16
17.40	1.17	3.67	0.00	0.00	0.65	0.00	0.00	0.00	0.00	5.49
17.50	1.37	3.78	0.00	0.00	0.68	0.00	0.00	0.00	0.00	5.83

Post-Development Stage-Area Calculations
Project Explanation

Storage Type:	**Stage-Area**
Starting Stage =	**14.00**
Ending Stage =	**22.00**
Stage Increment =	**0.10**

Name	**Open Space**	**Lake**	**Asphalt**	**Concrete**	**Lake Slope**	**Building**	**RV Pads**	**Exist. Area 8**	**Exist. Area 9**	
Area	**6.18**	**1.08**	**1.33**	**0.19**	**0.34**	**0.07**	**1.71**	**0.00**	**0.00**	
Start Elev	**16.20**	**14.00**	**18.12**	**18.80**	**14.00**	**20.00**	**18.70**	**0.00**	**0.00**	
End Elev	**20.00**	**0.00**	**19.57**	**20.00**	**17.00**	**0.00**	**19.10**	**0.00**	**0.00**	
Stage	Linear	Vert	Linear	Linear	Linear	Vert	Linear	Vert	Vert	Total
Feet	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
NAVD	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac	Ac
14.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
14.10	0.00	1.08	0.00	0.00	0.01	0.00	0.00	0.00	0.00	1.09
14.20	0.00	1.08	0.00	0.00	0.02	0.00	0.00	0.00	0.00	1.10
14.30	0.00	1.08	0.00	0.00	0.03	0.00	0.00	0.00	0.00	1.11
14.40	0.00	1.08	0.00	0.00	0.05	0.00	0.00	0.00	0.00	1.12
14.50	0.00	1.08	0.00	0.00	0.06	0.00	0.00	0.00	0.00	1.14
14.60	0.00	1.08	0.00	0.00	0.07	0.00	0.00	0.00	0.00	1.15
14.70	0.00	1.08	0.00	0.00	0.08	0.00	0.00	0.00	0.00	1.16
14.80	0.00	1.08	0.00	0.00	0.09	0.00	0.00	0.00	0.00	1.17
14.90	0.00	1.08	0.00	0.00	0.10	0.00	0.00	0.00	0.00	1.18
15.00	0.00	1.08	0.00	0.00	0.11	0.00	0.00	0.00	0.00	1.19
15.10	0.00	1.08	0.00	0.00	0.13	0.00	0.00	0.00	0.00	1.20
15.20	0.00	1.08	0.00	0.00	0.14	0.00	0.00	0.00	0.00	1.22
15.30	0.00	1.08	0.00	0.00	0.15	0.00	0.00	0.00	0.00	1.23
15.40	0.00	1.08	0.00	0.00	0.16	0.00	0.00	0.00	0.00	1.24
15.50	0.00	1.08	0.00	0.00	0.17	0.00	0.00	0.00	0.00	1.25
15.60	0.00	1.08	0.00	0.00	0.18	0.00	0.00	0.00	0.00	1.26
15.70	0.00	1.08	0.00	0.00	0.19	0.00	0.00	0.00	0.00	1.27
15.80	0.00	1.08	0.00	0.00	0.20	0.00	0.00	0.00	0.00	1.28
15.90	0.00	1.08	0.00	0.00	0.22	0.00	0.00	0.00	0.00	1.30
16.00	0.00	1.08	0.00	0.00	0.23	0.00	0.00	0.00	0.00	1.31
16.10	0.00	1.08	0.00	0.00	0.24	0.00	0.00	0.00	0.00	1.32
16.20	0.00	1.08	0.00	0.00	0.25	0.00	0.00	0.00	0.00	1.33
16.30	0.16	1.08	0.00	0.00	0.26	0.00	0.00	0.00	0.00	1.50
16.40	0.33	1.08	0.00	0.00	0.27	0.00	0.00	0.00	0.00	1.68
16.50	0.49	1.08	0.00	0.00	0.28	0.00	0.00	0.00	0.00	1.85
16.60	0.65	1.08	0.00	0.00	0.30	0.00	0.00	0.00	0.00	2.03
16.70	0.81	1.08	0.00	0.00	0.31	0.00	0.00	0.00	0.00	2.20
16.80	0.98	1.08	0.00	0.00	0.32	0.00	0.00	0.00	0.00	2.37
16.90	1.14	1.08	0.00	0.00	0.33	0.00	0.00	0.00	0.00	2.55
17.00	1.30	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	2.72
17.10	1.46	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	2.88
17.20	1.63	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	3.05
17.30	1.79	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	3.21
17.40	1.95	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	3.37
17.50	2.11	1.08	0.00	0.00	0.34	0.00	0.00	0.00	0.00	3.54

Post-Development Stormwater Calculations

Project Explanation

Revised: 3/22/2023

Project: Crossroads RV Park
Engineer: DCC
Project #: 22-024
Date: 11/1/2022

Land Use Table

Use	Imp. (ac)	Bldg. (ac)	Pervious (ac)	Total (ac)
Basin =	4.31	0.07	6.52	10.91
TOTAL =	4.31	0.07	6.52	10.91

Find Curve Number:

Avg. Pervious Ground El. =	17.96
Control Elev. =	14.00
Distance to Water Table =	3.96

Soil Storage Table

Depth to W.T. (ft)	Coastal Storage (in)	Flatwoods Storage (in)	Depression Storage (in)
0.0	0.0	0.0	0.0
1.0	0.6	0.6	0.6
1.5	1.6	1.6	1.4
2.0	2.5	2.5	2.1
2.5	4.6	4.0	3.3
3.0	6.6	5.4	4.4
3.5	8.8	7.2	5.6
4.0	10.9	9.0	6.8

Find the basin's soil classification and input below as "Soil Storage" using the above "Depth to W.T.".

Soil Type =	Flatwoods		
Max. Available Soil Storage (S_{max}) =	8.87	inches	
Compaction Factor ($F_{compact}$) =	25%		(Use 25% for developed site)
Compacted Soil Storage ($S_{compact}$) =	6.65	inches	$(S_{max})(F_{compact})$
Available Soil Storage (S_{avail}) =	3.98	inches	$(A_p)(S_{compact})/(A_t)$
Curve Number (CN) =	**72**		$1000 / (S_{avail}+10)$

Notes:
1. Soil Storage Table taken from Section 5.7.4.2 of the SFWMD ERP Applicant's Handbook Volume II.
2. Curve Number determination based on method presented in USDA NRCS Technical Release 55 (TR-55) "Urban Hydrology for Small Watersheds".

Post-Development Water Quality Calculations

Revised: 3/22/2023

Project: Crossroads RV Park
Project #: 22-024
Engineer: DCC
Date: 01-Nov-22

1-inch Over the Project Area

(Treated Volume) 1-inch * 1-ft/12-in * 10.91 (PROJECT AREA) = 0.91 (TREATED VOLUME) ac-ft

2.5-inches Times the Percent Impervious

(Site Area) 10.91 (PROJECT AREA (AC)) - (1.08 (LAKES (AC)) + 0.07 (ROOFS (AC))) = 9.75 (SITE AREA) ac

(Impervious Area) 9.75 (SITE AREA (AC)) - 6.52 (PERVIOUS AREA (AC)) = 3.23 (IMPERVIOUS AREA) ac

(% Impervious) IMPERVIOUS AREA * 100% / SITE AREA (AC) = 33.12%

(2.5-in * % Imp.) 2.5-inches * 33.12% (PERCENT IMPERVIOUS) = 0.83 (INCHES TO BE TREATED) in

(Treated Volume) 0.83 (TREATED (IN)) * 1-ft/12-in * 9.83 (PROJECT AREA - LAKES (AC)) = 0.68 (TREATED VOLUME) ac-ft

Required Wet Detention = **0.91** ac-ft

Required Dry Detention (75% of Wet Detention) = **0.68** ac-ft

Required Retention (50% of Wet Detention) = **0.45** ac-ft

Treatment System Type Wet Detention
Treatment Volume Required = **0.91** ac-ft

Direct Discharge to OFW? Yes
Total Treatment Volume Required = **1.36** ac-ft

Water Quality Elevation (EL_{wq}) = **15.19** ft NAVD

Estimated Required Attenuation

Project Explanation

		Revised:	
Project:	Crossroads RV Park	**Engineer:**	DCC
Project #:	22-024	**Date:**	11/1/2022

Pre-Developed Runoff

5 Year - 1 Day

Area, A (ac) = 10.91
Soil Storage, S (inches) = 5.58
Curve Number, CN = 1000/(S+10)
= 64

5 Year - 1 Day Rainfall, P (inches) = 5.87 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$
= 2.19

Volume, V (AC-FT) = A * Q
= 1.99

Post Developed Runoff

5 Year - 1 Day

Area, A (ac) = 10.91
Soil Storage, S (inches) = 3.98
Curve Number, CN = 1000/(S+10) =
72

5 Year - 1 Day Rainfall, P (inches) = 5.87 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$
= 2.84

Volume, V (AC-FT) = A * Q
= 2.58

5Y-1D Elevation = **16.15** ft NAVD

Estimated Required Attenuation

Project Explanation

Revised:

Project: Crossroads RV Park **Engineer:** DCC

Project #: 22-024 **Date:** 11/1/2022

Pre-Developed Runoff

10 Year - 1 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 5.58

Curve Number, CN = 1000/(S+10)

= 64

10 Year - 1 Day Rainfall, P (inches) = 7.02 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$

= 3.04

Volume, V (AC-FT) = A * Q

= 2.76

Post Developed Runoff

10 Year - 1 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 3.98

Curve Number, CN = 1000/(S+10) =

72

10 Year - 1 Day Rainfall, P (inches) = 7.02 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$

= 3.80

Volume, V (AC-FT) = A * Q

= 3.45

10Y-1D Elevation = **16.66** ft NAVD

Estimated Required Attenuation

Project Explanation

Revised:

Project: Crossroads RV Park **Engineer:** DCC

Project #: 22-024 **Date:** 11/1/2022

Pre-Developed Runoff

25 Year - 3 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 5.58

Curve Number, CN = 1000/(S+10)

= 64

25 Year - 3 Day Rainfall, P (inches) = 11 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$

= 6.32

Volume, V (AC-FT) = A * Q

= 5.74

Post Developed Runoff

25 Year - 3 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 3.98

Curve Number, CN = 1000/(S+10) =

72

25 Year - 3 Day Rainfall, P (inches) = 11 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$

= 7.34

Volume, V (AC-FT) = A * Q

= 6.67

25Y-3D Elevation = **17.73** ft NAVD

Estimated Required Attenuation

Project Explanation

		Revised:	
Project:	Crossroads RV Park	**Engineer:**	DCC
Project #:	22-024	**Date:**	11/1/2022

Pre-Developed Runoff

100 Year - 1 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 5.58

Curve Number, CN = 1000/(S+10)
= 64

100 Year - 1 Day Rainfall, P (inches) = 11.7 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$
= 6.93

Volume, V (AC-FT) = A * Q
= 6.30

Post Developed Runoff

100 Year - 1 Day

Area, A (ac) = 10.91

Soil Storage, S (inches) = 3.98

Curve Number, CN = 1000/(S+10) =
72

100 Year - 1 Day Rainfall, P (inches) = 11.7 (From Figure C-8 SFWMD ERP Applicant's Handbook Volume II

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$
= 7.99

Volume, V (AC-FT) = A * Q
= 7.26

100Y-1D Elevation = **17.87** ft NAVD

Appendix D
2003 SFWMD Permit

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

OKEECHOBEE SERVICE CENTER 205 North Parrott Avenue, Suite 201, Okeechobee, FL 34972-2916
(863) 462-5260 • FL WATS 1-800-250-4200 • Suncom 761-5260 • Fax (863) 462-5269
www.sfwmd.gov/org/exo/okeechobee/okindex1.html

56-01855-P

March 13, 2006

SUNDIAL HOMES INC
8000 SOUTH US 1 STE 402
PORT ST LUCIE, FL 34952

Dear Permittee :

Subject : Acceptance of Construction Completion Certification & Conversion to Operation Phase
TREASURE COAST MOTOR COACH RESORT
Permit No. 56-01855-P, Application No. 031229-20
Additional Application No(s). 050531-16
St Lucie County, S24/T35S/R39E

This letter is to acknowledge receipt of your consulting engineer's construction completion certification pertaining to the subject parcel's surface water management system. The submitted information has been accepted and incorporated into the permit file.

By accepting the engineer's certification, District staff considers the surface water management system permitted under the above listed application number(s) to be constructed in substantial conformance with the plans and specifications approved by the District. This satisfies your permit conditions regarding submittal of an engineer's certification for construction completion of the permitted drainage facilities and the above referenced permit is hereby converted from the construction phase to the operation phase.

Should you have any questions, please contact the undersigned at the Okeechobee Service Center at 863-462-5260 ext. 3033.

Sincerely,

Allison Murphy

Allison C. Murphy, Staff Regulatory Professional
Environmental Resource Compliance
Okeechobee Service Center
South Florida Water Management District
am

c: Adam Heltemes Pe, Lbfh Inc
Spanish Lakes Communities

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Carol Ann Wehle, *Executive Director*

SCANNED

bc: Vault File - Permit No. 56-01855-P / App. No. 031229-20 file
D. Loving 2280
Day File

LBFH INC.
CONSULTING CIVIL ENGINEERS,
SURVEYORS & MAPPERS

February 27, 2006
LBFH Project #03-0179

RECEIVED
FEB 28 2006
OKEECHOBEE
SERVICE CENTER

Allison Murphy, Staff Regulatory Professional
Environmental Resource Compliance
Okeechobee Service Center
South Florida Water Management District
205 North Parrott Avenue, Suite 201
Okeechobee, FL 34972-2916

CIVIL
AGRICULTURAL
WATER RESOURCES
WATER & WASTEWATER
TRANSPORTATION
SURVEYING & MAPPING
GIS

SUBJECT: CONSTRUCTION COMPLETION CERTIFICATION
PERMIT # 56-01855-P

Permittee: Sundial Homes, Inc.
Project: **Treasure Coast Motor Coach Resort**
Location: St. Lucie County, Section 24/Township 35S/Range 39E

Dear Ms. Murphy:

On behalf of LBFH Inc., please accept this application for Construction Completion Certification for the above mentioned project. Based upon the attached as-builts and inspections during construction, the Treasure Coast Motor Coach Resort project has been constructed in general accordance with the approved plans and specifications, and meets the applicable codes of SFWMD and the City of Fort Pierce.

The following items are enclosed for your review and approval:

- One originally signed and sealed certification application
- One originally signed and sealed as-built survey

If there is anything that we can do or provide to you to help expedite this approval, please do not hesitate to contact me. Thank you for your time and indulgence with this project.

Sincerely,
LBFH, Inc.

Kari Miller
Project Engineer

"Partners for Results
Value by Design"

2222 Colonial Road
Suite 201
Fort Pierce, FL 34950
Phone (772) 461-2450
Fax (772) 465-1225
www.lbfh.com

KM/km
cc: Harvey Newman, Sundial Homes w/attachments
P:\03-0179\Permit\CERTIFICATION\cover.doc

SCANNED

South Florida Water Management District

ENVIRONMENTAL RESOURCE / SURFACE WATER MANAGEMENT PERMIT
SURFACE WATER MANAGEMENT SYSTEM
CONSTRUCTION COMPLETION CERTIFICATION

ENVIRONMENTAL RESOURCE COMPLIANCE DIVISION

Permit No. 56-01855-P Application No(s). 031229-20, 050531-16

Project Name Treasure Coast Motor Coach Resort Park Phase N/A

The subject surface water management system has been designed, constructed and completed as follows (check all that apply):

DISCHARGE STRUCTURE(S) Please provide the requested information for all permitted discharge structures. Attach additional sheets if needed.

Structure Identification Number: WCS

☐ Weir: width 0.85' crest 17.02

☐ Bleeder: type Circle dimensions 3.6" invert 13.98

☐ Additional discharge structure information attached.

RETENTION/DETENTION AREA(S): Please provide the requested information for all permitted retention/detention areas. Attach additional sheets if needed.

Retention/Detention Area Identification Number: Wet Detention Pond Size (acres) 1.18

Side Slope (h:v) 4:1

☒ Additional retention/detention area information attached.

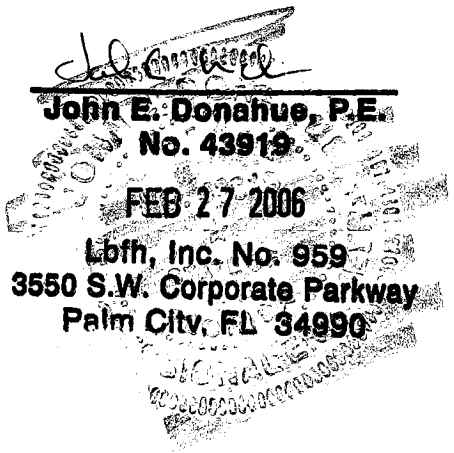
☐ **EXFILTRATION TRENCH** - Confirmation of cross-section with pipe size and invert, trench width, height and length is provided on the attached.

☒ **CONVEYANCE SYSTEM ONLY** - The components of the permitted surface water management consist of inlets, pipes or other form of conveyance system. Confirmation of ditches, canals, and/or swales with cross-sections, pipe diameters, inverts, and lengths is provided on the attached.

Please indicate the location of the benchmark(s) used to determine the above information on the record drawings (40E-4.381(1)(f), F.A.C. Code). All elevations should be according to National Geodetic Vertical Datum (NGVD).

I HEREBY NOTIFY THE DISTRICT OF THE COMPLETION OF CONSTRUCTION OF ALL THE COMPONENTS OF THE SURFACE WATER MANAGEMENT FACILITIES FOR THE ABOVE REFERENCED PROJECT AND CERTIFY THAT THEY HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS PERMITTED BY THE DISTRICT. [A COPY OF THE APPROVED PERMIT DRAWINGS IS ATTACHED WITH DEVIATIONS NOTED, IF APPLICABLE.]

Engineer's Signature, Seal and Date:



Please Print or Type

Engineer's Name John E.Donahue, P.E., V.P.

Company Name LBFH, Inc

Address 2222 Colonial Road, Suite 201

Fort Pierce, FL 34950

Authorization No. of Engineering Business (if applicable) 959

Telephone Number 772-461-2450

E-mail john-d@lbfh.com

sfwmd.gov SCANNED

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Environmental Resource/Surface Water Management Permit - Construction Commencement Notice

RECEIVED
MAR 29 2004
ERC 4230

FORM 0960
08/95

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
Environmental Resource Compliance Division - *Please see page 2 of 2

PROJECT NAME: Treasure Coast Motor Coach Resort

PHASE: N/A

I hereby notify the South Florida Water Management District Environmental Resource Compliance Division that construction of the surface water management system, authorized by Environmental Resource/Surface Water Management Permit No. 56 - 01855-P under Application No. 031229-20 has commenced/is expected to commence on March 30, 2004 ~~199~~ and will require a duration of approximately 6 /months 0 /weeks 0 /days to complete. Should the construction term extend beyond one year, I will submit Form No. 0961, Environmental Resource/Surface Water Management Permit Annual Status Report for Surface Water Management System Construction, to the District.

