



SEMINOLE COUNTY
 PLANNING & DEVELOPMENT DIVISION
 1101 EAST FIRST STREET, ROOM 2028
 SANFORD, FLORIDA 32771
 (407) 665-7371 EPLANDESK@SEMINOLECOUNTYFL.GOV

PROJ. #: WEKIVA WELL 9

Received: 2/29/24

Paid: 3/5/24

PRE-APPLICATION

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

APPLICATION FEE

PRE-APPLICATION \$50.00

PROJECT

PROJECT NAME: Sunshine Water Services AMI Gateway [Wekiva Trl](#)

PARCEL ID #(S): 05-21-29-300-001D-0000

TOTAL ACREAGE: 10Sqft BCC DISTRICT: [3: Constantine](#)

ZONING: PD FUTURE LAND USE: PD

APPLICANT

NAME: Brenda Pearce COMPANY: Black & Veatch / Sunshine Water Services Company

ADDRESS: 200 Weathersfield Ave

CITY: Altamonte Springs STATE: FL ZIP: 32714

PHONE: (678) 656-5179 EMAIL: Pearceb@bv.com

CONSULTANT

NAME: COMPANY:

ADDRESS:

CITY: STATE: ZIP:

PHONE: EMAIL:

PROPOSED DEVELOPMENT (CHECK ALL THAT APPLY)

SUBDIVISION LAND USE AMENDMENT REZONE SITE PLAN SPECIAL EXCEPTION

Description of proposed development: Installing automation system for reading residential water meters with antenna mounted on a 40ft pole in order to read the new meters remotely. Must be in a residential area in order to be close to meters.

STAFF USE ONLY

COMMENTS DUE: [3/15](#) COM DOC DUE: [3/21](#) DRC MEETING: [3/27](#)

PROPERTY APPRAISER SHEET PRIOR REVIEWS:

ZONING: PD FLU: PUBS LOCATION: [on the east side of E Wekiva Trl, south of Holderness Dr](#)

W/S: [Sunshine Water](#) BCC: [3: Constantine](#)

[Agenda: 3/22](#)



200 Weathersfield Avenue
Altamonte Spring, Florida
United States 32714

T 866.842.8432

www.sunshinewater.com

AUTHORIZATION by owner of property to agent for execution of Land Use Approvals and Building Permits.

Date 12/12/2023

The undersigned states that he/she is an owner of property in Seminole County and that he/she authorizes Black & Veatch to execute the application and documentation to secure Land Use Approvals and Building Permit for installation of 50-foot poles and associated equipment for Advanced Metering Infrastructure (AMI) implementation.

1460 E WEKIVA TRAIL, LONGWOOD FL 32779

(Address)

05-21-29-300-001D-0000

(Parcel ID of Property)

Brenda Pearce

Agent Name Printed

Signature of Agent

563 West Hillsborough Ave Florahome FL 32140

Address

(678) 656-5179 Pearceb@bv.com

Telephone Number

Sean Twomey

Owner Name Printed

Sean Twomey

Signature of Owner

200 Weathersfield Av., Altamonte Springs, FL, 32714

Address

407.312.1815

Telephone Number

AMI PROJECT OVERVIEW

Company Overview

Sunshine Water Services Company (SWS) is a water & wastewater utility that has been operating in Florida since 1976. SWS provides service to nearly 70,000 customers across 10 different counties. In Seminole County, SWS serves approximately 15,000 premises with either water, wastewater, or both. One of our largest service areas is “Sanlando”, in unincorporated Seminole County, where we serve a large portion of the Wekiva Springs area.

What is AMI?

AMI, also known as Advanced Metering Infrastructure, is a new water metering system that provides remote meter reading capabilities. AMI meters send a signal, either through cellular or to a LoRaWAN (low-power, wide area networking protocol) collector which feeds the overall system with the meter reads and other available information. AMI is designed to provide a monitoring system of water usage to residential and commercial properties, which will not only allow the water utility (SWS) to know what the usage is but will also supply the customer with data of their usage on a regular and easier-to-use basis. AMI, combined with the necessary software such as SWS My Utility Account, allows the customer to monitor their residence for leaks and to be more aware of their usage when they are not home.