PLEASE NOTE: If the actual construction commencement date is not known, District staff should be so notified in writing. This will eliminate the necessity of further post permit compliance action concerning satisfaction of the Permit condition.

Permittee's or Authorized Agent's Signature

HARVEY NEWMAN
Vice President, Sundial Homes, Inc.
Title and Company

772-878-5513
Phone Number

03/26/04
Date

SCANNED

*Projects in the following counties should respond to the corresponding SFWMD Service Center

Broward, Dade, Martin, Monroe, Palm Beach, and St. Lucie Counties - Please respond to the West Palm Beach Service Center:

SFWMD
Environmental Resource Compliance Division
P.O. Box 24680
West Palm Beach, FL 33416-4680

Highlands and Okeechobee Counties - Please respond to the Okeechobee Service Center.

SFWMD
Environmental Resource Compliance Division
205 East North Park Street
Okeechobee, FL 34972

Charlotte, Collier, Glades, Hendry, and Lee Counties - Please respond to the Ft. Myers Service Center:

SFWMD
Environmental Resource Compliance Division
2301 McGregor Blvd.
Ft. Myers, FL 33901

Orange, Osceola and Polk Counties - Please respond to the Orlando Service Center:

SFWMD
Environmental Resource Compliance Division
7335 Lake Ellenor Drive
Orlando, FL 32809

SCANNED

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Environmental Resource/Surface Water Management Permit - Construction Commencement Notice

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Environmental Resource Compliance Division
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Orange, Osceola and Polk Counties - Please respond to the Orlando Service Center:

SFWMD
Environmental Resource Compliance Division
7335 Lake Ellenor Drive
Orlando, FL 32809

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Storm Event Summary Table

56-01855-P

PROJECT DRAINAGE SUMMARY

Project: TC RV Park
Project #: 03-0179

Revised:
Engineer: AA
Date: 12/1/2003

	Post-Development	
	Maximum Discharge (cfs)	Maximum Stage NGVD
10 Year - 1 Day	0.8	17.6
10 Year - 3 Day	1.9	18.0
100 Year - 3 Day	3.5	18.5
100 Year - Zero Discharge **	N/A	18.8

Please file under App. 050531-16

Notes per City of Fort Pierce Land Use Code for Stormwater Design:

10 Year 1 Day = 6.00 in
10 Year 3 Day = 8.30 in
100 Year 3 Day = 12.23 in

(Receiving Body NSLRWCD Canal 40)

Allowable Discharge:

Pre-development = 2.61 Ac-Feet/Day
Post-development = 2.5 Ac-Feet/Day

	Time (Hours)	Cumulative Discharge (Ac-Feet)
At Peak	65	1.35
After 24 Hours	89	3.85

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PRE-Development Stormwater Calculations

Project: TC RV Park
Project #: 03-0179

Revised:
Engineer: AA
Date: 12/1/2003

North St. Lucie River Water Control District

Discharge Criteria

* The allowable discharge within the North St. Lucie River Water Control District is limited to 2 Ac-In per day. Therefore, a pre-development calculation is not necessary given the maximum discharge criteria for the NSLRWCD.

	Project Acreage	=	**15.7** Acres	
	(2 Inches per Day) x (Project Acreage)	=	31.36	Ac-Inches / 12 = 2.61
31.36	Ac-Inches x (1 ft / 12 inches)	=	2.61	Ac-Feet
2.61	Ac-Feet x (43,560 SF / 1 Acre)	=	113,837	CF per day

Cumulative discharge - 24 hr period 64-84 hrs for example:

84 hrs - 3.56 ac-ft
64 hrs - 1.19 ac-ft
$\Delta Q_{vol.}$ = 2.37 ac-ft < 2.61 ac-ft

Plus, min bleeder proposed

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POST-DEVELOPMENT LAND USE CALCULATIONS

Project: TC RV Park
Project #: 03-0179

Revised:
Engineer: AA
Date: 12/1/2003

Land Use Table

Use	Imp. (ac)	Pervious (ac)	Total (ac)
Buildings =	0.21	0.00	0.21
Pavement & Curb =	2.38	0.00	2.38
*Concrete Surfaces (Pads) =	6.59	0.00	6.59
SW =	0.19	0.00	0.19
W.T.A. =	0.98	0.00	0.98
W.T.A (Slopes) =	0.00	0.16	0.16
Landscape =	0.00	5.17	5.17
Remaining Pervious =	0.00	0.00	0.00
TOTAL =	10.35	5.33	15.68

*Concrete Surfaces (Pads) = Assumes 1750 s.f. for 164 pads

Find Curve Number:

Avg. Pervious Ground El. =	17.50
Control Elevation =	14.00
Distance to Water Table =	3.50

Soil Storage Table

Depth to W.T. (ft)	Coastal Storage (in)	Flatwoods Storage (in)	Depression Storage (in)
1.0	0.6	0.6	0.6
1.5	1.6	1.6	1.4
2.0	2.5	2.5	2.1
2.5	4.6	4.0	3.3
3.0	6.6	5.4	4.4
3.5	8.8	7.2	5.6
4.0	10.9	9.0	6.8

Find the basin's soil classification and input below as "Soil Storage" using the above "Depth to W.T.":

Developed Pervious Area =	5.33	
Undeveloped Pervious Area =	0.00	
Soil Storage =	7.20	inches
Soil Moisture Storage (S) =	1.84	inches
Curve Number =	**84**	

SCANNED

POST-DEVELOPMENT WATER QUAL... CALCULATIONS

Project: TC RV Park
Project #: 03-0179

Revised:
Engineer: AA
Date: 12/1/2003

1-Inch Over the Project Area

(Treated Volume) 1-inch * 1-ft/12-in * 15.68 (PROJECT AREA) = 1.31 (TREATED VOLUME) ac-ft

2.5-Inches Times the Percent Impervious

(Site Area) 15.68 (PROJECT AREA (AC)) - (0.98 (Water Management(AC)) + 0.21 (ROOFS (AC))) = 14.49 (SITE AREA) ac

(Impervious Area) 14.49 (SITE AREA (AC)) - 5.33 (PERVIOUS AREA (AC)) = 9.15 (IMPERVIOUS AREA) ac

(% Impervious) IMPERVIOUS AREA * 100% / SITE AREA (AC) = 63.20%

(2.5-in * % Imp.) 2.5-inches * 63.20% (PERCENT IMPERVIOUS) = 1.58 (INCHES TO BE TREATED) in

(Treated Volume) 1.58 (TREATED (IN)) * 1-ft/12-in * 14.70 (PROJECT AREA - LAKES (AC)) = 1.93 (TREATED VOLUME) ac-ft

Required Wet Detention = 1.93 ac-ft

Required Dry Detention (0.75% of wet) = 1.45 ac-ft

Required Retention (50-% of wet) = 0.97 ac-ft

Dry Pre-Treatment (Commercial / Industial Only) = 0.65 ac-ft

* A minimum of 0.5-inch of pretreatment for industrial or commercial projects will be needed.

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TC RV Park

Water Quality Control Structure Sizing, SFWMD BOR and NSLRWCD Criteria

Execution Date: 12/1/2003 **Engineer's Name:** AA
Project Name: TC RV Park **Job No:** 03-0179

Given:

Basin Area = 15.7 acres
Control Elevation = 14.0 FT. NGVD
Area of Storage at Control = 1.0 acres
Tailwater = 13.9 FT-NGVD
P, Design Rainfall (10-year 3-day)= 8.30 inches
CN for Basin = 84
S, Average Soil Storage for Basin = 1.84 inches

Determine Water Quality Volume and Stage:

Determine 1st Inch of Runoff: 1 Inch / 12 In/Ft * Basin Area = V_{DET} = *1.31 AC-FT*

Determine 0.5" Inch of Runoff: 0.5 Inch / 12 In/Ft * Basin Area = *0.65 AC-FT*

Determine 2.0" Inch of Runoff: 2.0 Inch / 12 In/Ft * Basin Area = *2.61 AC-FT*

Determine Weir Crest 1st inch of Runoff
From Stage-Storage Curve
Set WQ Weir Crest using Basin Area = 15.3 FT. NGVD

Determine Runoff Volume and Stage for 10-Year 3-Day Storm Event:

$$Q, \text{inches} = \frac{(P - 0.2\,S)^2}{(P + 0.8\,S)}$$

Q = 6.44 inches
V = 8.42 AC-FT

Corresponding Zero Discharge Stage = 18.20 FT. NGVD

Size the Water Quality Control Structure Discharge V-Notch Weir.

Size Circular Orifice

$$A = \frac{5.3 * V_{DET}}{C * (H^{0.5})}$$

A = cross-sectional area, in^2
C = 0.6

Based on SFWMD WQ Criteria

A = 9.60 in^2
H = 1.45 ft
D, diameter = 3.5 inches

Based on NSLRWCD Criteria

A = 11.06 in^2
H = 4.36 ft
D, diameter = 3.8 inches

Results: Use a D = 3.0 inches bleeder per SFWMD WQ Criteria

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POST - 100 YEAR 3 DAY ZERO DISCHARGE STAGE CALCULATIONS

Project: TC RV Park
Project #: 03-0179

Revised:
Engineer: AA
Date: 12/1/2003

Area, A (ac) = 15.08
Curve Number, CN = 84
Soil Storage, S (inches) = 1000/CN - 10 = 1.84
100 Year - 3 Day Rainfall, P (inches) = 12.23

Depth of Runoff, Q (inches) = $(P - 0.2S)^2/(P + 0.8S)$
= 10.27

Volume, V (AC-FT) = A * Q
= 13.42

Occurs @ Stage, FT-NGVD = 18.8

Results:

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OSQ Series

OSQ™ LED Area/Flood Luminaire featuring Patented NanoComfort™ Technology – Version C

Rev. Date: V7 11/01/2023

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. Medium is suitable upgrade for HID applications up to 400 Watts. Large is suitable upgrade for HID applications up to 1000 Watts. Extra Large is suitable upgrade for HID applications up to multiple 1000 Watts.

Applications: Parking lots, walkways, campuses, car dealerships, office complexes, pickleball courts, high-mast and internal roadways

Performance Summary

Utilizes Patented NanoComfort™ Technology

Utilizes Cree TrueWhite® Technology on 5000K Luminaires

Assembled in the USA by Cree Lighting from US and imported parts

Initial Delivered Lumens: 4,000 - 85,000

Efficacy: Up to 171 LPW

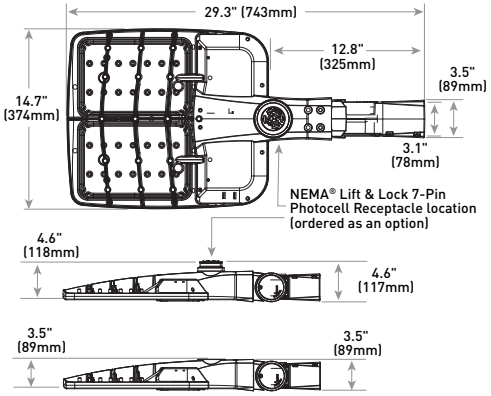
CRI: Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K)

CCT: 3000K, 4000K, 5000K, 5700K

Limited Warranty†: 10 years for luminaire; 10 years for Colorfast DeltaGuard® finish; 5 years for BML sensor; up to 5 years for Synapse® accessories; 1 year for luminaire accessories

† See http://creelighting.com/warranty for warranty terms. For Synapse accessories, consult Synapse spec sheets for details on warranty terms.

OSQM - AA Mount



Luminaire	Weight
OSQM	19.3 lbs. (8.8kg)

Note: For OSQL, OSQX and additional mounts, refer to drawings on page 27.

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-ML-C-AA-BK + **Luminaire:** OSQM-C-4L-30K7-2M-UL-NM-BK

Mount (Luminaire must be ordered separately)*

OSQ-

Medium/Large Mounts
OSQ-ML-C-AA Adjustable Arm
OSQ-ML-C-DA Direct Arm
OSQ-ML-C-TM Trunnion Mount

Extra Large Mounts
OSQ-X-C-AA Adjustable Arm
OSQ-X-C-DA Direct Arm

Color Options: **SV** Silver **BK** Black **BZ** Bronze **WH** White

* Reference fixture mounting drill pattern, EPA, and pole configuration suitability data beginning on page 14.

Luminaire (Mount must be ordered separately)

OSQ **C**

Family	Size	Series	Lumen Package†	CCT/ CRI	Optic	Voltage	Mount	Color Options	Controls*	Options
OSQ	**M** Medium **L** Large **X** Extra Large	**C**	**Medium** **4L** 4,000 Lumens **6L** 6,000 Lumens **9L** 9,000 Lumens **11L** 11,000 Lumens **16L** 16,000 Lumens **Large** **22L** 22,000 Lumens **30L** 30,000 Lumens **40L** 40,000 Lumens **Extra Large** **50L** 50,000 Lumens **65L** 65,000 Lumens **75L** 75,000 Lumens **85L** 85,000 Lumens	**30K7** 3000K, 70 CRI **40K7** 4000K, 70 CRI **50K9** 5000K, 90 CRI **57K7** 5700K, 70 CRI	**Asymmetric** **2M** Type II Mid **2B**** Type II Mid w/ Factory-Installed Backlight Shield - Available with all lumen packages except 85L **3M** Type III Mid **3B**** Type III Mid w/ Factory-Installed Backlight Shield - Available with all lumen packages except 85L **4M** Type IV Mid **4B**** Type IV Mid w/Factory-Installed Backlight Shield - Available with all lumen packages except 85L **AF** Automotive FrontlineOptic™ **AB**** Automotive Frontline Optic™ w/Factory-Installed Backlight Shield - Available with all lumen packages except 85L **Symmetric** **5M** Type V Mid **5N** Type V Narrow **33** NEMA® 3x3 **44** NEMA® 4x4 **55** NEMA® 5x5 **66** NEMA® 6x6 **75** NEMA® 7x5	**UL** Universal 120-277V **UH** Universal 347-480V - Not available with 4L, 40L, 75L or 85L lumen packages **UE** Universal 277-480V - Available only with 40L, 75L and 85L lumen packages	**NM** No Mount - Must specify mount from table above - Mount ships separately	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**BML** **Bluetooth® Technology Enabled Multi-Level Sensor** - Utilizes a multifunction sensor - Refer to BML spec sheet for details - 20-40' sensor lens installed on luminaire; 8-20' sensor lens and aisle shroud included - Intended for downlight applications at 0° tilt - Not available with Q or X options or Synapse TL7-HVG accessory **Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1** **Field Adjustable Output** - Must select Q9, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 - Offers full range adjustability - Refer to pages 15-26 for power and lumen values - Not available with BML or X options or Synapse TL7-HVG accessory **X8/X7/X6/X5/X4/X3/X2/X1** **Locked Lumen Output** - Must select X8, X7, X6, X5, X4, X3, X2, or X1 - Not available with BML or Q options - X1 option not available with the following lumen package/voltage offerings: 9L/UL, 16L/UL, 16L/UH, 30L/UL, 30L/UH, 65L/UL, 65L/UH - X2 option not available 9L/UL lumen package/voltage - Lumen output is permanently locked to the setting selected - Refer to pages 15-26 for power and lumen values	**20KV** **20kV/10kA Surge Suppression** - Replaces standard 10kV/5kA surge protection **F** **Fuse** - Compatible with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - When code dictates fusing, use time delay fuse **N** **Utility Label and NEMA® Lift & Lock 7-Pin Photocell Receptacle** - External utility label per ANSI C136.15-2020 - 7-pin receptacle per ANSI C136.41 - Available only with OSQM & OSQL luminaires - Intended for downlight applications with maximum 45° tilt - Factory connected 0-10V dim leads - Requires photocell or shorting cap by others **R** **NEMA® Lift & Lock 7-Pin Photocell Receptacle** - 7-pin receptacle per ANSI C136.41 - Intended for downlight applications with maximum 45° tilt - Factory connected 0-10V dim leads - Requires photocell or shorting cap by others - Refer to page 2 for compatible Synapse control offerings **RL** **Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 27 for optic directionality - Not for use with symmetric optics **RR** **Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 27 for optic directionality - Not for use with symmetric optics

† Lumen Package codes identify approximate light output only. Actual lumen output levels vary by CCT and optic selection. Refer to Initial Delivered Lumen tables for specific lumen values.
* Luminaire comes standard with 0-10V dimming.
** Factory-installed backlight shields are integral to luminaire optic and may not be removed in the field. For field-install backlight control, please refer to the External Backlight Shields in the accessory table on page 2.

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING®

Product Specifications

CREE LIGHTING NANOCOMFORT™ TECHNOLOGY

Cree Lighting's NanoComfort™ Technology ends the trade-offs in outdoor lighting by providing superior glare reduction and visual comfort in high-efficiency illumination delivered precisely where it is needed. The basic building block of NanoComfort™Technology is a compact 4x4 array of LEDs. Each of the 16 LEDs in a module is in contact with its own acrylic polymer lens to capture and precisely direct light. With NanoComfort™ Technology, the acrylic optics are cut and sculpted into facets that relieve the glare and harshness while improving visual comfort – all while retaining superb efficacy and control.

CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology is a patented approach that delivers an exclusive combination of 90+ CRI, beautiful light characteristics and lifelong color consistency, all while maintaining high luminous efficacy – a true no compromise solution.

CONSTRUCTION & MATERIALS

- Slim, low profile design minimizes wind load requirements
- Luminaire housing is rugged die cast aluminum with an integral, weathertight LED driver compartment and high-performance heat sink
- Acrylic optic w/clear tempered glass lens
- Some versions are provided with full circuit board, but not fully populated with LEDs or optics to scale back lumen package
- Convenient interlocking mounting method on direct arm. Mounting adaptor is rugged die cast aluminum and mounts to 3" (76mm) or larger square or round pole, secured by two 5/16-18 UNC bolts spaced on 2" (51mm) centers. Refer to page 14 for fixture mounting drill patterns
- Adjustable arm mount adapters are rugged die cast aluminum
- OSQ-ML-C-AA mounts to a horizontal or vertical 2" (51mm) IP, 2.375" (60mm) O.D. tenon and can be adjusted 180˚ in 2.5˚ increments
- OSQ-X-C-AA mounts to a horizontal or vertical 2" (51mm) IP, 2.375-2.50" (60-64mm) O.D. steel tenon and can be adjusted 180˚ in 5.0˚ increments. **NOTE: Tenon length must be a minimum of 3.75" (95mm), and tenon must be steel**
- Trunnion mount is constructed of A500 and A1011 steel and is adjustable from 0-180˚ in 15˚ degree increments. Trunnion mount secures to surface with (1) 3/4" bolt or (2) 1/2" or 3/8" bolts
- Luminaires include 15" (381mm) 18/5 cord exiting the luminaire
- Designed for uplight and downlight applications. Uplight orientation not suitable for use with N or R options
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Silver, bronze, black, and white are available

Weight

Mount	Housing Size		
	Medium	Large	Extra Large
Direct Arm	19.7 lbs. (8.9kg)	28.8 lbs. (13.1kg)	45.8 lbs. (20.8kg)
Adjustable Arm	19.3 lbs. (8.8kg)	28.4 lbs. (12.9kg)	48.6 lbs. (22.0kg)
Trunnion	23.2 lbs. (10.5kg)	32.3 lbs. (14.7kg)	N/A

For BML sensor add 0.1 lbs. (45g), and for NEMA receptacle, add 0.3 lbs. (136g).

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V, 277-480V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral 10kV/5kA surge suppression protection standard; 20kV/10kA surge suppression protection optional
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current
- Designed with 0-10V dimming capabilities. Dims to 10%. Controls by others
- 0-10V dimming per ANSI C137.1-2019 (8-Volt or 9-Volt per power level/options selected)
- Refer to Dimming spec sheet for details
- **Maximum 10V Source Current:** 1.8mA
- **Operating Temperature Range:** -40˚C - +40˚C (-40˚F - +104˚F)

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed (UL1598)
- Suitable for wet locations
- Meets NEMA C82.77 standards
- Drivers and LEDs are UL certified in accordance with UL8750
- Meets requirements of IP66 per IEC 60529 when ordered without N or R options
- Certified to ANSI C136.31-2018, 3G bridge and overpass vibration standards
- ANSI C136.2 10kV/5kA (standard) and 20kV/10kA (optional) surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Lens meets IK07 requirements per IEC 60068-2
- Assembled in the USA by Cree Lighting from US and imported parts
- Meets Buy American requirements within ARRA
- RoHS compliant. Consult factory for additional details
- Dark Sky Friendly, IDA Approved when ordered with 30K CCT and direct arm mount only. Please refer to https://darksky.org/what-we-do/darksky-approved/products-companies/#!/~/search/keyword=cree for most current information
- DLC and DLC Premium qualified SKUs available. Exceptions apply when 2B, 3B, 4B & AB optics are selected. Please refer to https://qpl.designlights.org/solid-state-lighting for most current information
- DLC Luna qualified when ordered with direct arm mount and 30K7 CCT. Please refer to https://qpl.designlights.org/solid-state-lighting for most current information
- **CA RESIDENTS WARNING:** Cancer and Reproductive Harm – www.p65warnings.ca.gov

Product Specifications

SYNAPSE® SIMPLYSNAP INTELLIGENT CONTROL

The Synapse SimplySNAP platform is a highly intuitive connected lighting solution featuring zone dimming, motion sensing, and daylight harvesting with utility-grade power monitoring and support of up to 1000 nodes per gateway. The system features a reliable and robust self-healing mesh network with a browser-based interface that runs on smartphones, tablets, and PCs. The Twist-Lock Lighting Controller (TL7-HVG) and Site Controller (SS450-002) take the OSQ Series to a new performance plateau, providing extreme energy productivity, code compliance and a better light experience.

Synapse Wireless Control Accessories

Twist-Lock Lighting Controller
TL7-HVG
- Suitable for 120-480V (UL, UE and UH) voltages
- Requires NEMA/ANSI C136.41 7-Pin Dimming Receptacle
- Not for use with BML or Q options
- Provides On/Off switching, dimming, power metering, digital sensor input, and status monitoring of luminaire
- Refer to TL7-HVG spec sheet for details

SimplySNAP Central Base Station
CBSSW-450-002
- Includes On-Site Controller (SS450-002) and 5-button switch
- Indoor and Outdoor rated
- Refer to CBSSW-450-002 spec sheet for details

Synapse Wireless Sensor
WSN-DPM
- Motion and light sensor
- Control multiple zones
- Refer to WSN-DPM spec sheet for details

SimplySNAP On-Site Controller
SS450-002
- Verizon® LTE-enabled
- Designed for indoor applications
- Refer to SS450-002 spec sheet for details

Building Management System (BMS) Gateway
BMS-GW-002
- Required for BACnet integration
- Refer to BMS-GW-002 spec sheet for details

Outdoor Antennas
(Optional, for increased range, 8dB gain)
KIT-ANT420SM
- Kit includes antenna, 20' cable and bracket

KIT-ANT360
- Kit includes antenna, 30' cable and bracket

KIT-ANT600
- Kit includes antenna, 50' cable and bracket
- Refer to Outdoor antenna spec sheet for details

Electrical Data*

Lumen Package	System Watts 120-480V	Utility Label Wattage	Total Current (A)					
			120V	208V	240V	277V	347V	480V
4L**	26	30	0.21	0.12	0.11	0.09	N/A	N/A
6L	37	40	0.31	0.18	0.15	0.13	0.11	0.08
9L	55	60	0.46	0.27	0.23	0.20	0.16	0.12
11L	68	70	0.57	0.33	0.28	0.25	0.20	0.14
16L	97	100	0.81	0.47	0.40	0.35	0.28	0.20
22L	131	130	1.09	0.63	0.55	0.47	0.38	0.27
30L	175	180	1.46	0.84	0.73	0.63	0.50	0.36
40L	236	240	1.96	1.13	0.98	0.85	0.68	0.49
50L	297	N/A	2.48	1.43	1.24	1.07	0.86	0.62
65L	384	N/A	3.20	1.85	1.60	1.39	1.11	0.80
75L	447	N/A	3.73	2.15	1.86	1.61	1.29	0.93
85L	520	N/A	4.34	2.50	2.17	1.88	1.50	0.93

* Electrical data at 25˚C (77˚F). Actual wattage may differ by +/- 10% when operating between 120-277V, 277-480V or 347-480V+/-10%.
** Available with UL voltage only.

OSQ-C Series Ambient Adjusted Lumen Maintenance[1]

Ambient	Initial LMF	25K hr Reported[2] LMF	50K hr Reported[2] LMF	75K hr Reported[2] LMF	100K hr Reported[2] LMF
5˚C (41˚F)	1.02	0.99	0.93	0.88	0.83
10˚C (50˚F)	1.02	0.98	0.93	0.87	0.82
15˚C (59˚F)	1.01	0.98	0.92	0.87	0.82
20˚C (68˚F)	1.01	0.97	0.92	0.86	0.81
25˚C (77˚F)	1.00	0.97	0.91	0.86	0.81

[1] Lumen maintenance values at 25˚C (77˚F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors. Please refer to the Temperature Zone Reference Document for outdoor average nighttime ambient conditions.
[2] In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED.

Accessories

Field-Installed

External Backlight Shield
OSQ-M-C-BLSF (Medium)
OSQ-L-C-BLSF (Large)
OSQ-X-C-BLSF (Extra Large)
- Not for use with rotated optics

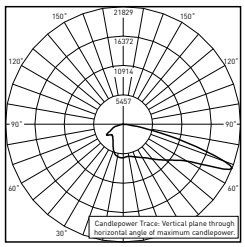
Bird Spikes
OSQ-M-C-BRDSPK
OSQ-L-C-BRDSPK
OSQ-X-C-BRDSPK

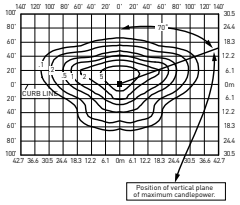
Shorting Cap
XA-XSLSHRT

Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

2M





RESTL Test Report #: PL17910-001A
Configured
OSQL-C-30L-30K7-2M-UL-xx-xx-xx
Initial Delivered Lumens: 27,400

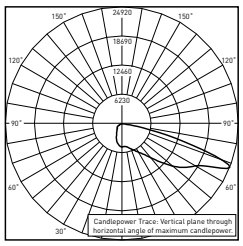
OSQL-C-30L-30K7-2M-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 27,400
Initial FC at grade

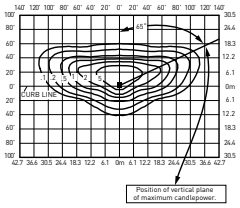
Type II Mid Distribution

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,650	B1 U0 G1	3,800	B1 U0 G1	2,810	B1 U0 G1	3,800	B1 U0 G1
6L	5,475	B1 U0 G1	5,700	B1 U0 G1	4,220	B1 U0 G1	5,700	B1 U0 G1
9L	8,225	B2 U0 G2	8,550	B2 U0 G2	6,325	B2 U0 G2	8,550	B2 U0 G2
11L	10,025	B2 U0 G2	10,450	B2 U0 G2	7,750	B2 U0 G2	10,450	B2 U0 G2
16L	14,650	B3 U0 G3	15,200	B3 U0 G3	11,275	B2 U0 G2	15,200	B3 U0 G3
22L	20,100	B3 U0 G3	20,900	B3 U0 G3	15,500	B3 U0 G3	20,900	B3 U0 G3
30L	27,400	B3 U0 G3	28,500	B3 U0 G3	21,100	B3 U0 G3	28,500	B3 U0 G3
40L	36,500	B4 U0 G4	38,000	B4 U0 G4	28,100	B3 U0 G3	38,000	B4 U0 G4
50L	45,600	B4 U0 G4	47,500	B4 U0 G4	35,200	B3 U0 G3	47,500	B4 U0 G4
65L	59,300	B4 U0 G5	61,800	B4 U0 G5	45,700	B4 U0 G4	61,800	B4 U0 G5
75L	68,400	B5 U0 G5	71,300	B5 U0 G5	52,800	B4 U0 G4	71,300	B5 U0 G5
85L	77,600	B5 U0 G5	80,800	B5 U0 G5	59,800	B4 U0 G5	80,800	B5 U0 G5

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

2B





RESTL Test Report #: PL17977-001A
OSQL-C-40L-30K7-2B-UL-xx-xx-xx
Initial Delivered Lumens: 25,560

OSQL-C-40L-30K7-2B-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 25,100
Initial FC at grade

Type II Mid w/BLS Distribution (factory-installed)

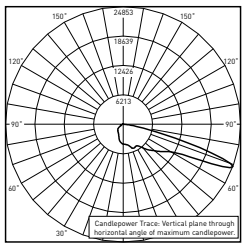
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,510	B1 U0 G1	2,620	B1 U0 G1	1,940	B0 U0 G1	2,620	B1 U0 G1
6L	3,760	B1 U0 G1	3,920	B1 U0 G1	2,900	B1 U0 G1	3,920	B1 U0 G1
9L	5,650	B1 U0 G1	5,875	B1 U0 G1	4,350	B1 U0 G1	5,875	B1 U0 G1
11L	6,900	B1 U0 G1	7,200	B1 U0 G2	5,325	B1 U0 G1	7,200	B1 U0 G2
16L	10,075	B1 U0 G2	10,450	B2 U0 G2	7,750	B1 U0 G2	10,450	B2 U0 G2
22L	13,800	B2 U0 G2	14,375	B2 U0 G2	10,650	B2 U0 G2	14,375	B2 U0 G2
30L	18,800	B2 U0 G2	19,600	B2 U0 G3	14,525	B2 U0 G2	19,600	B2 U0 G3
40L	25,100	B3 U0 G3	26,200	B3 U0 G3	19,400	B2 U0 G2	26,200	B3 U0 G3
50L	31,400	B3 U0 G4	32,700	B3 U0 G4	24,200	B3 U0 G3	32,700	B3 U0 G4
65L	40,800	B3 U0 G4	42,500	B3 U0 G4	31,500	B3 U0 G4	42,500	B3 U0 G4
75L	47,100	B3 U0 G5	49,000	B3 U0 G5	36,300	B3 U0 G4	49,000	B3 U0 G5

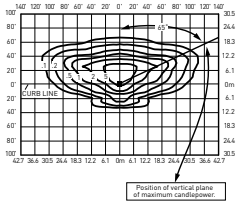
* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

2M W/OSQ-*-C-BLSF





RESTL Test Report#: PL17978-001B
OSQL-C-40L-30K7-2M-UL-xx-xx-xx w/ OSQ-L-C-BLSF
Initial Delivered Lumens: 21,978

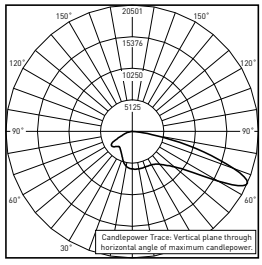
OSQL-C-40L-30K7-2M-UL w/OSQ-L-C-BLSF
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 21,000
Initial FC at grade

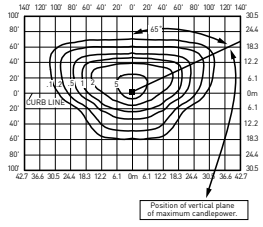
Type II Mid Distribution w/OSQ-*-C-BLSF (field-installed)

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,100	B0 U0 G1	2,180	B0 U0 G1	1,610	B0 U0 G1	2,180	B0 U0 G1
6L	3,140	B1 U0 G1	3,270	B1 U0 G1	2,420	B1 U0 G1	3,270	B1 U0 G1
9L	4,720	B1 U0 G1	4,910	B1 U0 G1	3,630	B1 U0 G1	4,910	B1 U0 G1
11L	5,750	B1 U0 G1	6,000	B1 U0 G1	4,450	B1 U0 G1	6,000	B1 U0 G1
16L	8,400	B1 U0 G2	8,725	B1 U0 G2	6,475	B1 U0 G2	8,725	B1 U0 G2
22L	11,550	B2 U0 G2	12,000	B2 U0 G2	8,900	B1 U0 G2	12,000	B2 U0 G2
30L	15,700	B2 U0 G3	16,400	B2 U0 G3	12,100	B2 U0 G2	16,400	B2 U0 G3
40L	21,000	B3 U0 G3	21,800	B3 U0 G3	16,100	B2 U0 G3	21,800	B3 U0 G3
50L	26,200	B3 U0 G4	27,300	B3 U0 G4	20,200	B3 U0 G3	27,300	B3 U0 G4
65L	34,000	B3 U0 G4	35,500	B3 U0 G4	26,200	B3 U0 G4	35,500	B3 U0 G4
75L	39,300	B3 U0 G4	40,900	B3 U0 G4	30,300	B3 U0 G4	40,900	B3 U0 G4
85L	44,500	B3 U0 G5	46,400	B4 U0 G4	34,300	B3 U0 G5	46,400	B3 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

3M





RESTL Test Report #: PL17882-001A
Configured
OSQL-C-30L-30K7-3M-UL-xx-xx-xx
Initial Delivered Lumens: 27,400

OSQL-C-30L-30K7-3M-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 27,400
Initial FC at grade

Type III Mid Distribution

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,650	B1 U0 G1	3,800	B1 U0 G1	2,810	B1 U0 G1	3,800	B1 U0 G1
6L	5,475	B1 U0 G1	5,700	B1 U0 G1	4,220	B1 U0 G1	5,700	B1 U0 G1
9L	8,225	B2 U0 G2	8,550	B2 U0 G2	6,325	B1 U0 G1	8,550	B2 U0 G2
11L	10,025	B2 U0 G2	10,450	B2 U0 G2	7,750	B2 U0 G2	10,450	B2 U0 G2
16L	14,650	B3 U0 G3	15,200	B3 U0 G3	11,275	B2 U0 G2	15,200	B3 U0 G3
22L	20,100	B3 U0 G3	20,900	B3 U0 G3	15,500	B3 U0 G3	20,900	B3 U0 G3
30L	27,400	B3 U0 G4	28,500	B3 U0 G4	21,100	B3 U0 G3	28,500	B3 U0 G4
40L	36,500	B4 U0 G4	38,000	B4 U0 G4	28,100	B3 U0 G4	38,000	B4 U0 G4
50L	45,600	B4 U0 G5	47,500	B4 U0 G5	35,200	B3 U0 G4	47,500	B4 U0 G5
65L	59,300	B4 U0 G5	61,800	B4 U0 G5	45,700	B4 U0 G5	61,800	B4 U0 G5
75L	68,400	B4 U0 G5	71,300	B5 U0 G5	52,800	B4 U0 G5	71,300	B5 U0 G5
85L	77,600	B5 U0 G5	80,800	B5 U0 G5	59,800	B4 U0 G5	80,800	B5 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
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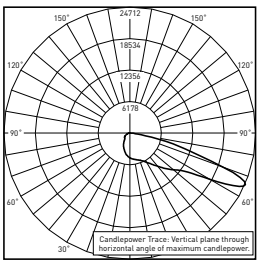
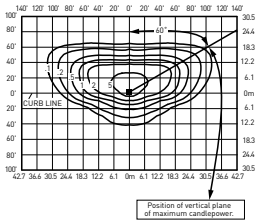
Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

3B





RESTL Test Report #: PL17975-001A
OSQL-C-40L-30K7-3B-UL-xx-xx-xx
Initial Delivered Lumens: 25,199

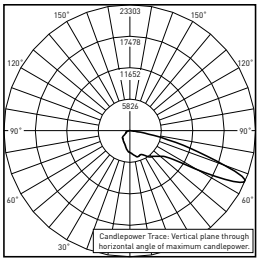
OSQL-C-40L-30K7-3B-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 25,100
Initial FC at grade

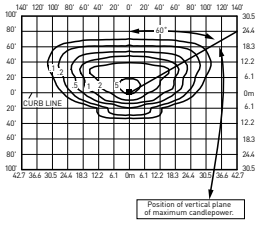
Type III Mid w/BLS Distribution (factory-installed)

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,510	B1 U0 G1	2,620	B1 U0 G1	1,940	B0 U0 G1	2,620	B1 U0 G1
6L	3,760	B1 U0 G1	3,920	B1 U0 G1	2,900	B1 U0 G1	3,920	B1 U0 G1
9L	5,650	B1 U0 G1	5,875	B1 U0 G2	4,350	B1 U0 G1	5,875	B1 U0 G2
11L	6,900	B1 U0 G2	7,200	B1 U0 G2	5,325	B1 U0 G1	7,200	B1 U0 G2
16L	10,075	B1 U0 G2	10,450	B2 U0 G2	7,750	B1 U0 G2	10,450	B2 U0 G2
22L	13,800	B2 U0 G2	14,375	B2 U0 G2	10,650	B2 U0 G2	14,375	B2 U0 G2
30L	18,800	B2 U0 G3	19,600	B2 U0 G3	14,525	B2 U0 G2	19,600	B2 U0 G3
40L	25,100	B3 U0 G4	26,200	B3 U0 G4	19,400	B2 U0 G3	26,200	B3 U0 G4
50L	31,400	B3 U0 G4	32,700	B3 U0 G4	24,200	B3 U0 G3	32,700	B3 U0 G4
65L	40,800	B3 U0 G5	42,500	B3 U0 G5	31,500	B3 U0 G4	42,500	B3 U0 G5
75L	47,100	B3 U0 G5	49,000	B3 U0 G5	36,300	B3 U0 G4	49,000	B3 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

3M W/OSQ-*-C-BLSF





RESTL Test Report#: PL17976-001A
OSQL-C-40L-30K7-3M-UL-xx-xx-xx w/ OSQ-L-C-BLSF
Initial Delivered Lumens: 22,081

OSQL-C-40L-30K7-3M-UL w/OSQ-L-C-BLSF
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 21,000
Initial FC at grade