SWS AMI PROJECT

SWS has contracted with meter manufacturer, Neptune, to provide AMI and it's capabilities to all SWS water customers. The AMI installation will require the replacement of older mechanical meters with AMI. There are approximately 14,750 meters in Seminole County that will be replaced with AMI prior to the end of 2024.

The upgrade to AMI technology will provide significant benefits to our customers including,

- Detection of leaks and customer notification through My Utility Account,
- Eliminates the need for manual and estimated reads,
- Reduction in high-bill cases because customers will have more information to evaluate their usage,
- Greenhouse gas reductions with the reduction of “truck rolls” to obtain manual meter reads.

The majority of AMI meters in Seminole County will use LoRaWAN technology to supply meter read data back to the system. The use of LoRaWAN requires the installation of gateway poles with specific antenna technology to collect the data for a region of AMI meters while others will be served by cellular technology.

Round Tapered Direct Burial Aluminum Light Pole 40 Foot Above Grade, 8 Inch Diameter, 0.219 Inch Wall Thickness

PRODUCT DESCRIPTION

Pole Top Options: Poles are provided with either a removable top cap or a welded aluminum tenon. A 2-3/8 inch outside diameter tenon with 4 inches in length is the most common; however, other tenon options are available. Customers should confirm the appropriate tenon size required by their project prior to ordering. Poles with a top cap can also be drilled during fabrication. The drill pattern and orientation need to be provided by the customer unless Energy Light fixtures are being used for the project.

Pole Shaft: The pole shaft will be constructed of seamless extruded tube of 6063 aluminum alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