Type III Mid Distribution w/OSQ-*-C-BLSF (field-installed)

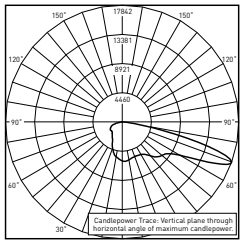
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,100	B0 U0 G1	2,180	B0 U0 G1	1,610	B0 U0 G1	2,180	B0 U0 G1
6L	3,140	B1 U0 G1	3,270	B1 U0 G1	2,420	B1 U0 G1	3,270	B1 U0 G1
9L	4,720	B1 U0 G1	4,910	B1 U0 G1	3,630	B1 U0 G1	4,910	B1 U0 G1
11L	5,750	B1 U0 G2	6,000	B1 U0 G2	4,450	B1 U0 G1	6,000	B1 U0 G2
16L	8,400	B1 U0 G2	8,725	B1 U0 G2	6,475	B1 U0 G2	8,725	B1 U0 G2
22L	11,550	B2 U0 G2	12,000	B2 U0 G2	8,900	B1 U0 G2	12,000	B2 U0 G2
30L	15,700	B2 U0 G3	16,400	B2 U0 G3	12,100	B2 U0 G2	16,400	B2 U0 G3
40L	21,000	B2 U0 G3	21,800	B3 U0 G3	16,100	B2 U0 G3	21,800	B3 U0 G3
50L	26,200	B3 U0 G4	27,300	B3 U0 G4	20,200	B2 U0 G3	27,300	B3 U0 G4
65L	34,000	B3 U0 G4	35,500	B3 U0 G5	26,200	B3 U0 G4	35,500	B3 U0 G5
75L	39,300	B3 U0 G5	40,900	B3 U0 G5	30,300	B3 U0 G4	40,900	B3 U0 G5
85L	44,500	B3 U0 G5	46,400	B3 U0 G5	34,300	B3 U0 G4	46,400	B3 U0 G5

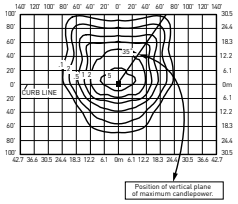
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

4M





RESTL Test Report #: PL17908-001A
Configured
OSQL-C-30L-30K7-4M-UL-xx-xx-xx
Initial Delivered Lumens: 27,400

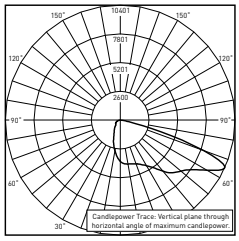
OSQL-C-30L-30K7-4M-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 27,400
Initial FC at grade

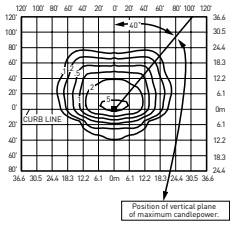
Type IV Mid Distribution

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,650	B1 U0 G1	3,800	B1 U0 G1	2,810	B1 U0 G1	3,800	B1 U0 G1
6L	5,475	B1 U0 G1	5,700	B1 U0 G1	4,220	B1 U0 G1	5,700	B1 U0 G1
9L	8,225	B2 U0 G2	8,550	B2 U0 G2	6,325	B1 U0 G1	8,550	B2 U0 G2
11L	10,025	B2 U0 G2	10,450	B2 U0 G2	7,750	B2 U0 G2	10,450	B2 U0 G2
16L	14,650	B3 U0 G2	15,200	B3 U0 G2	11,275	B2 U0 G2	15,200	B3 U0 G2
22L	20,100	B3 U0 G3	20,900	B3 U0 G3	15,500	B3 U0 G2	20,900	B3 U0 G3
30L	27,400	B3 U0 G3	28,500	B3 U0 G4	21,100	B3 U0 G3	28,500	B3 U0 G4
40L	36,500	B4 U0 G4	38,000	B4 U0 G4	28,100	B3 U0 G4	38,000	B4 U0 G4
50L	45,600	B4 U0 G5	47,500	B4 U0 G5	35,200	B4 U0 G4	47,500	B4 U0 G5
65L	59,300	B5 U0 G5	61,800	B5 U0 G5	45,700	B4 U0 G5	61,800	B5 U0 G5
75L	68,400	B5 U0 G5	71,300	B5 U0 G5	52,800	B4 U0 G5	71,300	B5 U0 G5
85L	77,600	B5 U0 G5	80,800	B5 U0 G5	59,800	B5 U0 G5	80,800	B5 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

4B





RESTL Test Report #: PL17930-001A
Configured
OSQL-C-30L-30K7-4B-UL-xx-xx-xx
Initial Delivered Lumens: 17,200

OSQL-C-30L-30K7-4B-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 17,200
Initial FC at grade

Type IV Mid w/BLS Distribution (factory-installed)

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,300	B1 U0 G0	2,400	B1 U0 G0	1,770	B0 U0 G0	2,400	B1 U0 G0
6L	3,440	B1 U0 G1	3,590	B1 U0 G1	2,660	B1 U0 G0	3,590	B1 U0 G1
9L	5,175	B1 U0 G1	5,400	B1 U0 G1	3,980	B1 U0 G1	5,400	B1 U0 G1
11L	6,325	B1 U0 G1	6,600	B1 U0 G1	4,880	B1 U0 G1	6,600	B1 U0 G1
16L	9,225	B2 U0 G2	9,575	B2 U0 G2	7,100	B1 U0 G1	9,575	B2 U0 G2
22L	12,625	B2 U0 G2	13,175	B2 U0 G2	9,750	B2 U0 G2	13,175	B2 U0 G2
30L	17,200	B2 U0 G2	18,000	B2 U0 G2	13,300	B2 U0 G2	18,000	B2 U0 G2
40L	23,000	B3 U0 G3	24,000	B3 U0 G3	17,700	B2 U0 G2	24,000	B3 U0 G3
50L	28,700	B3 U0 G3	29,900	B3 U0 G3	22,200	B3 U0 G3	29,900	B3 U0 G3
65L	37,400	B3 U0 G4	38,900	B3 U0 G4	28,800	B3 U0 G3	38,900	B3 U0 G4
75L	43,100	B3 U0 G4	44,900	B4 U0 G4	33,200	B3 U0 G4	44,900	B4 U0 G4

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
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Photometry

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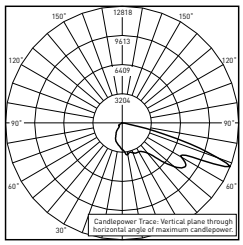
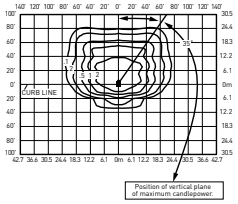
https://creelighting.com/products/outdoor/area/osq-series

4M W/OSQ-*-C-BLSF





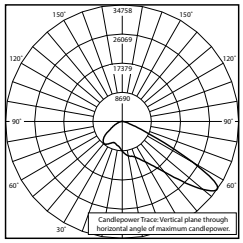
RESTL Test Report #: PL17929-001A Configured
OSQL-C-30L-30K7-4M-UL-xx-xx-xx w/OSQ-L-C-BLSF
Initial Delivered Lumens: 15,400

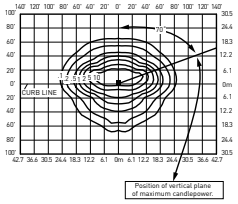
OSQL-C-30L-30K7-4M-UL w/OSQ-L-C-BLSF
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 15,700
Initial FC at grade

Type IV Mid Distribution w/OSQ-*-C-BLSF (field-installed)								
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,100	B1 U0 G1	2,180	B1 U0 G1	1,610	B0 U0 G1	2,180	B1 U0 G1
6L	3,140	B1 U0 G1	3,270	B1 U0 G1	2,420	B1 U0 G1	3,270	B1 U0 G1
9L	4,720	B1 U0 G1	4,910	B1 U0 G1	3,630	B1 U0 G1	4,910	B1 U0 G1
11L	5,750	B1 U0 G1	6,000	B1 U0 G2	4,450	B1 U0 G1	6,000	B1 U0 G2
16L	8,400	B1 U0 G2	8,725	B2 U0 G2	6,475	B1 U0 G2	8,725	B2 U0 G2
22L	11,550	B2 U0 G2	12,000	B2 U0 G2	8,900	B2 U0 G2	12,000	B2 U0 G2
30L	15,700	B2 U0 G2	16,400	B2 U0 G2	12,100	B2 U0 G2	16,400	B2 U0 G2
40L	21,000	B3 U0 G3	21,800	B3 U0 G3	16,100	B2 U0 G2	21,800	B3 U0 G3
50L	26,200	B3 U0 G4	27,300	B3 U0 G4	20,200	B3 U0 G3	27,300	B3 U0 G4
65L	34,000	B3 U0 G4	35,500	B3 U0 G4	26,200	B3 U0 G4	35,500	B3 U0 G4
75L	39,300	B3 U0 G4	40,900	B3 U0 G5	30,300	B3 U0 G4	40,900	B3 U0 G5
85L	44,500	B4 U0 G5	46,400	B4 U0 G5	34,300	B3 U0 G4	46,400	B4 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

AF





RESTL Test Report #: PL17447-001A
OSQL-C-40L-30K7-AF-UL-xx-xx-xx
Initial Delivered Lumens: 35,801

OSQL-C-40L-40K7-AF-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 38,000
Initial FC at grade

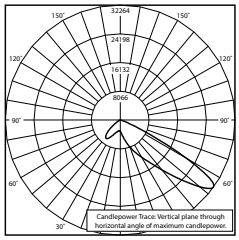
Automotive FrontLineOptic™ Distribution								
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,650	B1 U0 G1	3,800	B1 U0 G1	2,810	B1 U0 G1	3,800	B1 U0 G1
6L	5,475	B1 U0 G1	5,700	B1 U0 G1	4,220	B1 U0 G1	5,700	B1 U0 G1
9L	8,225	B2 U0 G1	8,550	B2 U0 G1	6,325	B1 U0 G1	8,550	B2 U0 G1
11L	10,025	B2 U0 G2	10,450	B2 U0 G2	7,750	B2 U0 G1	10,450	B2 U0 G2
16L	14,650	B2 U0 G2	15,200	B2 U0 G2	11,275	B2 U0 G2	15,200	B2 U0 G2
22L	20,100	B3 U0 G3	20,900	B3 U0 G3	15,500	B2 U0 G2	20,900	B3 U0 G3
30L	27,400	B3 U0 G3	28,500	B3 U0 G3	21,100	B3 U0 G3	28,500	B3 U0 G3
40L	36,500	B4 U0 G3	38,000	B4 U0 G3	28,100	B3 U0 G3	38,000	B4 U0 G3
50L	45,600	B4 U0 G3	47,500	B4 U0 G3	35,200	B4 U0 G3	47,500	B4 U0 G3
65L	59,300	B5 U0 G4	61,800	B5 U0 G4	45,700	B4 U0 G3	61,800	B5 U0 G4
75L	68,400	B5 U0 G4	71,300	B5 U0 G4	52,800	B4 U0 G4	71,300	B5 U0 G4
85L	77,600	B5 U0 G4	80,800	B5 U0 G4	59,800	B5 U0 G4	80,800	B5 U0 G4

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

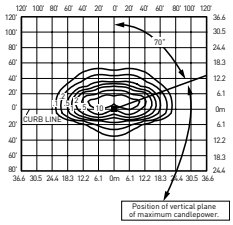
Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

AB



RESTL Test Report #: PL17448-001A
OSQL-C-40L-30K7-AB-UL-xx-xx-xx
Initial Delivered Lumens: 26,118



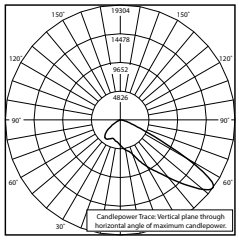
OSQL-C-40L-40K7-AB-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 26,200
Initial FC at grade

Automotive FrontLineOptic™ w/BLS Distribution (factory-installed)

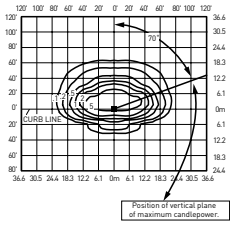
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,510	B1 U0 G0	2,620	B1 U0 G0	1,940	B1 U0 G0	2,620	B1 U0 G0
6L	3,760	B1 U0 G0	3,920	B1 U0 G0	2,900	B1 U0 G0	3,920	B1 U0 G0
9L	5,650	B1 U0 G1	5,875	B1 U0 G1	4,350	B1 U0 G0	5,875	B1 U0 G1
11L	6,900	B1 U0 G1	7,200	B1 U0 G1	5,325	B1 U0 G1	7,200	B1 U0 G1
16L	10,075	B2 U0 G1	10,450	B2 U0 G1	7,750	B1 U0 G1	10,450	B2 U0 G1
22L	13,800	B2 U0 G1	14,375	B2 U0 G1	10,650	B2 U0 G1	14,375	B2 U0 G1
30L	18,800	B2 U0 G1	19,600	B2 U0 G1	14,525	B2 U0 G1	19,600	B2 U0 G1
40L	25,100	B3 U0 G2	26,200	B3 U0 G2	19,400	B2 U0 G1	26,200	B3 U0 G2
50L	31,400	B3 U0 G2	32,700	B3 U0 G2	24,200	B3 U0 G2	32,700	B3 U0 G2
65L	40,800	B3 U0 G2	42,500	B4 U0 G2	31,500	B3 U0 G2	42,500	B4 U0 G2
75L	47,100	B4 U0 G3	49,000	B4 U0 G3	36,300	B3 U0 G2	49,000	B4 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

AF W/OSQ-*-C-BLSF



RESTL Test Report #: PL17533-001A
OSQL-C-40L-30K7-AF-UL-xx-xx-xx w/OSQ-L-C-BLSF
Initial Delivered Lumens: 19,828



OSQL-C-40L-40K7-AF-UL w/OSQ-L-C-BLSF
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 26,200
Initial FC at grade

Automotive FrontLineOptic™ w/OSQ-*-C-BLSF (field-installed)

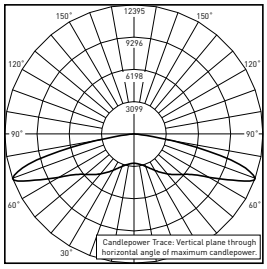
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	2,100	B1 U0 G1	2,180	B1 U0 G1	1,610	B0 U0 G1	2,180	B1 U0 G1
6L	3,140	B1 U0 G1	3,270	B1 U0 G1	2,420	B1 U0 G1	3,270	B1 U0 G1
9L	4,720	B1 U0 G1	4,910	B1 U0 G1	3,630	B1 U0 G1	4,910	B1 U0 G1
11L	5,750	B1 U0 G1	6,000	B1 U0 G1	4,450	B1 U0 G1	6,000	B1 U0 G1
16L	8,400	B1 U0 G1	8,725	B1 U0 G1	6,475	B1 U0 G1	8,725	B1 U0 G1
22L	11,550	B2 U0 G1	12,000	B2 U0 G1	8,900	B1 U0 G1	12,000	B2 U0 G1
30L	15,700	B2 U0 G2	16,400	B2 U0 G2	12,100	B2 U0 G1	16,400	B2 U0 G2
40L	21,000	B3 U0 G2	21,800	B3 U0 G2	16,100	B2 U0 G2	21,800	B3 U0 G2
50L	26,200	B3 U0 G2	27,300	B3 U0 G2	20,200	B3 U0 G2	27,300	B3 U0 G2
65L	34,000	B3 U0 G2	35,500	B3 U0 G2	26,200	B3 U0 G2	35,500	B3 U0 G2
75L	39,300	B3 U0 G3	40,900	B3 U0 G3	30,300	B3 U0 G2	40,900	B3 U0 G3
85L	44,500	B3 U0 G3	46,400	B4 U0 G3	34,300	B3 U0 G3	46,400	B4 U0 G3

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

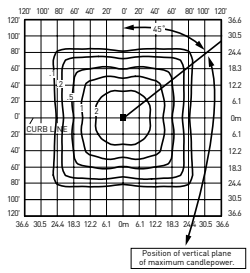
Photometry

All published luminaire photometric testing performed to IES LM-79 standards. To obtain an IES file specific to your project consult: https://creelighting.com/products/outdoor/area/osq-series

5M



RESTL Test Report #: PL17909-001A
Configured
OSQL-C-30L-30K7-5M-UL-xx-xx-xx
Initial Delivered Lumens: 28,800



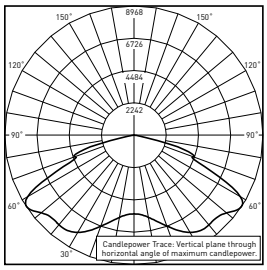
OSQL-C-30L-30K7-5M-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 28,800
Initial FC at grade

Type V Mid Distribution

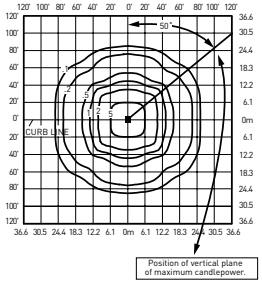
Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,840	B2 U0 G1	4,000	B2 U0 G1	2,960	B2 U0 G1	4,000	B2 U0 G1
6L	5,750	B3 U0 G1	6,000	B3 U0 G1	4,440	B2 U0 G1	6,000	B3 U0 G1
9L	8,650	B3 U0 G2	9,000	B3 U0 G2	6,650	B3 U0 G1	9,000	B3 U0 G2
11L	10,550	B3 U0 G2	11,000	B3 U0 G2	8,150	B3 U0 G1	11,000	B3 U0 G2
16L	15,400	B4 U0 G2	16,000	B4 U0 G2	11,850	B4 U0 G2	16,000	B4 U0 G2
22L	21,100	B4 U0 G2	22,000	B4 U0 G2	16,300	B4 U0 G2	22,000	B4 U0 G2
30L	28,800	B5 U0 G3	30,000	B5 U0 G3	22,200	B4 U0 G2	30,000	B5 U0 G3
40L	38,400	B5 U0 G4	40,000	B5 U0 G4	29,600	B5 U0 G3	40,000	B5 U0 G4
50L	48,000	B5 U0 G4	50,000	B5 U0 G4	37,000	B5 U0 G4	50,000	B5 U0 G4
65L	62,400	B5 U0 G5	65,000	B5 U0 G5	48,100	B5 U0 G4	65,000	B5 U0 G5
75L	72,000	B5 U0 G5	75,000	B5 U0 G5	55,500	B5 U0 G4	75,000	B5 U0 G5
85L	81,600	B5 U0 G5	85,000	B5 U0 G5	62,900	B5 U0 G5	85,000	B5 U0 G5

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

5N



RESTL Test Report #: PL17911-001A
Configured
OSQL-C-30L-30K7-5N-UL-xx-xx-xx
Initial Delivered Lumens: 28,800



OSQL-C-30L-30K7-5N-UL
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 28,800
Initial FC at grade

Type V Narrow Distribution

Lumen Package	3000K (70 CRI)		4000K (70 CRI)		5000K (90 CRI)		5700K (70 CRI)	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20	Initial Delivered Lumens*	BUG Ratings** Per TM-15-20
4L	3,840	B2 U0 G0	4,000	B2 U0 G0	2,960	B1 U0 G0	4,000	B2 U0 G0
6L	5,750	B2 U0 G1	6,000	B2 U0 G1	4,440	B2 U0 G0	6,000	B2 U0 G1
9L	8,650	B3 U0 G1	9,000	B3 U0 G1	6,650	B2 U0 G1	9,000	B3 U0 G1
11L	10,550	B3 U0 G1	11,000	B3 U0 G1	8,150	B2 U0 G1	11,000	B3 U0 G1
16L	15,400	B3 U0 G2	16,000	B3 U0 G2	11,850	B3 U0 G1	16,000	B3 U0 G2
22L	21,100	B4 U0 G2	22,000	B4 U0 G2	16,300	B3 U0 G2	22,000	B4 U0 G2
30L	28,800	B4 U0 G2	30,000	B4 U0 G2	22,200	B4 U0 G2	30,000	B4 U0 G2
40L	38,400	B5 U0 G2	40,000	B5 U0 G2	29,600	B4 U0 G2	40,000	B5 U0 G2
50L	48,000	B5 U0 G3	50,000	B5 U0 G3	37,000	B5 U0 G2	50,000	B5 U0 G3
65L	62,400	B5 U0 G4	65,000	B5 U0 G4	48,100	B5 U0 G3	65,000	B5 U0 G4
75L	72,000	B5 U0 G4	75,000	B5 U0 G4	55,500	B5 U0 G3	75,000	B5 U0 G4
85L	81,600	B5 U0 G4	85,000	B5 U0 G4	62,900	B5 U0 G4	85,000	B5 U0 G4

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: https://www.ies.org/wp-content/uploads/2017/03/TM-15-11BUGRatingsAddendum.pdf. Valid with no tilt

Photometry

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https://creelighting.com/products/outdoor/area/osq-series

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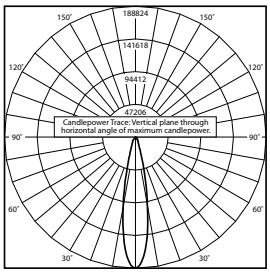
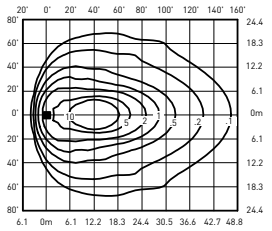


RESTL Test Report #: PL17450-001A
OSQL-C-40L-30K7-33-UL-xx-xx-xx
Initial Delivered Lumens: 36,102



OSQL-C-40L-40K7-33-UL
Mounting Height: 25' (7.6m) A.F.G., 60° Tilt
Initial Delivered Lumens: 40,000
Initial FC at grade

NEMA® 3x3 Distribution				
Lumen Package	3000K (70 CRI)	4000K (70 CRI)	5000K (90CRI)	5700K (70 CRI)
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
4L	3,840	4,000	2,960	4,000
6L	5,750	6,000	4,440	6,000
9L	8,650	9,000	6,650	9,000
11L	10,550	11,000	8,150	11,000
16L	15,400	16,000	11,850	16,000
22L	21,100	22,000	16,300	22,000
30L	28,800	30,000	22,200	30,000
40L	38,400	40,000	29,600	40,000
50L	48,000	50,000	37,000	50,000
65L	62,400	65,000	48,100	65,000
75L	72,000	75,000	55,500	75,000
85L	81,600	85,000	62,900	85,000

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

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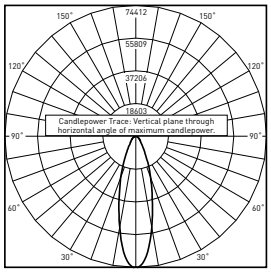
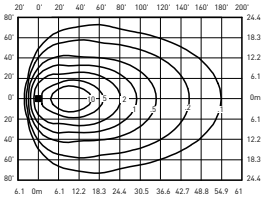


RESTL Test Report #: PL17748-001A
OSQL-C-40L-30K7-44-UL-xx-xx-xx
Initial Delivered Lumens: 35,349



OSQL-C-40L-40K7-44-UL
Mounting Height: 25' (7.6m) A.F.G., 60° Tilt
Initial Delivered Lumens: 40,000
Initial FC at grade

NEMA® 4x4 Distribution				
Lumen Package	3000K (70 CRI)	4000K (70 CRI)	5000K (90CRI)	5700K (70 CRI)
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
4L	3,840	4,000	2,960	4,000
6L	5,750	6,000	4,440	6,000
9L	8,650	9,000	6,650	9,000
11L	10,550	11,000	8,150	11,000
16L	15,400	16,000	11,850	16,000
22L	21,100	22,000	16,300	22,000
30L	28,800	30,000	22,200	30,000
40L	38,400	40,000	29,600	40,000
50L	48,000	50,000	37,000	50,000
65L	62,400	65,000	48,100	65,000
75L	72,000	75,000	55,500	75,000
85L	81,600	85,000	62,900	85,000

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

Photometry

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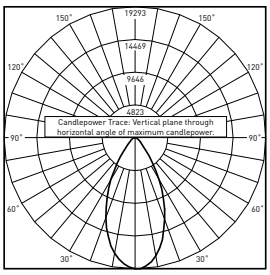
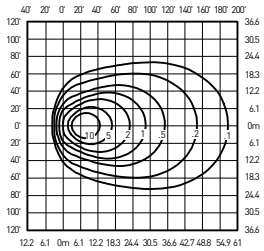
https://creelighting.com/products/outdoor/area/osq-series

55



RESTL Test Report #: PL17771-001A
OSQL-C-40L-30K7-55-UL-xx-xx-xx
Initial Delivered Lumens: 37,424

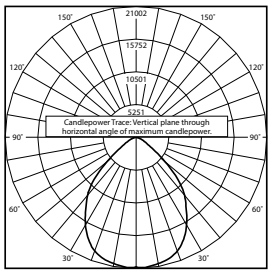


OSQL-C-40L-40K7-55-UL
Mounting Height: 25' (7.6m) A.F.G., 60° Tilt
Initial Delivered Lumens: 40,000
Initial FC at grade

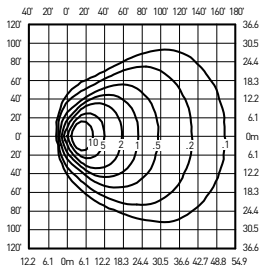
NEMA® 5x5 Distribution				
Lumen Package	3000K (70 CRI)	4000K (70 CRI)	5000K (90CRI)	5700K (70 CRI)
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
4L	3,840	4,000	2,960	4,000
6L	5,750	6,000	4,440	6,000
9L	8,650	9,000	6,650	9,000
11L	10,550	11,000	8,150	11,000
16L	15,400	16,000	11,850	16,000
22L	21,100	22,000	16,300	22,000
30L	28,800	30,000	22,200	30,000
40L	38,400	40,000	29,600	40,000
50L	48,000	50,000	37,000	50,000
65L	62,400	65,000	48,100	65,000
75L	72,000	75,000	55,500	75,000
85L	81,600	85,000	62,900	85,000

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

66



RESTL Test Report #: PL17439-001A
OSQL-C-40L-30K7-66-UL-xx-xx-xx
Initial Delivered Lumens: 37,525



OSQL-C-40L-40K7-66-UL
Mounting Height: 25' (7.6m) A.F.G., 60° Tilt
Initial Delivered Lumens: 40,000
Initial FC at grade

NEMA® 6x6 Distribution				
Lumen Package	3000K (70 CRI)	4000K (70 CRI)	5000K (90CRI)	5700K (70 CRI)
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
4L	3,840	4,000	2,960	4,000
6L	5,750	6,000	4,440	6,000
9L	8,650	9,000	6,650	9,000
11L	10,550	11,000	8,150	11,000
16L	15,400	16,000	11,850	16,000
22L	21,100	22,000	16,300	22,000
30L	28,800	30,000	22,200	30,000
40L	38,400	40,000	29,600	40,000
50L	48,000	50,000	37,000	50,000
65L	62,400	65,000	48,100	65,000
75L	72,000	75,000	55,500	75,000
85L	81,600	85,000	62,900	85,000

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

Photometry

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https://creelighting.com/products/outdoor/area/osq-series

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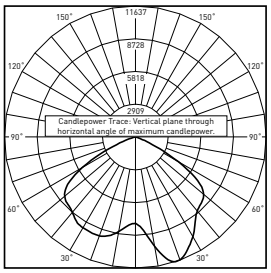
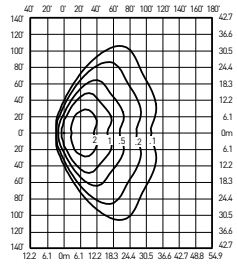


RESTL Test Report #: PL17921-001A
OSQM-C-16L-40K7-75-UL-xx-xx-xx
Initial Delivered Lumens: 16,933



OSQL-C-16L-40K7-75-UL
Mounting Height: 25' (7.6m) A.F.G., 60° Tilt
Initial Delivered Lumens: 16,000
Initial FC at grade

NEMA® 7x5 Distribution				
Lumen Package	3000K (70 CRI)	4000K (70 CRI)	5000K (90CRI)	5700K (70 CRI)
	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*	Initial Delivered Lumens*
4L	3,840	4,000	2,960	4,000
6L	5,750	6,000	4,440	6,000
9L	8,650	9,000	6,650	9,000
11L	10,550	11,000	8,150	11,000
16L	15,400	16,000	11,850	16,000
22L	21,100	22,000	16,300	22,000
30L	28,800	30,000	22,200	30,000
40L	38,400	40,000	29,600	40,000
50L	48,000	50,000	37,000	50,000
65L	62,400	65,000	48,100	65,000
75L	72,000	75,000	55,500	75,000
85L	81,600	85,000	62,900	85,000

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

Luminaire EPA

Adjustable Arm Mount – OSQ-ML-C-AA Weight: Medium - 19.3 lbs. (8.8kg); Large - 28.4 lbs. (12.9kg); **OSQ-X-C-DA** Weight: Extra Large - 48.6 lbs. (22kg)								
Luminaire	Single	2 @ 180˚	2 @ 90˚	3 @ 90˚	3 @ 120˚	3 @ 180˚	4 @ 180˚	4 @ 90˚
	Tenon Configuration (0˚-90˚ Tilt); If used with Cree Lighting tenons, please add tenon EPA with Luminaire EPA							
	PB-1A*; PT-1+; PW-1A3**	PB-2A*; PB-2R2.375; PD-2A4(180)+; PT-2(180)+; PW-2A3**	PB-2A*; PB-2R2.375; PD-2A4(90)+; PT-2(90)+; PW-2A3**	PB-3A*; PB-3R2.375; PD-3A4(90)+; PT-3(90)+	PB-3A*; PB-3R2.375; PT-3(120)+	PB-3A*; PB-3R2.375	PB-4A*(180); PB-4R2.375	PB-4A*(90); PB-4R2.375; PD-4A4(90)+; PT-4(90)+
	0˚ Tilt							
OSQM	0.69	1.38	1.11	1.80	2.01	1.38	1.73	2.22
OSQL	0.78	1.55	1.30	2.07	2.33	1.55	1.94	2.60
OSQX	0.98	1.95	1.65	2.63	2.97	1.95	2.44	3.31
	45˚ Tilt							
OSQM	1.41	2.81	2.10	3.50	4.23	4.22	5.63	4.19
OSQL	2.62	5.23	3.39	6.01	6.91	7.85	10.46	6.79
OSQX	4.35	8.70	5.33	9.68	9.65	13.05	17.40	10.66
	90˚ Tilt* **							
OSQM	1.89	3.79	2.58	4.48	5.56	5.68	7.57	5.17
OSQL	3.52	7.03	4.29	7.81	9.14	10.55	14.07	8.59
OSQX	5.84	11.68	6.82	12.66	12.78	17.52	23.36	13.63

* Specify pole size: 3 (3"), 4 (4"), 5 (5"), or 6 (6") for single, double or triple luminaire orientation or 4 (4"), 5 (5"), or 6 (6") for quad luminaire orientation
** These EPA values must be multiplied by the following ratio: Fixture Mounting Height/Total Pole Height. Specify pole size: 3 (3"), 4 (4"), 5 (5"), or 6 (6")
*** PD-2A4(90), PT-2(90), PD-3A4(90), PT-3(90), PD-4A4(90), PT-4(90) are not compatible with 90 degree tilt
+ PT & PD aluminum tenons are not suitable for use with OSQX luminaires.

Tenon EPA

Part Number	EPA
PB-1A*	None
PB-2A*	0.82
PB-3A*	1.52
PB-4A*(180)	2.22
PB-4A*(90)	1.11
PB-2R2.375	0.92
PB-3R2.375	1.62
PB-4R2.375	2.32
PD Series Tenons	0.09
PT Series Tenons	0.10
PW-1A3**	0.47
PW-2A3**	0.94
WM-2	0.08
WM-4	0.25
WM-DM	None

* Specify pole size: 3 (3"), 4 (4"), 5 (5"), or 6 (6") for single, double or triple luminaire orientation or 4 (4"), 5 (5"), or 6 (6") for quad luminaire orientation
** These EPA values must be multiplied by the following ratio: Fixture Mounting Height/Total Pole Height. Specify pole size: 3 (3"), 4 (4"), 5 (5"), or 6 (6")

Tenons and Brackets‡ (must specify color)

Square Internal Mount Vertical Tenons (Steel)
- Mounts to 3-6" (76-152mm) square aluminum or steel poles

PB-1A* – Single
PB-2A* – 180˚ Twin
PB-3A* – 180˚ Triple
PB-4A*(90) – 90˚ Quad
PB-4A*(180) – 180˚ Quad

Square Internal Mount Horizontal Tenons (Aluminum)
- Mounts to 4" (102mm) square aluminum or steel poles
- Not for use with OSQX luminaires

PD-2A4(90) – 90˚ Twin
PD-2A4(180) – 180˚ Twin
PD-3A4(90) – 90˚ Triple
PD-4A4(90) – 90˚ Quad

Wall Mount Brackets
- Mounts to wall or roof

WM-2 – Horizontal for OSQ-ML-C-AA or OSQ-X-C-AA mounts
WM-4 – L-Shape for OSQ-ML-C-AA or OSQ-X-C-AA mounts
WM-DM – Plate for OSQ-ML-C-DA mount

Round External Mount Vertical Tenons (Steel)
- Mounts to 2.375" (60mm) O.D. round aluminum or steel poles or tenons

PB-2R2.375 – Twin
PB-3R2.375 – Triple
PB-4R2.375 – Quad

Round External Mount Horizontal Tenons (Aluminum)
- Mounts to 2.375" (60mm) O.D. round aluminum or steel poles or tenons
- Mounts to square pole with PB-1A* tenon
- Not for use with OSQX luminaires

PT-1 – Single (Vertical)
PT-2(90) – 90˚ Twin
PT-2(180) – 180˚ Twin
PT-3(90) – 90˚ Triple
PT-3(120) – 120˚ Triple
PT-4(90) – 90˚ Quad

Mid-Pole Bracket
- Mounts to square pole

PW-1A3** – Single
PW-2A3** – Double

Ground Mount Post
- For ground-mounted flood luminaires

PGM-1 - for OSQ-ML-C-AA or OSQ-X-C-AA mounts

‡ Refer to the Bracket and Tenons spec sheet for more details

Luminaire EPA

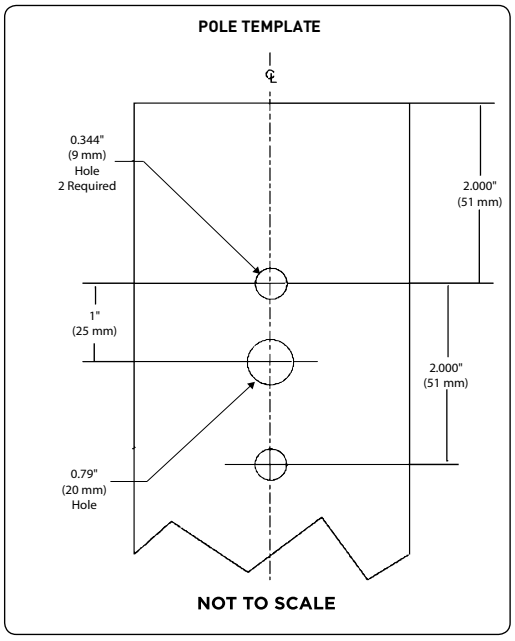
Direct Arm Mount – OSQ-ML-C-DA Weight: Medium - 19.7 lbs. (8.9kg); Large - 28.8 lbs. (13.1kg); **OSQ-X-C-DA** Weight: Extra Large - 45.8 lbs. (20.8kg)						
Luminaire	Single	2 @ 180˚	2 @ 90˚	3 @ 90˚	3 @ 120˚	4 @ 90˚
OSQM	0.63	1.26	0.98	1.61	1.79	1.97
OSQL	0.72	1.45	1.24	1.97	2.23	2.49
OSQX	0.91	1.83	1.52	2.43	2.74	3.04

Direct Mount Configurations

Compatibility with Direct Mount Brackets					
Size	2 @ 90˚	2 @ 180˚	3 @ 90˚	3 @ 120˚	4 @ 90˚
3" Square					
Medium/Large	✓	✓	✓	N/A	✓
Extra Large	N/A	✓	N/A	N/A	N/A
3" Round					
Medium/Large	N/A	✓	N/A	✓	N/A
Extra Large	N/A	N/A	N/A	N/A	N/A
4" Square					
Medium/Large	✓	✓	✓	N/A	✓
Extra Large	✓	✓	✓	N/A	✓
4" Round					
Medium/Large	✓	✓	✓	✓	✓
Extra Large	✓	✓	✓	✓	✓
5" Square					
Medium/Large	✓	✓	✓	N/A	✓
Extra Large	✓	✓	✓	N/A	✓
5" Round					
Medium/Large	✓	✓	✓	✓	✓
Extra Large	✓	✓	✓	✓	✓
6" + Square					
Medium/Large	✓	✓	✓	N/A	✓
Extra Large	✓	✓	✓	N/A	✓
6" + Round					
Medium/Large	✓	✓	✓	✓	✓
Extra Large	✓	✓	✓	✓	✓

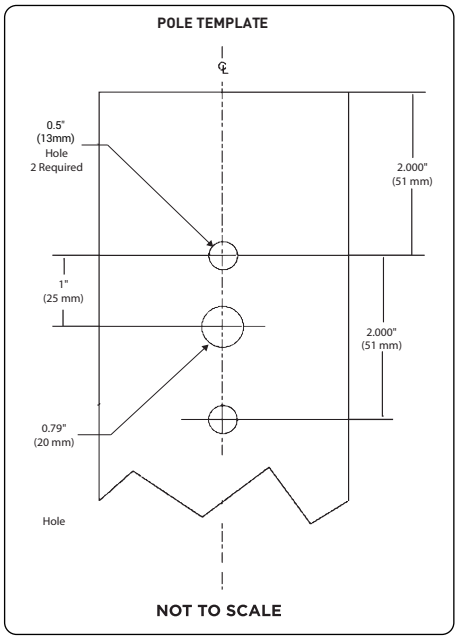
Fixture Mounting Drill Pattern for OSQ-ML-C-DA Mount

Note: When using with Cree Lighting poles, order the BLANK Fixture Mounting Drill Pattern.