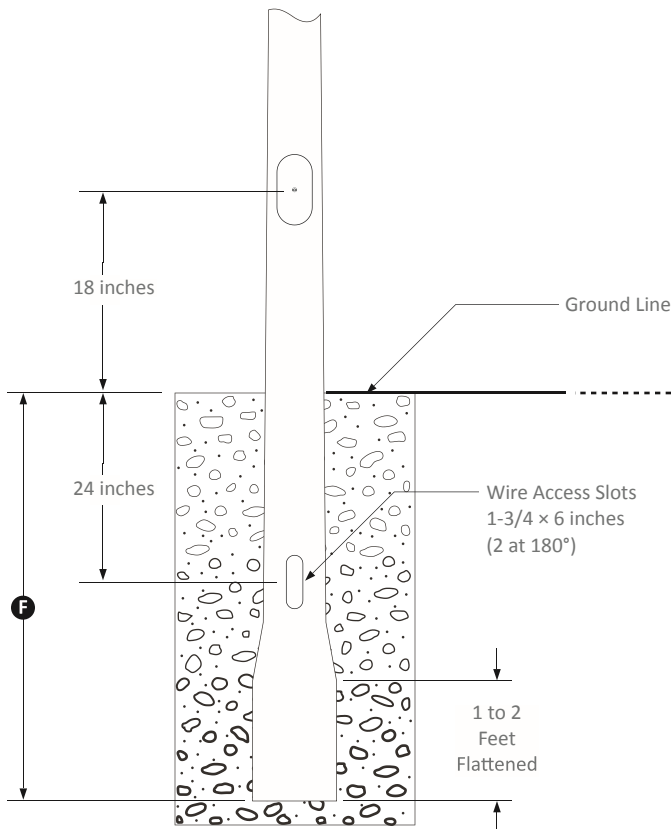
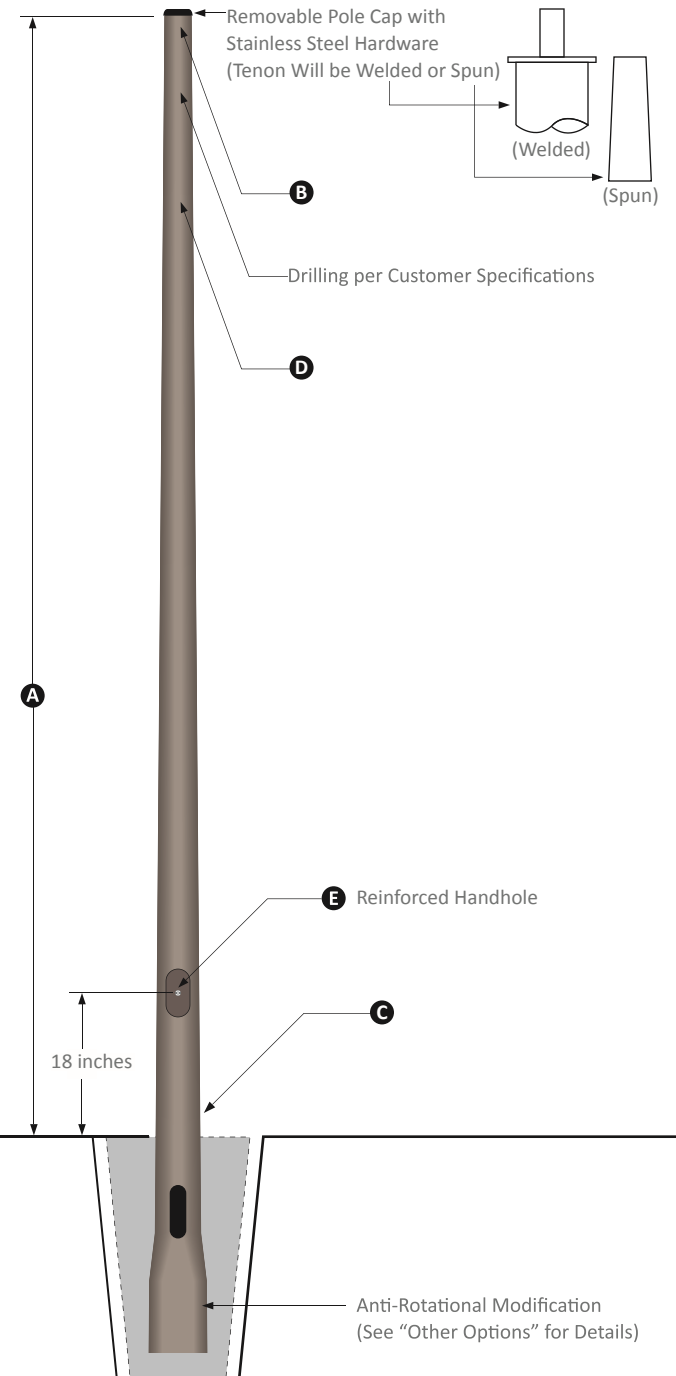
Handhole: A reinforced handhole with grounding provision is provided at 18 inches from the base end of the pole assembly. Each handhole includes a cover and the attachment hardware.

Color and Finish Options: The standard finish for our aluminum light poles is a natural aluminum finish. Our poles are also available with a commercial grade, powder coat finish for an additional charge. Standard color options include dark bronze, black, gray, green, and white; however, custom color options are also available.

Other Options: The Following options are available. Please consult one of our light pole experts for details: Custom tenon size, custom color, electric/GFI outlet, custom pole height and additional handholes. Anti-Rotational Modification is also an option. Poles will be partially flattened into an anti-rotational, oval cross section, for added stability.

Specification Table		
Mounting Height (ft.)	A	40
Top Diameter (in.)	B	4.5
Butt Diameter (in.)	C	8
Wall Thickness (in.)	D	0.219
Handhole (in.)	E	4 x 6
Embedment (ft.)	F	5

Maximum EPA with 1.3 Gust Factor:		
90 mph:	12.8	Square Feet
100 mph:	9.2	Square Feet
120 mph:	6.4	Square Feet
130 mph:	5.2	Square Feet





Main

Product or component type	All-In-One
Range of product	Homeline
Meter socket type	Ringed
Hub type	A

Complementary

Line Rated Current	100 A
Short-circuit current	10 kA
Device mounting	Surface
Number of spaces	10
Number of circuits	20
Number of tandem circuit breakers	10
Electrical connection	Lugs line side Lugs service ground
AWG gauge	AWG 6...AWG 1 (aluminium/copper) line side AWG 8...AWG 4 (aluminium/copper) service ground
Device composition	Service disconnect (factory installed)
Service disconnect rated current	100 A
Branch circuit breaker rated current	80 A
Service feed location	OH
Bypass type	No bypass

Environment

Offer Sustainability

Green Premium product	Green Premium product
Compliant - since 0944 - Schneider Electric declaration of conformity	Compliant - since 0944 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Need no specific recycling operations	Need no specific recycling operations

Contractual warranty

Warranty period	18 months
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MFB9155

900/800 MHz MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The MFB 900/800 MHz series are base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

Features

- White ultra-violet resistant pultruded fiberglass radome
- Thick walled aluminum mounting base
- Unity/3 dB/5 dB/7 dB models
- UPS shippable
- Factory tuned



Technical Data

Maximum Power: 150 watts
Normal Impedance: 50 ohms
Radome Material: 1.0" OD pultruded white fiberglass
Radiator Material: Coated steel wire
ESD Protection: DC grounded
Wind Survival: 100 mph
Termination: Unity and 3 dB models, N Female
Mounting Base Diameter: 1-5/16"
Mounting Method: Mast or wall mounted. Mounting hardware is sold separately. MMK1: light duty mast mount for antennas under 30" MMK3: light duty mast mount for antennas over 30" MMK4: heavy duty mast mount MMK6: cast mounting bracket MMK9: Aluminum mast mount for 1-5/16" OD antennas MBSWM: wall mounting bracket for antennas over 30" (two are required)



MMK3



MMK1



MMK4



MMK6



MBSWM



MMK9

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB8130	806-866 MHz	813 MHz	Unity	40 MHz	75°
MFB8133	806-866 MHz	813 MHz	3 dB	30 MHz	40°
MFB8135	806-866 MHz	813 MHz	5 dB	20 MHz	22°
MFB8580	806-866 MHz	858 MHz	Unity	40 MHz	75°
MFB8583	806-866 MHz	858 MHz	3 dB	30 MHz	40°
MFB8585	806-866 MHz	858 MHz	5 dB	20 MHz	22°
MFB8353	824-896 MHz	835 MHz	3 dB	30 MHz	40°
MFBW8903	890-960 MHz	N/A	3 dB	70 MHz	40°
MFBW8905	890-960 MHz	N/A	5 dB	70 MHz	22°
MFB8963	896-940 MHz	898 MHz	3 dB	30 MHz	40°
MFB8965(NF)	896-940 MHz	898 MHz	5 dB	20 MHz	22°
MFB9387	896-940 MHz	938 MHz	7 dB	20 MHz	17°
MFB8967(NF)	896-940 MHz	898 MHz	7 dB	20 MHz	17°
MFB9150	902-928 MHz	915 MHz	Unity	20 MHz	75°
MFB9153	902-928 MHz	915 MHz	3 dB	20 MHz	40°
MFB9155(NF)	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9155RPC	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9157(NF)*	902-928 MHz	915 MHz	7 dB	20 MHz	17°

* Bandwidth @ 2.0:1 VSWR

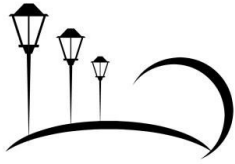


E Wekiva Trail

E Wekiva Trail

Herness Dr

1460 E Wekiva Trail



SmartLine Design

Always On.

804 Lincoln Avenue • Saint Paul, MN 55105
(612) 990-0266

February 27, 2024

Mark Kuiper
LightMart

Re: Design Memo – PCTEL antenna pole, Orlando

Mark:

The attached calculations demonstrate conformance of the proposed pole assembly to the requirements of the 2023 Florida Building Code, based on a 160 mph design wind speed. The pole assembly has additional structural capacity to withstand wind speeds well above this level. In the very unlikely event that wind speeds increase to a level causing failure, the pole would likely buckle at the handhole location, forming a hinge at that location and causing the pole to deflect above that point, and remain in a deflected position.