Fixture Mounting Drill Pattern for OSQ-X-C-DA

Note: When using with Cree Lighting poles, order the Q Fixture Mounting Drill Pattern.



Luminaire EPA

Trunnion Mount – OSQ-ML-C-TM Weight: Medium - 23.2 lbs. (10.5kg); Large - 32.3 lbs. (14.7kg)	
Single	
Medium	**Large**
0˚ Tilt	
0.69	0.78
45˚ Tilt	
1.41	2.62
90˚ Tilt	
1.89	3.52

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 4L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-in-stalled BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/ External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	26	3,650	3,840	2,510	2,300	2,100	30	4000 L	4000 L	3000 L	2000 L
	40K (70 CRI)		3,800	4,000	2,620	2,400	2,180		4000 L	4000 L	3000 L	2000 L
	50K (90 CRI)		2,810	2,960	1,940	1,770	1,610		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,800	4,000	2,620	2,400	2,180		4000 L	4000 L	3000 L	2000 L
Q8/X8	30K (70 CRI)	24	3,480	3,660	2,390	2,190	2,000	20	3000 L	4000 L	2000 L	2000 L
	40K (70 CRI)		3,630	3,820	2,500	2,290	2,080		4000 L	4000 L	3000 L	2000 L
	50K (90 CRI)		2,680	2,820	1,840	1,690	1,540		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,630	3,820	2,500	2,290	2,080		4000 L	4000 L	3000 L	2000 L
Q7/X7	30K (70 CRI)	23	3,340	3,510	2,300	2,100	1,920	20	3000 L	4000 L	2000 L	2000 L
	40K (70 CRI)		3,480	3,660	2,390	2,190	2,000		3000 L	4000 L	2000 L	2000 L
	50K (90 CRI)		2,580	2,710	1,770	1,620	1,480		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,480	3,660	2,390	2,190	2,000		3000 L	4000 L	2000 L	2000 L
Q6/X6	30K (70 CRI)	22	3,220	3,390	2,220	2,030	1,850	20	3000 L	3000 L	2000 L	2000 L
	40K (70 CRI)		3,360	3,540	2,310	2,120	1,930		3000 L	4000 L	2000 L	2000 L
	50K (90 CRI)		2,490	2,620	1,710	1,570	1,430		2000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,360	3,540	2,310	2,120	1,930		3000 L	4000 L	2000 L	2000 L
Q5/X5	30K (70 CRI)	20	2,950	3,100	2,030	1,860	1,690	20	3000 L	3000 L	2000 L	2000 L
	40K (70 CRI)		3,070	3,230	2,110	1,930	1,760		3000 L	3000 L	2000 L	2000 L
	50K (90 CRI)		2,270	2,390	1,560	1,430	1,300		2000 L	2000 L	2000 L	1000 L
	57K (70 CRI)		3,070	3,230	2,110	1,930	1,760		3000 L	3000 L	2000 L	2000 L
Q4/X4	30K (70 CRI)	18	2,680	2,820	1,840	1,690	1,540	20	3000 L	3000 L	2000 L	2000 L
	40K (70 CRI)		2,790	2,940	1,920	1,760	1,600		3000 L	3000 L	2000 L	2000 L
	50K (90 CRI)		2,060	2,170	1,420	1,300	1,180		2000 L	2000 L	1000 L	1000 L
	57K (70 CRI)		2,790	2,940	1,920	1,760	1,600		3000 L	3000 L	2000 L	2000 L
Q3/X3	30K (70 CRI)	16	2,470	2,600	1,700	1,560	1,420	20	2000 L	3000 L	2000 L	2000 L
	40K (70 CRI)		2,580	2,710	1,770	1,620	1,480		3000 L	3000 L	2000 L	2000 L
	50K (90 CRI)		1,910	2,010	1,310	1,200	1,100		2000 L	2000 L	1000 L	1000 L
	57K (70 CRI)		2,580	2,710	1,770	1,620	1,480		3000 L	3000 L	2000 L	2000 L
Q2/X2	30K (70 CRI)	15	2,220	2,340	1,530	1,400	1,270	20	2000 L	2000 L	2000 L	1000 L
	40K (70 CRI)		2,320	2,440	1,600	1,460	1,330		2000 L	2000 L	2000 L	1000 L
	50K (90 CRI)		1,720	1,810	1,180	1,080	990		2000 L	2000 L	1000 L	1000 L
	57K (70 CRI)		2,320	2,440	1,600	1,460	1,330		2000 L	2000 L	2000 L	1000 L
Q1/X1	30K (70 CRI)	13	1,970	2,070	1,350	1,240	1,130	10	2000 L	2000 L	1000 L	1000 L
	40K (70 CRI)		2,050	2,160	1,410	1,290	1,180		2000 L	2000 L	1000 L	1000 L
	50K (90 CRI)		1,520	1,600	1,050	960	870		2000 L	2000 L	1000 L	1000 L
	57K (70 CRI)		2,050	2,160	1,410	1,290	1,180		2000 L	2000 L	1000 L	1000 L

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 6L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	37	5,475	5,750	3,760	3,440	3,140	40	5000 L	6000 L	4000 L	3000 L
	40K (70 CRI)		5,700	6,000	3,920	3,590	3,270		6000 L	6000 L	4000 L	4000 L
	50K (90 CRI)		4,220	4,440	2,900	2,660	2,420		4000 L	4000 L	3000 L	3000 L
	57K (70 CRI)		5,700	6,000	3,920	3,590	3,270		6000 L	6000 L	4000 L	4000 L
Q8/X8	30K (70 CRI)	36	5,200	5,475	3,580	3,280	2,980	40	5000 L	5000 L	4000 L	3000 L
	40K (70 CRI)		5,450	5,725	3,740	3,430	3,130		5000 L	6000 L	4000 L	3000 L
	50K (90 CRI)		4,030	4,240	2,770	2,540	2,310		4000 L	4000 L	3000 L	3000 L
	57K (70 CRI)		5,450	5,725	3,740	3,430	3,130		5000 L	6000 L	4000 L	3000 L
Q7/X7	30K (70 CRI)	34	4,990	5,250	3,430	3,140	2,860	30	5000 L	5000 L	3000 L	3000 L
	40K (70 CRI)		5,200	5,475	3,580	3,280	2,980		5000 L	5000 L	4000 L	3000 L
	50K (90 CRI)		3,860	4,060	2,650	2,430	2,220		4000 L	4000 L	3000 L	2000 L
	57K (70 CRI)		5,200	5,475	3,580	3,280	2,980		5000 L	5000 L	4000 L	3000 L
Q6/X6	30K (70 CRI)	32	4,820	5,075	3,320	3,040	2,770	30	5000 L	5000 L	3000 L	3000 L
	40K (70 CRI)		5,050	5,300	3,470	3,170	2,900		5000 L	5000 L	3000 L	3000 L
	50K (90 CRI)		3,730	3,920	2,560	2,350	2,140		4000 L	4000 L	3000 L	2000 L
	57K (70 CRI)		5,050	5,300	3,470	3,170	2,900		5000 L	5000 L	3000 L	3000 L
Q5/X5	30K (70 CRI)	29	4,420	4,650	3,040	2,780	2,540	30	4000 L	5000 L	3000 L	3000 L
	40K (70 CRI)		4,610	4,850	3,170	2,900	2,650		5000 L	5000 L	3000 L	3000 L
	50K (90 CRI)		3,410	3,590	2,350	2,150	1,960		3000 L	4000 L	2000 L	2000 L
	57K (70 CRI)		4,610	4,850	3,170	2,900	2,650		5000 L	5000 L	3000 L	3000 L
Q4/X4	30K (70 CRI)	27	4,010	4,220	2,760	2,530	2,300	30	4000 L	4000 L	3000 L	3000 L
	40K (70 CRI)		4,180	4,400	2,880	2,640	2,400		4000 L	4000 L	3000 L	3000 L
	50K (90 CRI)		3,100	3,260	2,130	1,950	1,780		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		4,180	4,400	2,880	2,640	2,400		4000 L	4000 L	3000 L	3000 L
Q3/X3	30K (70 CRI)	24	3,710	3,900	2,550	2,340	2,130	20	4000 L	4000 L	3000 L	2000 L
	40K (70 CRI)		3,870	4,070	2,660	2,440	2,220		4000 L	4000 L	3000 L	2000 L
	50K (90 CRI)		2,860	3,010	1,970	1,800	1,640		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,870	4,070	2,660	2,440	2,220		4000 L	4000 L	3000 L	2000 L
Q2/X2	30K (70 CRI)	21	3,340	3,510	2,300	2,100	1,920	20	3000 L	4000 L	2000 L	2000 L
	40K (70 CRI)		3,480	3,660	2,390	2,190	2,000		3000 L	4000 L	2000 L	2000 L
	50K (90 CRI)		2,580	2,710	1,770	1,620	1,480		3000 L	3000 L	2000 L	2000 L
	57K (70 CRI)		3,480	3,660	2,390	2,190	2,000		3000 L	4000 L	2000 L	2000 L
Q1/X1	30K (70 CRI)	19	2,950	3,100	2,030	1,860	1,690	20	3000 L	3000 L	2000 L	2000 L
	40K (70 CRI)		3,070	3,230	2,110	1,930	1,760		3000 L	3000 L	2000 L	2000 L
	50K (90 CRI)		2,270	2,390	1,560	1,430	1,300		2000 L	2000 L	2000 L	1000 L
	57K (70 CRI)		3,070	3,230	2,110	1,930	1,760		3000 L	3000 L	2000 L	2000 L

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 9L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	55	8,225	8,650	5,650	5,175	4,720	60	8000 L	9000 L	6000 L	5000 L
	40K (70 CRI)		8,550	9,000	5,875	5,400	4,910		9000 L	9000 L	6000 L	5000 L
	50K (90 CRI)		6,325	6,650	4,350	3,980	3,630		6000 L	7000 L	4000 L	4000 L
	57K (70 CRI)		8,550	9,000	5,875	5,400	4,910		9000 L	9000 L	6000 L	5000 L
Q8/X8	30K (70 CRI)	53	7,850	8,250	5,400	4,940	4,510	50	8000 L	8000 L	5000 L	5000 L
	40K (70 CRI)		8,150	8,575	5,600	5,125	4,680		8000 L	9000 L	6000 L	5000 L
	50K (90 CRI)		6,025	6,350	4,150	3,800	3,460		6000 L	6000 L	4000 L	4000 L
	57K (70 CRI)		8,150	8,575	5,600	5,125	4,680		8000 L	9000 L	6000 L	5000 L
Q7/X7	30K (70 CRI)	50	7,500	7,900	5,175	4,730	4,310	50	8000 L	8000 L	5000 L	5000 L
	40K (70 CRI)		7,825	8,225	5,375	4,930	4,490		8000 L	8000 L	5000 L	5000 L
	50K (90 CRI)		5,775	6,075	3,970	3,640	3,310		6000 L	6000 L	4000 L	4000 L
	57K (70 CRI)		7,825	8,225	5,375	4,930	4,490		8000 L	8000 L	5000 L	5000 L
Q6/X6	30K (70 CRI)	48	7,275	7,650	5,000	4,580	4,180	50	7000 L	8000 L	5000 L	5000 L
	40K (70 CRI)		7,550	7,950	5,200	4,760	4,330		8000 L	8000 L	5000 L	5000 L
	50K (90 CRI)		5,575	5,875	3,840	3,520	3,200		6000 L	6000 L	4000 L	4000 L
	57K (70 CRI)		7,550	7,950	5,200	4,760	4,330		8000 L	8000 L	5000 L	5000 L
Q5/X5	30K (70 CRI)	43	6,650	7,000	4,580	4,190	3,820	40	7000 L	7000 L	5000 L	4000 L
	40K (70 CRI)		6,925	7,275	4,760	4,360	3,980		7000 L	7000 L	5000 L	4000 L
	50K (90 CRI)		5,100	5,375	3,510	3,220	2,930		5000 L	5000 L	4000 L	3000 L
	57K (70 CRI)		6,925	7,275	4,760	4,360	3,980		7000 L	7000 L	5000 L	4000 L
Q4/X4	30K (70 CRI)	40	6,025	6,350	4,150	3,800	3,460	40	6000 L	6000 L	4000 L	4000 L
	40K (70 CRI)		6,275	6,600	4,320	3,950	3,600		6000 L	7000 L	4000 L	4000 L
	50K (90 CRI)		4,640	4,880	3,190	2,920	2,660		5000 L	5000 L	3000 L	3000 L
	57K (70 CRI)		6,275	6,600	4,320	3,950	3,600		6000 L	7000 L	4000 L	4000 L
Q3/X3	30K (70 CRI)	36	5,575	5,875	3,840	3,520	3,200	40	6000 L	6000 L	4000 L	4000 L
	40K (70 CRI)		5,800	6,100	3,990	3,650	3,330		6000 L	6000 L	4000 L	4000 L
	50K (90 CRI)		4,290	4,510	2,950	2,700	2,460		4000 L	5000 L	3000 L	3000 L
	57K (70 CRI)		5,800	6,100	3,990	3,650	3,330		6000 L	6000 L	4000 L	4000 L
Q2/X2*	30K (70 CRI)	32	5,025	5,275	3,450	3,160	2,880	30	5000 L	5000 L	3000 L	3000 L
	40K (70 CRI)		5,225	5,500	3,600	3,290	3,000		5000 L	6000 L	4000 L	3000 L
	50K (90 CRI)		3,860	4,060	2,650	2,430	2,220		4000 L	4000 L	3000 L	2000 L
	57K (70 CRI)		5,225	5,500	3,600	3,290	3,000		5000 L	6000 L	4000 L	3000 L
Q1/X1*	30K (70 CRI)	29	4,430	4,660	3,050	2,790	2,540	30	4000 L	5000 L	3000 L	3000 L
	40K (70 CRI)		4,610	4,850	3,170	2,900	2,650		5000 L	5000 L	3000 L	3000 L
	50K (90 CRI)		3,400	3,580	2,340	2,140	1,950		3000 L	4000 L	2000 L	2000 L
	57K (70 CRI)		4,610	4,850	3,170	2,900	2,650		5000 L	5000 L	3000 L	3000 L

* X2 and X1 options not available with 9L lumen package with UL voltage.

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 11L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/ External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	68	10,025	10,550	6,900	6,325	5,750	70	10000 L	11000 L	7000 L	6000 L
	40K (70 CRI)		10,450	11,000	7,200	6,600	6,000		10000 L	11000 L	7000 L	7000 L
	50K (90 CRI)		7,750	8,150	5,325	4,880	4,450		8000 L	8000 L	5000 L	5000 L
	57K (70 CRI)		10,450	11,000	7,200	6,600	5,750		10000 L	11000 L	7000 L	7000 L
Q8/X8	30K (70 CRI)	65	9,575	10,075	6,600	6,025	5,500	70	10000 L	10000 L	7000 L	6000 L
	40K (70 CRI)		9,975	10,500	6,875	6,300	5,725		10000 L	11000 L	7000 L	6000 L
	50K (90 CRI)		7,400	7,775	5,075	4,660	4,250		7000 L	8000 L	5000 L	5000 L
	57K (70 CRI)		9,975	10,500	6,875	6,300	5,725		10000 L	11000 L	7000 L	6000 L
Q7/X7	30K (70 CRI)	62	9,175	9,650	6,300	5,775	5,275	60	9000 L	10000 L	6000 L	6000 L
	40K (70 CRI)		9,550	10,050	6,575	6,025	5,475		10000 L	10000 L	7000 L	6000 L
	50K (90 CRI)		7,075	7,450	4,870	4,460	4,060		7000 L	7000 L	5000 L	4000 L
	57K (70 CRI)		9,550	10,050	6,575	6,025	5,475		10000 L	10000 L	7000 L	6000 L
Q6/X6	30K (70 CRI)	59	8,875	9,325	6,100	5,575	5,100	60	9000 L	9000 L	6000 L	6000 L
	40K (70 CRI)		9,250	9,725	6,350	5,825	5,300		9000 L	10000 L	6000 L	6000 L
	50K (90 CRI)		6,850	7,200	4,710	4,310	3,930		7000 L	7000 L	5000 L	4000 L
	57K (70 CRI)		9,250	9,725	6,350	5,825	5,300		9000 L	10000 L	6000 L	6000 L
Q5/X5	30K (70 CRI)	53	8,100	8,525	5,575	5,100	4,650	50	8000 L	9000 L	6000 L	5000 L
	40K (70 CRI)		8,450	8,900	5,825	5,325	4,850		8000 L	9000 L	6000 L	5000 L
	50K (90 CRI)		6,250	6,575	4,300	3,940	3,590		6000 L	7000 L	4000 L	4000 L
	57K (70 CRI)		8,450	8,900	5,825	5,325	4,850		8000 L	9000 L	6000 L	5000 L
Q4/X4	30K (70 CRI)	49	7,375	7,750	5,075	4,640	4,230	50	7000 L	8000 L	5000 L	5000 L
	40K (70 CRI)		7,675	8,075	5,275	4,840	4,410		8000 L	8000 L	5000 L	5000 L
	50K (90 CRI)		5,675	5,975	3,910	3,580	3,260		6000 L	6000 L	4000 L	4000 L
	57K (70 CRI)		7,675	8,075	5,275	4,840	4,410		8000 L	8000 L	5000 L	5000 L
Q3/X3	30K (70 CRI)	44	6,800	7,150	4,680	4,280	3,900	40	7000 L	7000 L	5000 L	4000 L
	40K (70 CRI)		7,075	7,450	4,870	4,460	4,060		7000 L	7000 L	5000 L	4000 L
	50K (90 CRI)		5,250	5,525	3,610	3,310	3,010		5000 L	6000 L	4000 L	3000 L
	57K (70 CRI)		7,075	7,450	4,870	4,460	4,060		7000 L	7000 L	5000 L	4000 L
Q2/X2	30K (70 CRI)	39	6,100	6,425	4,200	3,850	3,500	40	6000 L	6000 L	4000 L	4000 L
	40K (70 CRI)		6,375	6,700	4,380	4,010	3,660		6000 L	7000 L	4000 L	4000 L
	50K (90 CRI)		4,720	4,970	3,250	2,980	2,710		5000 L	5000 L	3000 L	3000 L
	57K (70 CRI)		6,375	6,700	4,380	4,010	3,660		6000 L	7000 L	4000 L	4000 L
Q1/X1	30K (70 CRI)	35	5,400	5,675	3,710	3,400	3,100	40	5000 L	6000 L	4000 L	3000 L
	40K (70 CRI)		5,625	5,925	3,870	3,550	3,230		6000 L	6000 L	4000 L	4000 L
	50K (90 CRI)		4,170	4,390	2,870	2,630	2,390		4000 L	4000 L	3000 L	3000 L
	57K (70 CRI)		5,625	5,925	3,870	3,550	3,230		6000 L	6000 L	4000 L	4000 L