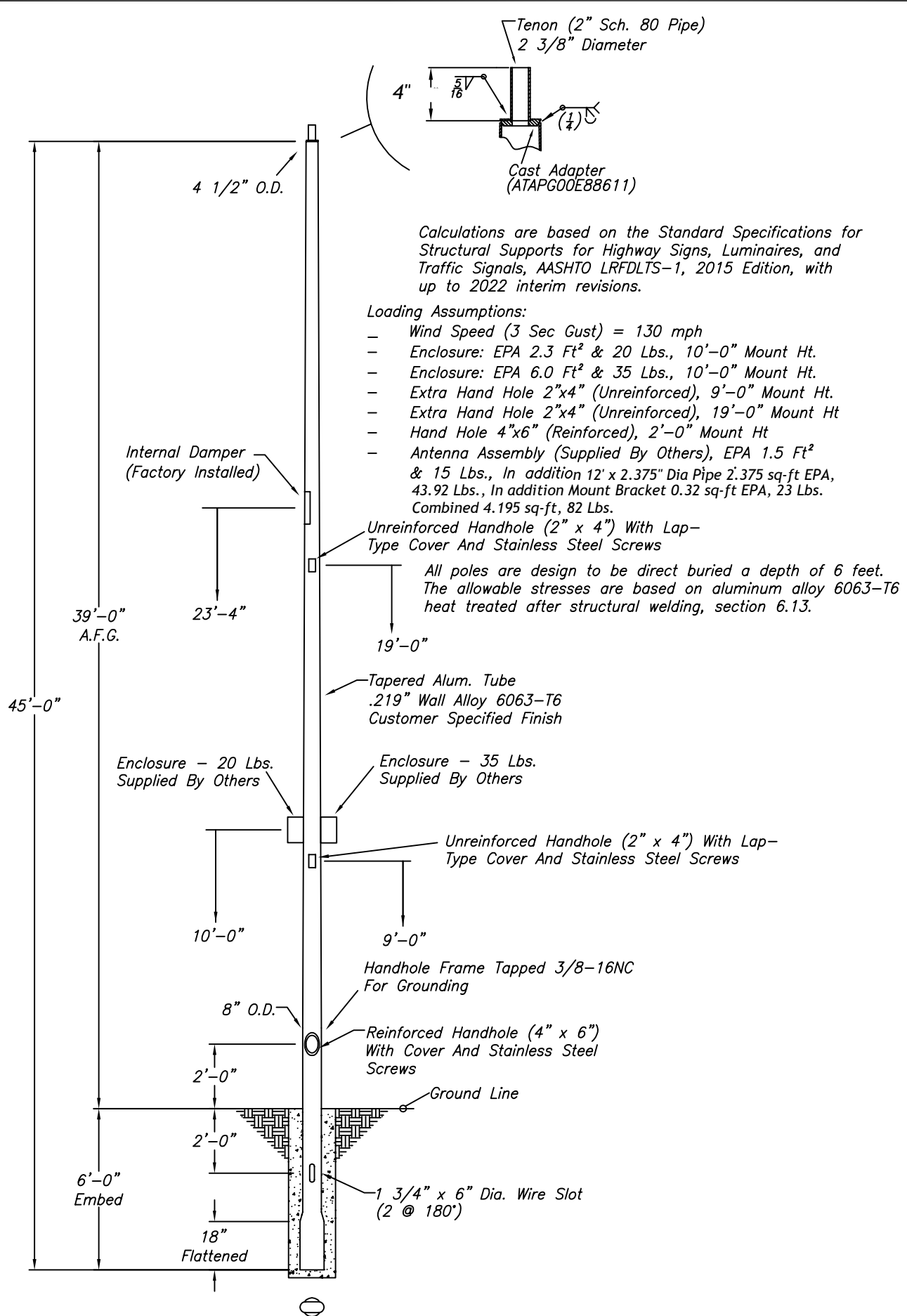
Regards,

I HEREBY CERTIFY THAT THIS REPORT WAS PREPARED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA

Chris Arlandson, P.E

Enclosure: Pole wind analysis





NO.	REVISIONS	DATE
1	Revised per customer request	2/24

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

hapco
Abingdon, Va.

TITLE 39' EMBEDDED LIGHTING POLE	
CUSTOMER	
SCALE NTS	DATE 2/6/2024
BY JED	DWG. NO.
CHK'D	RTA39E8BD-Pxx

Project Name: PCTEL ANTENNA POLE, Orlando
 Work Order No.: SO148306
 Part Number: RTA39E8BD pole + MFB9155 antenna

February 27, 2024

Pole Cat. No.: PS44S18-125-HB MODIFIED

INPUT DATA

Design Standard: 2020 FBC

(ASD Design, 3-sec. gust wind speed)

Pole Material: ALUMINUM
 Pole Material Specification: 6063T6
 Pole Shaft Shape: ROUND
 Rooftop Mounted: NO

Base Plate Material: ALUMINUM
 Base Plate Material Spec.: 356T6
 Bolt Material Specification: F1554 Gr 55
 Weld Electrode Spec.: RE4043

Wind Velocity: (V) 160 mph
 Exposure Category: C
 Structure Category: II

Pole Ultimate Strength 85% Table A.3.4 25500 psi
 Pole Yield Strength 85% Table A.3.4 21250 psi
 Plate All. Bending Stress 6700 psi

Pole Natural Frequency (n1) 1.093 RIGID
 Gust Factor: (G): 0.85 Sec. 26.9.5

Pole Length: (L) 39 ft.
 Pole Base Height AGL: ft.
 Tip Width: (b_t) 4.5 in.
 Butt Width: (b_b) 8 in.
 Nom. Wall Thickness: (t) 0.219 in.

Compressive Yield Strength 85% Table A.3.4 21250 psi
 Shear Ultimate Strength 85% Table A.3.4 16150 psi
 Shear Yield Strength 85% Table A.3.4 11900 psi

Dampening Factor: (β) 0.02

	Antenna+Arm	2 enclosures	meter encl.	Max.	
MAX. EPA	2.7	1.5	0.9		ft. ²
Hgt. from Tip	7	-29	-34		ft.
Weight	88	55	22		lbf
Offset	0	4	3		in.

CALCULATED PROPERTIES

Cross-Sectional Area: (A) 5.35 in²
 Butt Section Modulus: (S_{xx}) 10.1 in³
 Butt Section Mod. - Diag.: (S_{diag}) 10.1 in³
 Weight of Pole 188.8 lbf
 Bolt Area Excl. Thread 0.00 in²

WIND LOAD ANALYSIS

Segment	A _{sq} ft ²	A _{diag} ft ²	Centroid Hgt ft	Kz	Cf (sq)	qz (sq) psf	F (sq) lbf	GLM (sq) ft*lbf
1	9.16	9.16	7.5	0.85	0.70	52.9	288	2163
2	2.68	2.68	17.5	0.88	0.70	54.6	87	1523
Fixture @ Tip	2.7		46	1.07	1	66.9	154	7064
Attachment 2	1.5		10	0.85	1	52.9	67	693
Attachment 3	0.9		5	0.85	1	52.9	40	208
Summation							637	11651

COMPONENT ANALYSES

POLE	Actual Stress	All. Stress	Unity Check(s)
Orthogonal Bending	8275	24049 psi	fb/Fb 0.34
Axial	66	17129 psi	fa/Fa 0.00
Shear	119	6462 psi	fv/Fv 0.02

SUMMARY

POLE Moment	11651	ft*lbf	
Shear	637	lbf	
Axial	354	lbf	
CSR	0.35	<< PASS >>	

POLE BASE ANALYSIS

d = proposed embedment, ft A = 2.34P/S_b P = applied lateral force, lbs
 b = diagonal dimension of embedded portion (taken @ 2/3 embedment depth), ft
 h = distance from ground to application of resultant "P" (h = ΣM/ΣP), ft

d, ft.	P, lb.	S1	b, ft.	A, ft ²	ΣM, lb-ft	h, ft.	d _{req.} , ft.
6	637	1005	1.33	1.12	11651	18.29	5.5