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 16L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	97	14,650	15,400	10,075	9,225	8,400	100	15000 L	15000 L	10000 L	9000 L
	40K (70 CRI)		15,200	16,000	10,450	9,575	8,725		15000 L	16000 L	10000 L	10000 L
	50K (90 CRI)		11,275	11,850	7,750	7,100	6,475		11000 L	12000 L	8000 L	7000 L
	57K (70 CRI)		15,200	16,000	10,450	9,575	8,725		15000 L	16000 L	10000 L	10000 L
Q8/X8	30K (70 CRI)	93	13,975	14,700	9,600	8,800	8,025	90	14000 L	15000 L	10000 L	9000 L
	40K (70 CRI)		14,550	15,300	10,000	9,175	8,350		15000 L	15000 L	10000 L	9000 L
	50K (90 CRI)		10,750	11,300	7,400	6,775	6,175		11000 L	11000 L	7000 L	7000 L
	57K (70 CRI)		14,550	15,300	10,000	9,175	8,350		15000 L	15000 L	10000 L	9000 L
Q7/X7	30K (70 CRI)	87	13,375	14,075	9,200	8,425	7,675	90	13000 L	14000 L	9000 L	8000 L
	40K (70 CRI)		13,900	14,625	9,575	8,750	7,975		14000 L	15000 L	10000 L	9000 L
	50K (90 CRI)		10,300	10,825	7,075	6,475	5,900		10000 L	11000 L	7000 L	6000 L
	57K (70 CRI)		13,900	14,625	9,575	8,750	7,975		14000 L	15000 L	10000 L	9000 L
Q6/X6	30K (70 CRI)	84	12,950	13,625	8,900	8,150	7,425	80	13000 L	14000 L	9000 L	8000 L
	40K (70 CRI)		13,450	14,150	9,250	8,475	7,725		13000 L	14000 L	9000 L	8000 L
	50K (90 CRI)		9,950	10,475	6,850	6,275	5,700		10000 L	10000 L	7000 L	6000 L
	57K (70 CRI)		13,450	14,150	9,250	8,475	7,725		13000 L	14000 L	9000 L	8000 L
Q5/X5	30K (70 CRI)	76	11,825	12,450	8,150	7,450	6,800	80	12000 L	12000 L	8000 L	7000 L
	40K (70 CRI)		12,275	12,925	8,450	7,750	7,050		12000 L	13000 L	8000 L	8000 L
	50K (90 CRI)		9,100	9,575	6,250	5,725	5,225		9000 L	10000 L	6000 L	6000 L
	57K (70 CRI)		12,275	12,925	8,450	7,750	7,050		12000 L	13000 L	8000 L	8000 L
Q4/X4	30K (70 CRI)	70	10,750	11,300	7,400	6,775	6,175	70	11000 L	11000 L	7000 L	7000 L
	40K (70 CRI)		11,175	11,750	7,675	7,025	6,425		11000 L	12000 L	8000 L	7000 L
	50K (90 CRI)		8,275	8,700	5,700	5,200	4,750		8000 L	9000 L	6000 L	5000 L
	57K (70 CRI)		11,175	11,750	7,675	7,025	6,425		11000 L	12000 L	8000 L	7000 L
Q3/X3	30K (70 CRI)	62	9,925	10,450	6,825	6,250	5,700	60	10000 L	10000 L	7000 L	6000 L
	40K (70 CRI)		10,325	10,850	7,100	6,500	5,925		10000 L	11000 L	7000 L	7000 L
	50K (90 CRI)		7,625	8,025	5,250	4,810	4,380		8000 L	8000 L	5000 L	5000 L
	57K (70 CRI)		10,325	10,850	7,100	6,500	5,925		10000 L	11000 L	7000 L	7000 L
Q2/X2	30K (70 CRI)	55	8,925	9,400	6,150	5,625	5,125	60	9000 L	9000 L	6000 L	6000 L
	40K (70 CRI)		9,275	9,750	6,375	5,850	5,325		9000 L	10000 L	6000 L	6000 L
	50K (90 CRI)		6,875	7,225	4,720	4,330	3,950		7000 L	7000 L	5000 L	4000 L
	57K (70 CRI)		9,275	9,750	6,375	5,850	5,325		9000 L	10000 L	6000 L	6000 L
Q1*	30K (70 CRI)	50	7,900	8,300	5,425	4,970	4,530	50	8000 L	8000 L	5000 L	5000 L
	40K (70 CRI)		8,200	8,625	5,650	5,175	4,710		8000 L	9000 L	6000 L	5000 L
	50K (90 CRI)		6,050	6,375	4,170	3,820	3,470		6000 L	6000 L	4000 L	4000 L
	57K (70 CRI)		8,200	8,625	5,650	5,175	4,710		8000 L	9000 L	6000 L	5000 L

* X1 option not available with 16L lumen package.

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (rounded to nearest 1000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 22L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-in-stalled BLS)	Asymmetric Lumens w/ External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	131	20,100	21,100	13,800	12,625	11,550	130	20000 L	21000 L	14000 L	13000 L
	40K (70 CRI)		20,900	22,000	14,375	13,175	12,000		21000 L	22000 L	14000 L	13000 L
	50K (90 CRI)		15,500	16,300	10,650	9,750	8,900		16000 L	16000 L	11000 L	10000 L
	57K (70 CRI)		20,900	22,000	14,375	13,175	12,000		21000 L	22000 L	14000 L	13000 L
Q8/X8	30K (70 CRI)	126	19,100	20,100	13,150	12,050	10,975	130	19000 L	20000 L	13000 L	12000 L
	40K (70 CRI)		20,000	21,000	13,725	12,575	11,475		20000 L	21000 L	14000 L	13000 L
	50K (90 CRI)		14,825	15,600	10,200	9,350	8,500		15000 L	16000 L	10000 L	9000 L
	57K (70 CRI)		20,000	21,000	13,725	12,575	11,475		20000 L	21000 L	14000 L	13000 L
Q7/X7	30K (70 CRI)	119	18,300	19,300	12,625	11,550	10,500	120	18000 L	19000 L	13000 L	12000 L
	40K (70 CRI)		19,100	20,100	13,150	12,050	10,975		19000 L	20000 L	13000 L	12000 L
	50K (90 CRI)		14,175	14,900	9,750	8,925	8,125		14000 L	15000 L	10000 L	9000 L
	57K (70 CRI)		19,100	20,100	13,150	12,050	10,975		19000 L	20000 L	13000 L	12000 L
Q6/X6	30K (70 CRI)	114	17,800	18,700	12,225	11,200	10,225	110	18000 L	19000 L	12000 L	11000 L
	40K (70 CRI)		18,400	19,400	12,675	11,625	10,550		18000 L	19000 L	13000 L	12000 L
	50K (90 CRI)		13,700	14,400	9,425	8,625	7,875		14000 L	14000 L	9000 L	9000 L
	57K (70 CRI)		18,400	19,400	12,675	11,625	10,550		18000 L	19000 L	13000 L	12000 L
Q5/X5	30K (70 CRI)	103	16,200	17,000	11,125	10,175	9,300	100	16000 L	17000 L	11000 L	10000 L
	40K (70 CRI)		16,900	17,800	11,650	10,650	9,700		17000 L	18000 L	12000 L	11000 L
	50K (90 CRI)		12,525	13,175	8,625	7,900	7,200		13000 L	13000 L	9000 L	8000 L
	57K (70 CRI)		16,900	17,800	11,650	10,650	9,700		17000 L	18000 L	12000 L	11000 L
Q4/X4	30K (70 CRI)	95	14,725	15,500	10,125	9,275	8,450	100	15000 L	16000 L	10000 L	9000 L
	40K (70 CRI)		15,300	16,100	10,525	9,650	8,775		15000 L	16000 L	11000 L	10000 L
	50K (90 CRI)		11,375	11,975	7,825	7,175	6,525		11000 L	12000 L	8000 L	7000 L
	57K (70 CRI)		15,300	16,100	10,525	9,650	8,775		15000 L	16000 L	11000 L	10000 L
Q3/X3	30K (70 CRI)	84	13,600	14,300	9,350	8,575	7,800	80	14000 L	14000 L	9000 L	9000 L
	40K (70 CRI)		14,175	14,925	9,750	8,950	8,125		14000 L	15000 L	10000 L	9000 L
	50K (90 CRI)		10,500	11,050	7,225	6,625	6,025		11000 L	11000 L	7000 L	7000 L
	57K (70 CRI)		14,175	14,925	9,750	8,950	8,125		14000 L	15000 L	10000 L	9000 L
Q2/X2	30K (70 CRI)	75	12,250	12,875	8,425	7,700	7,025	80	12000 L	13000 L	8000 L	8000 L
	40K (70 CRI)		12,750	13,425	8,775	8,050	7,325		13000 L	13000 L	9000 L	8000 L
	50K (90 CRI)		9,450	9,950	6,500	5,950	5,425		9000 L	10000 L	7000 L	6000 L
	57K (70 CRI)		12,750	13,425	8,775	8,050	7,325		13000 L	13000 L	9000 L	8000 L
Q1/X1	30K (70 CRI)	68	10,825	11,375	7,450	6,825	6,225	70	11000 L	11000 L	7000 L	7000 L
	40K (70 CRI)		11,275	11,850	7,750	7,100	6,475		11000 L	12000 L	8000 L	7000 L
	50K (90 CRI)		8,350	8,775	5,750	5,250	4,790		8000 L	9000 L	6000 L	5000 L
	57K (70 CRI)		11,275	11,850	7,750	7,100	6,475		11000 L	12000 L	8000 L	7000 L

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (</= 24,000 lumens rounded to nearest 1000 lumens, > 24,001 lumens rounded to the nearest 2000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 30L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/ External BLS		Asymmetric / Asymmetric w/ External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	175	27,400	28,800	18,800	17,200	15,700	180	28000 L	28000 L	19000 L	17000 L
	40K (70 CRI)		28,500	30,000	19,600	18,000	16,400		28000 L	30000 L	20000 L	18000 L
	50K (90 CRI)		21,100	22,200	14,525	13,300	12,100		21000 L	22000 L	15000 L	13000 L
	57K (70 CRI)		28,500	30,000	19,600	18,000	16,400		28000 L	30000 L	20000 L	18000 L
Q8/X8	30K (70 CRI)	168	26,100	27,500	18,000	16,500	14,975	170	26000 L	28000 L	18000 L	17000 L
	40K (70 CRI)		27,200	28,600	18,700	17,100	15,600		28000 L	28000 L	19000 L	17000 L
	50K (90 CRI)		20,200	21,200	13,850	12,700	11,600		20000 L	21000 L	14000 L	13000 L
	57K (70 CRI)		27,200	28,600	18,700	17,100	15,600		28000 L	28000 L	19000 L	17000 L
Q7/X7	30K (70 CRI)	158	25,000	26,300	17,200	15,800	14,350	160	26000 L	26000 L	17000 L	16000 L
	40K (70 CRI)		26,000	27,400	17,900	16,400	14,925		26000 L	28000 L	18000 L	16000 L
	50K (90 CRI)		19,300	20,300	13,275	12,150	11,075		19000 L	20000 L	13000 L	12000 L
	57K (70 CRI)		26,000	27,400	17,900	16,400	14,925		26000 L	28000 L	18000 L	16000 L
Q6/X6	30K (70 CRI)	152	24,200	25,500	16,700	15,300	13,900	150	24000 L	26000 L	17000 L	15000 L
	40K (70 CRI)		25,200	26,500	17,300	15,900	14,475		26000 L	26000 L	17000 L	16000 L
	50K (90 CRI)		18,600	19,600	12,825	11,750	10,675		19000 L	20000 L	13000 L	12000 L
	57K (70 CRI)		25,200	26,500	17,300	15,900	14,475		26000 L	26000 L	17000 L	16000 L
Q5/X5	30K (70 CRI)	137	22,100	23,300	15,200	13,950	12,675	140	22000 L	23000 L	15000 L	14000 L
	40K (70 CRI)		23,000	24,200	15,800	14,500	13,200		23000 L	24000 L	16000 L	15000 L
	50K (90 CRI)		17,000	17,900	11,700	10,725	9,750		17000 L	18000 L	12000 L	11000 L
	57K (70 CRI)		23,000	24,200	15,800	14,500	13,200		23000 L	24000 L	16000 L	15000 L
Q4/X4	30K (70 CRI)	126	20,100	21,100	13,800	12,625	11,550	130	20000 L	21000 L	14000 L	13000 L
	40K (70 CRI)		20,900	22,000	14,375	13,175	12,000		21000 L	22000 L	14000 L	13000 L
	50K (90 CRI)		15,500	16,300	10,650	9,750	8,900		16000 L	16000 L	11000 L	10000 L
	57K (70 CRI)		20,900	22,000	14,375	13,175	12,000		21000 L	22000 L	14000 L	13000 L
Q3/X3	30K (70 CRI)	113	18,500	19,500	12,750	11,675	10,625	110	19000 L	20000 L	13000 L	12000 L
	40K (70 CRI)		19,300	20,300	13,275	12,150	11,075		19000 L	20000 L	13000 L	12000 L
	50K (90 CRI)		14,350	15,100	9,875	9,050	8,225		14000 L	15000 L	10000 L	9000 L
	57K (70 CRI)		19,300	20,300	13,275	12,150	11,075		19000 L	20000 L	13000 L	12000 L
Q2/X2	30K (70 CRI)	100	16,700	17,600	11,500	10,550	9,575	100	17000 L	18000 L	12000 L	11000 L
	40K (70 CRI)		17,400	18,300	11,975	10,950	10,000		17000 L	18000 L	12000 L	11000 L
	50K (90 CRI)		12,875	13,550	8,850	8,125	7,400		13000 L	14000 L	9000 L	8000 L
	57K (70 CRI)		17,400	18,300	11,975	10,950	10,000		17000 L	18000 L	12000 L	11000 L
Q1*	30K (70 CRI)	90	14,725	15,500	10,125	9,275	8,450	90	15000 L	16000 L	10000 L	9000 L
	40K (70 CRI)		15,400	16,200	10,600	9,700	8,850		15000 L	16000 L	11000 L	10000 L
	50K (90 CRI)		11,375	11,975	7,825	7,175	6,525		11000 L	12000 L	8000 L	7000 L
	57K (70 CRI)		15,400	16,200	10,600	9,700	8,850		15000 L	16000 L	11000 L	10000 L

* X1 option not available with 30L lumen package.

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings. When ordered with the N option, the luminaire will include an ANSI C136.15-2020 utility label that indicates the wattage (rounded to nearest 10W), the lumen output (</= 24,000 lumens rounded to nearest 1000 lumens, > 24,001 lumens rounded to the nearest 2000 lumens), and the CCT of the luminaire at the selected lumen output. Additional dimming functionality is available when a dimming control (by others) is used in the 7-Pin receptacle.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others). When ordered with the N option, the luminaire will include a utility label that indicates the wattage, lumen output, and CCT of the setting selected.

Q & X Option Power & Lumen Data – 40L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-277V	Lumen Values					Utility Label Wattage	Utility Label Lumens			
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/ External BLS		Asymmetric / Asymmetric w/External BLS	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)
Q9 (Full Power)	30K (70 CRI)	236	36,500	38,400	25,100	23,000	21,000	240	36000 L	38000 L	26000 L	23000 L
	40K (70 CRI)		38,000	40,000	26,200	24,000	21,800		38000 L	40000 L	26000 L	24000 L
	50K (90 CRI)		28,100	29,600	19,400	17,700	16,100		28000 L	30000 L	19000 L	18000 L
	57K (70 CRI)		38,000	40,000	26,200	24,000	21,800		38000 L	40000 L	26000 L	24000 L
Q8/X8	30K (70 CRI)	221	34,800	36,600	23,900	21,900	20,000	220	34000 L	36000 L	24000 L	22000 L
	40K (70 CRI)		36,300	38,200	25,000	22,900	20,800		36000 L	38000 L	26000 L	23000 L
	50K (90 CRI)		26,800	28,200	18,400	16,900	15,400		26000 L	28000 L	18000 L	17000 L
	57K (70 CRI)		36,300	38,200	25,000	22,900	20,800		36000 L	38000 L	26000 L	23000 L
Q7/X7	30K (70 CRI)	212	33,400	35,100	23,000	21,000	19,200	210	34000 L	36000 L	23000 L	21000 L
	40K (70 CRI)		34,800	36,600	23,900	21,900	20,000		34000 L	36000 L	24000 L	22000 L
	50K (90 CRI)		25,800	27,100	17,700	16,200	14,800		26000 L	28000 L	18000 L	16000 L
	57K (70 CRI)		34,800	36,600	23,900	21,900	20,000		34000 L	36000 L	24000 L	22000 L
Q6/X6	30K (70 CRI)	203	32,200	33,900	22,200	20,300	18,500	200	32000 L	34000 L	22000 L	20000 L
	40K (70 CRI)		33,600	35,400	23,100	21,200	19,300		34000 L	36000 L	23000 L	21000 L
	50K (90 CRI)		24,900	26,200	17,100	15,700	14,300		24000 L	26000 L	17000 L	16000 L
	57K (70 CRI)		33,600	35,400	23,100	21,200	19,300		34000 L	36000 L	23000 L	21000 L
Q5/X5	30K (70 CRI)	184	29,500	31,000	20,300	18,600	16,900	180	30000 L	32000 L	20000 L	19000 L
	40K (70 CRI)		30,700	32,300	21,100	19,300	17,600		30000 L	32000 L	21000 L	19000 L
	50K (90 CRI)		22,700	23,900	15,600	14,325	13,025		23000 L	24000 L	16000 L	14000 L
	57K (70 CRI)		30,700	32,300	21,100	19,300	17,600		30000 L	32000 L	21000 L	19000 L
Q4/X4	30K (70 CRI)	167	26,800	28,200	18,400	16,900	15,400	170	26000 L	28000 L	18000 L	17000 L
	40K (70 CRI)		27,900	29,400	19,200	17,600	16,000		28000 L	30000 L	19000 L	18000 L
	50K (90 CRI)		20,600	21,700	14,200	13,000	11,825		21000 L	22000 L	14000 L	13000 L
	57K (70 CRI)		27,900	29,400	19,200	17,600	16,000		28000 L	30000 L	19000 L	18000 L
Q3/X3	30K (70 CRI)	151	24,700	26,000	17,000	15,600	14,175	150	24000 L	26000 L	17000 L	16000 L
	40K (70 CRI)		25,800	27,100	17,700	16,200	14,800		26000 L	28000 L	18000 L	16000 L
	50K (90 CRI)		19,100	20,100	13,150	12,050	10,975		19000 L	20000 L	13000 L	12000 L
	57K (70 CRI)		25,800	27,100	17,700	16,200	14,800		26000 L	28000 L	18000 L	16000 L
Q2/X2	30K (70 CRI)	135	22,200	23,400	15,300	14,025	12,750	140	22000 L	23000 L	15000 L	14000 L
	40K (70 CRI)		23,200	24,400	16,000	14,625	13,325		23000 L	24000 L	16000 L	15000 L
	50K (90 CRI)		17,200	18,100	11,825	10,850	9,875		17000 L	18000 L	12000 L	11000 L
	57K (70 CRI)		23,200	24,400	16,000	14,625	13,325		23000 L	24000 L	16000 L	15000 L
Q1/X1	30K (70 CRI)	116	19,700	20,700	13,525	12,400	11,300	120	20000 L	21000 L	14000 L	12000 L
	40K (70 CRI)		20,500	21,600	14,125	12,925	11,775		21000 L	22000 L	14000 L	13000 L
	50K (90 CRI)		15,200	16,000	10,450	9,575	8,725		15000 L	16000 L	10000 L	10000 L
	57K (70 CRI)		20,500	21,600	14,125	12,925	11,775		21000 L	22000 L	14000 L	13000 L

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others).