LATERAL BEARING value= 250* *double for isolated poles

16" dia. backfill w/compacted 57 stone; 6' embedment OK? YES



Property Report



Property Address: 05-21-29-300-001D-0000
LONGWOOD, FL 329

Property Location

Site View



Sorry, No Image Available at this Time

Property Information

Value Summary

Property Address	05-21-29-300-001D-0000
Owner(s)	SUNSHINE WATER SERVICES COMPANY
Property Address	LONGWOOD, FL 329
Mailing Address	500 W MONROE ST STE 3600 CHICAGO, IL 60661-3611
Subdivision Name	
Tax District	01-COUNTY-TX DIST 1
DOR Use Code	91-GAS/ELECTRIC/TELEPHONE ETC
Exemptions	None
AG Assessment	No

	2024 Working Values	2023 Certified Values
Valuation Method	Cost/Market	Cost/Market
Number of Buildings	0	0
Depreciate Building Value		
Depreciate EXFT Value		
Land Value (Market)	\$100	\$100
Land Value Ag		
Just/Market Value	\$100	\$100
Portability Adj		
Save Our Homes Adj	\$0	\$0
Non-Hx 10% Cap (AMD 1)	\$0	\$0
P&G Adj	\$0	\$0
Assessed Value	\$100	\$100

2023 Certified Tax Summary

2023 Tax Amount w/o Exemptions/ Property: \$1.33
2023 Tax Bill Amount: \$1.33

* Does NOT INCLUDE Non-Ad Valorem Assessments

Legal Description

SEC 05 TWP 21S RGE 29E
BEG S 44 DEG 36 MIN 40 SEC
E 18 FT & S 45 DEG 23 MIN
20 SEC W 46 FT OF MOST WLY
COR LOT 241 WEKIVA HUNT
CLUB FOX HUNT SEC 2 RUN S
45 DEG 23 MIN 20 SEC W 20
FT S 44 DEG 36 MIN 40 SEC E
20 FT N 45 DEG 23 MIN 20
SEC E 20 FT N 44 DEG 36 MIN
40 SEC W 20 FT TO BEG

Taxes

Taxing Jurisdiction	Assessed Value	Exempt Values	Taxable Value
ROAD DISTRICT	\$ 00	\$0	\$ 00
SJWM(Saint Johns Water Management)	\$ 00	\$0	\$ 00
FIRE	\$ 00	\$0	\$ 00
COUNTY GENERAL FUND	\$ 00	\$0	\$ 00
Schools	\$ 00	\$0	\$ 00

Sales

Description	Date	Book	Page	Amount	Qualified	Value/Imp
WARRANTY DEED	05/0 / 978	0 70	6 5	\$ 00	No	Vacant

Land

Method	Frontage	Depth	Units	Units Price	Land Value
LOT				\$ 00.00	\$ 00

Building Information Permits

Permit #	Description	Agency	Amount	CO Date	Permit Date
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Extra Features

Description	Year Built	Units	Value	New Costs
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Zoning

Zoning	Zoning Description	Former Land Use	Former Land Use Description
PD		PUBS	Planned Development

Utility Information

Fire Station	Power	Penetration	Water Provider	Sewer Provider	Garbage Pickup	Recycle	Yard Waste	Hauler
3.00	DUKE	CENTURY LINK	SUNSHINE WATER SERVICES	SUNSHINE WATER SERVICES	NA	NA	NA	NA

Political Representation

Committee	US Congress	State House	State Senate	Voting Precinct
Dist 3 - Lee Constantine	Dist 7 - Cory Mills	Dist 39 - DOUG BANKSON	Dist 0 - Jason Brodeur	34

School Information

Elementary School District	Middle School District	High School District
Wekiva	Teague	Lake Brantley



**Seminole County Government
Development Services Department
Planning and Development Division
Credit Card Payment Receipt**

If you have questions about your application or payment, please email us eplandesk@seminolecountyfl.gov or call us at: (407) 665-7371.

Receipt Details

Date: 3/5/2024 9:25:34 AM
Project: 24-80000040
Credit Card Number: 42*****9173
Authorization Number: 048889
Transaction Number: 050324C29-A2668ADB-B88A-45B7-8221-D2B49E3C91FB
Total Fees Paid: 52.50

Fees Paid

Description	Amount
CC CONVENIENCE FEE -- PZ	2.50
PRE APPLICATION	50.00
Total Amount	52.50