Q & X Option Power & Lumen Data – 50L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-480V	Lumen Values				
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS
Q9 (Full Power)	30K (70 CRI)	297	45,600	48,000	31,400	28,700	26,200
	40K (70 CRI)		47,500	50,000	32,700	29,900	27,300
	50K (90 CRI)		35,200	37,000	24,200	22,200	20,200
	57K (70 CRI)		47,500	50,000	32,700	29,900	27,300
Q8/X8	30K (70 CRI)	285	43,500	45,800	29,900	27,400	25,000
	40K (70 CRI)		45,300	47,700	31,200	28,600	26,000
	50K (90 CRI)		33,600	35,300	23,100	21,100	19,300
	57K (70 CRI)		45,300	47,700	31,200	28,600	26,000
Q7/X7	30K (70 CRI)	269	41,700	43,900	28,700	26,300	23,900
	40K (70 CRI)		43,400	45,700	29,900	27,400	24,900
	50K (90 CRI)		32,100	33,800	22,100	20,200	18,400
	57K (70 CRI)		43,400	45,700	29,900	27,400	24,900
Q6/X6	30K (70 CRI)	258	40,300	42,400	27,700	25,400	23,100
	40K (70 CRI)		42,000	44,200	28,900	26,500	24,100
	50K (90 CRI)		31,100	32,700	21,400	19,600	17,900
	57K (70 CRI)		42,000	44,200	28,900	26,500	24,100
Q5/X5	30K (70 CRI)	233	36,900	38,800	25,400	23,200	21,200
	40K (70 CRI)		38,400	40,400	26,400	24,200	22,000
	50K (90 CRI)		28,400	29,900	19,600	17,900	16,300
	57K (70 CRI)		38,400	40,400	26,400	24,200	22,000
Q4/X4	30K (70 CRI)	215	33,500	35,200	23,000	21,100	19,200
	40K (70 CRI)		34,900	36,700	24,000	22,000	20,000
	50K (90 CRI)		25,900	27,200	17,800	16,300	14,875
	57K (70 CRI)		34,900	36,700	24,000	22,000	20,000
Q3/X3	30K (70 CRI)	191	30,900	32,500	21,300	19,500	17,700
	40K (70 CRI)		32,200	33,900	22,200	20,300	18,500
	50K (90 CRI)		23,900	25,100	16,400	15,000	13,725
	57K (70 CRI)		32,200	33,900	22,200	20,300	18,500
Q2/X2	30K (70 CRI)	170	27,900	29,300	19,200	17,500	16,000
	40K (70 CRI)		29,000	30,500	19,900	18,300	16,600
	50K (90 CRI)		21,500	22,600	14,775	13,525	12,350
	57K (70 CRI)		29,000	30,500	19,900	18,300	16,600
Q1/X1	30K (70 CRI)	153	24,600	25,900	16,900	15,500	14,125
	40K (70 CRI)		25,700	27,000	17,700	16,200	14,750
	50K (90 CRI)		18,900	19,900	13,000	11,925	10,850
	57K (70 CRI)		25,700	27,000	17,700	16,200	14,750

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others).

Q & X Option Power & Lumen Data – 65L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-480V	Lumen Values				
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS
Q9 (Full Power)	30K (70 CRI)	384	59,300	62,400	40,800	37,400	34,000
	40K (70 CRI)		61,800	65,000	42,500	38,900	35,500
	50K (90 CRI)		45,700	48,100	31,500	28,800	26,200
	57K (70 CRI)		61,800	65,000	42,500	38,900	35,500
Q8/X8	30K (70 CRI)	365	56,600	59,500	38,900	35,600	32,500
	40K (70 CRI)		58,900	62,000	40,500	37,100	33,800
	50K (90 CRI)		43,600	45,900	30,000	27,500	25,000
	57K (70 CRI)		58,900	62,000	40,500	37,100	33,800
Q7/X7	30K (70 CRI)	347	54,200	57,000	37,300	34,100	31,100
	40K (70 CRI)		56,500	59,400	38,800	35,600	32,400
	50K (90 CRI)		41,800	44,000	28,800	26,400	24,000
	57K (70 CRI)		56,500	59,400	38,800	35,600	32,400
Q6/X6	30K (70 CRI)	332	52,500	55,200	36,100	33,100	30,100
	40K (70 CRI)		54,700	57,500	37,600	34,400	31,400
	50K (90 CRI)		40,400	42,500	27,800	25,500	23,200
	57K (70 CRI)		54,700	57,500	37,600	34,400	31,400
Q5/X5	30K (70 CRI)	301	47,900	50,400	33,000	30,200	27,500
	40K (70 CRI)		49,900	52,500	34,300	31,400	28,600
	50K (90 CRI)		37,000	38,900	25,400	23,300	21,200
	57K (70 CRI)		49,900	52,500	34,300	31,400	28,600
Q4/X4	30K (70 CRI)	276	43,500	45,800	29,900	27,400	25,000
	40K (70 CRI)		45,300	47,700	31,200	28,600	26,000
	50K (90 CRI)		33,600	35,300	23,100	21,100	19,300
	57K (70 CRI)		45,300	47,700	31,200	28,600	26,000
Q3/X3	30K (70 CRI)	247	40,200	42,300	27,700	25,300	23,100
	40K (70 CRI)		41,900	44,100	28,800	26,400	24,100
	50K (90 CRI)		31,000	32,600	21,300	19,500	17,800
	57K (70 CRI)		41,900	44,100	28,800	26,400	24,100
Q2/X2	30K (70 CRI)	220	36,200	38,100	24,900	22,800	20,800
	40K (70 CRI)		37,700	39,700	26,000	23,800	21,600
	50K (90 CRI)		27,900	29,300	19,200	17,500	16,000
	57K (70 CRI)		37,700	39,700	26,000	23,800	21,600
Q1*	30K (70 CRI)	195	31,900	33,600	22,000	20,100	18,300
	40K (70 CRI)		33,300	35,000	22,900	21,000	19,100
	50K (90 CRI)		24,600	25,900	16,900	15,500	14,125
	57K (70 CRI)		33,300	35,000	22,900	21,000	19,100

* X1 option not available with 65L lumen package.

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings.

Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others).

Q & X Option Power & Lumen Data – 75L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-480V	Lumen Values				
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS
Q9 (Full Power)	30K (70 CRI)	447	68,400	72,000	47,100	43,100	39,300
	40K (70 CRI)		71,300	75,000	49,000	44,900	40,900
	50K (90 CRI)		52,800	55,500	36,300	33,200	30,300
	57K (70 CRI)		71,300	75,000	49,000	44,900	40,900
Q8/X8	30K (70 CRI)	426	65,300	68,700	44,900	41,100	37,500
	40K (70 CRI)		68,100	71,600	46,800	42,900	39,100
	50K (90 CRI)		50,300	52,900	34,600	31,700	28,900
	57K (70 CRI)		68,100	71,600	46,800	42,900	39,100
Q7/X7	30K (70 CRI)	404	62,500	65,800	43,000	39,400	35,900
	40K (70 CRI)		65,200	68,600	44,900	41,100	37,400
	50K (90 CRI)		48,200	50,700	33,200	30,400	27,700
	57K (70 CRI)		65,200	68,600	44,900	41,100	37,400
Q6/X6	30K (70 CRI)	387	60,500	63,600	41,600	38,100	34,700
	40K (70 CRI)		63,000	66,300	43,400	39,700	36,200
	50K (90 CRI)		46,700	49,100	32,100	29,400	26,800
	57K (70 CRI)		63,000	66,300	43,400	39,700	36,200
Q5/X5	30K (70 CRI)	350	55,300	58,200	38,100	34,900	31,700
	40K (70 CRI)		57,600	60,600	39,600	36,300	33,100
	50K (90 CRI)		42,600	44,800	29,300	26,800	24,500
	57K (70 CRI)		57,600	60,600	39,600	36,300	33,100
Q4/X4	30K (70 CRI)	321	50,200	52,800	34,500	31,600	28,800
	40K (70 CRI)		52,400	55,100	36,000	33,000	30,100
	50K (90 CRI)		38,700	40,700	26,600	24,400	22,200
	57K (70 CRI)		52,400	55,100	36,000	33,000	30,100
Q3/X3	30K (70 CRI)	287	46,400	48,800	31,900	29,200	26,600
	40K (70 CRI)		48,400	50,900	33,300	30,500	27,800
	50K (90 CRI)		35,700	37,600	24,600	22,500	20,500
	57K (70 CRI)		48,400	50,900	33,300	30,500	27,800
Q2/X2	30K (70 CRI)	256	41,700	43,900	28,700	26,300	23,900
	40K (70 CRI)		43,500	45,800	29,900	27,400	25,000
	50K (90 CRI)		32,200	33,900	22,200	20,300	18,500
	57K (70 CRI)		43,500	45,800	29,900	27,400	25,000
Q1/X1	30K (70 CRI)	227	36,900	38,800	25,400	23,200	21,200
	40K (70 CRI)		38,400	40,400	26,400	24,200	22,000
	50K (90 CRI)		28,400	29,900	19,600	17,900	16,300
	57K (70 CRI)		38,400	40,400	26,400	24,200	22,000

Field Adjustable Output (Q9/Q8/Q7/Q6/Q5/Q4/Q3/Q2/Q1) Option Description:

The Field Adjustable Output option enables the OSQ area luminaires to be tuned to the exact needs of a particular application through multiple levels of adjustment. When ordered with the Q option, the luminaire will be shipped from the factory at the selected Q setting and will be fully adjustable between the nine settings.

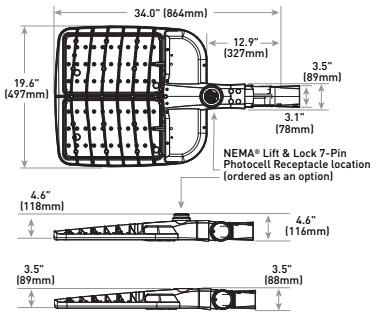
Locked Lumen Output (X8/X7/X6/X5/X4/X3/X2/X1) Option Description:

The Locked Lumen Output option on this page permanently locks the lumen output on the OSQ area luminaire to the setting selected. When ordered with the X option, the luminaire will be shipped from the factory at the lumen output setting selected and will only be able to be adjusted down in the field through a dimming control (by others).

Q & X Option Power & Lumen Data – 85L Lumen Package

Q/X Option Setting	CCT/CRI	System Watts 120-480V	Lumen Values				
			Asymmetric	Symmetric	2B, 3B, AB (factory-installed BLS)	4B (factory-installed BLS)	Asymmetric Lumens w/External BLS
Q9 (Full Power)	30K (70 CRI)	520	77,600	81,600	N/A	N/A	44,500
	40K (70 CRI)		80,800	85,000	N/A	N/A	46,400
	50K (90 CRI)		59,800	62,900	N/A	N/A	34,300
	57K (70 CRI)		80,800	85,000	N/A	N/A	46,400
Q8/X8	30K (70 CRI)	494	74,000	77,800	N/A	N/A	42,500
	40K (70 CRI)		77,100	81,100	N/A	N/A	44,300
	50K (90 CRI)		57,000	60,000	N/A	N/A	32,700
	57K (70 CRI)		77,100	81,100	N/A	N/A	44,300
Q7/X7	30K (70 CRI)	469	70,900	74,600	N/A	N/A	40,700
	40K (70 CRI)		73,900	77,700	N/A	N/A	42,400
	50K (90 CRI)		54,700	57,500	N/A	N/A	31,400
	57K (70 CRI)		73,900	77,700	N/A	N/A	42,400
Q6/X6	30K (70 CRI)	450	68,500	72,100	N/A	N/A	39,300
	40K (70 CRI)		71,400	75,100	N/A	N/A	41,000
	50K (90 CRI)		52,900	55,600	N/A	N/A	30,400
	57K (70 CRI)		71,400	75,100	N/A	N/A	41,000
Q5/X5	30K (70 CRI)	407	62,600	65,900	N/A	N/A	35,900
	40K (70 CRI)		65,300	68,700	N/A	N/A	37,500
	50K (90 CRI)		48,300	50,800	N/A	N/A	27,700
	57K (70 CRI)		65,300	68,700	N/A	N/A	37,500
Q4/X4	30K (70 CRI)	373	56,900	59,900	N/A	N/A	32,700
	40K (70 CRI)		59,300	62,400	N/A	N/A	34,000
	50K (90 CRI)		43,900	46,200	N/A	N/A	25,200
	57K (70 CRI)		59,300	62,400	N/A	N/A	34,000
Q3/X3	30K (70 CRI)	334	52,600	55,300	N/A	N/A	30,200
	40K (70 CRI)		54,800	57,600	N/A	N/A	31,500
	50K (90 CRI)		40,500	42,600	N/A	N/A	23,200
	57K (70 CRI)		54,800	57,600	N/A	N/A	31,500
Q2/X2	30K (70 CRI)	298	47,300	49,800	N/A	N/A	27,200
	40K (70 CRI)		49,300	51,900	N/A	N/A	28,300
	50K (90 CRI)		36,500	38,400	N/A	N/A	21,000
	57K (70 CRI)		49,300	51,900	N/A	N/A	28,300
Q1/X1	30K (70 CRI)	263	41,800	44,000	N/A	N/A	24,000
	40K (70 CRI)		43,500	45,800	N/A	N/A	25,000
	50K (90 CRI)		32,200	33,900	N/A	N/A	18,500
	57K (70 CRI)		43,500	45,800	N/A	N/A	25,000

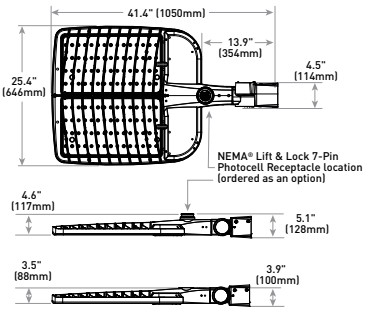
OSQL - AA Mount



Luminaire	Weight
OSQL	28.4 lbs. (12.9kg)

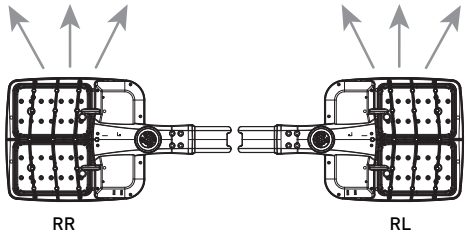
Note: For OSQM w/AA mount, refer to drawing on page 1.

OSQX - AA Mount



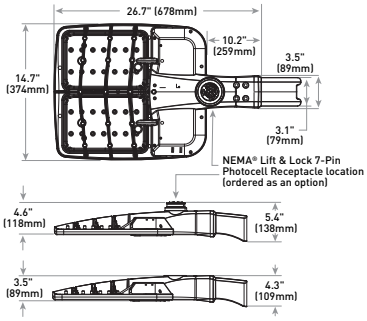
Luminaire	Weight
OSQX	48.6 lbs. (22.0kg)

RR/RL Configuration



OSQM - DA Mount

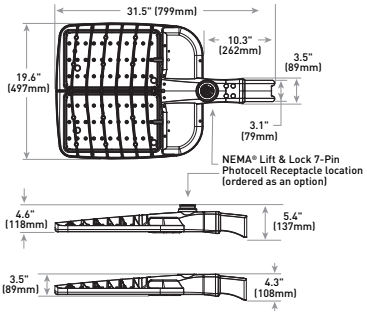
OSQM - DA Mount



Luminaire	Weight
OSQM	19.7 lbs. (8.9kg)

Note: Refer to page 14 for fixture mounting drill pattern.

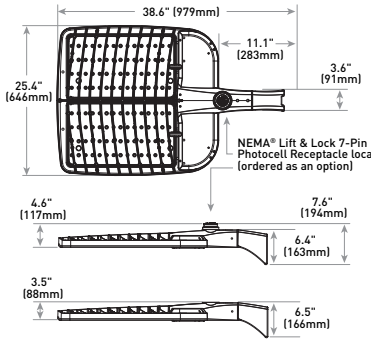
OSQL - DA Mount



Luminaire	Weight
OSQL	28.8 lbs. (13.1kg)

Note: Refer to page 14 for fixture mounting drill pattern.

OSQX-DA Mount

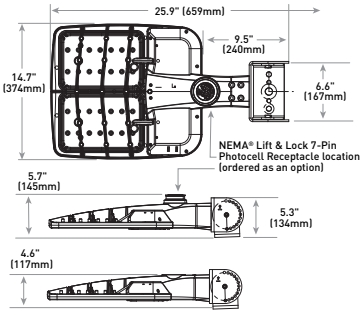


Luminaire	Weight
OSQX	45.8 lbs. (20.8kg)

Note: Refer to page 14 for fixture mounting drill pattern.

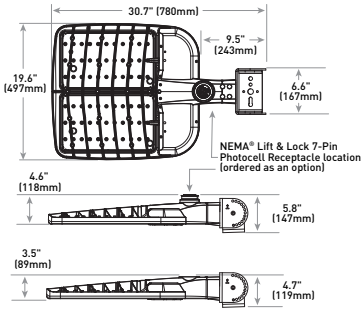
OSQM - Trunnion Mount

OSQM - Trunnion Mount



Luminaire	Weight
OSQM	23.2 lbs. (10.5kg)

OSQL - Trunnion Mount



Luminaire	Weight
OSQL	32.3 lbs. (14.7kg)

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CITY OF FORT PIERCE
*** CUSTOMER RECEIPT ***

Batch ID: DANA 1/08/24 01 Receipt no: 8449

Year	Number	Type	SvcCd	Description	Amount
2024	7000001	PL		PLANNING DEPARTMENT	$5875.00

CROSSROADS RV PARK
CK FR/ALEXANDER GEORGE & CO
ADVERTISING FEE & ETC

Tender detail

CH Ref#:	1453	$3775.00
SQ SQUARE TRANS		$2100.00
Total tendered:		$5875.00
Total payment:		$5875.00

Trans date: 1/08/24 Time: 16:31:13

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THANK YOU!