



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

<input checked="" type="checkbox"/> PRE-APPLICATION	\$50.00
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PROJECT

PROJECT NAME: Sunshine Water Services AMI Gateway	Wekiva Trl
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PARCEL ID #(S): 05-21-29-300-001D-0000
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TOTAL ACREAGE: 10Sqft	BCC DISTRICT: 3: Constantine
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ZONING: PD	FUTURE LAND USE: PD
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APPLICANT

NAME: Brenda Pearce	COMPANY: Black & Veatch / Sunshine Water Services Company
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ADDRESS: 200 Weathersfield Ave

CITY: Altamonte Springs	STATE: FL	ZIP: 32714
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PHONE: (678) 656-5179	EMAIL: Pearceb@bv.com
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CONSULTANT

NAME:	COMPANY:
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ADDRESS:

CITY:	STATE:	ZIP:
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PHONE:	EMAIL:
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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
<input type="checkbox"/> PROPERTY APPRAISER SHEET <input type="checkbox"/> 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	



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 its 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

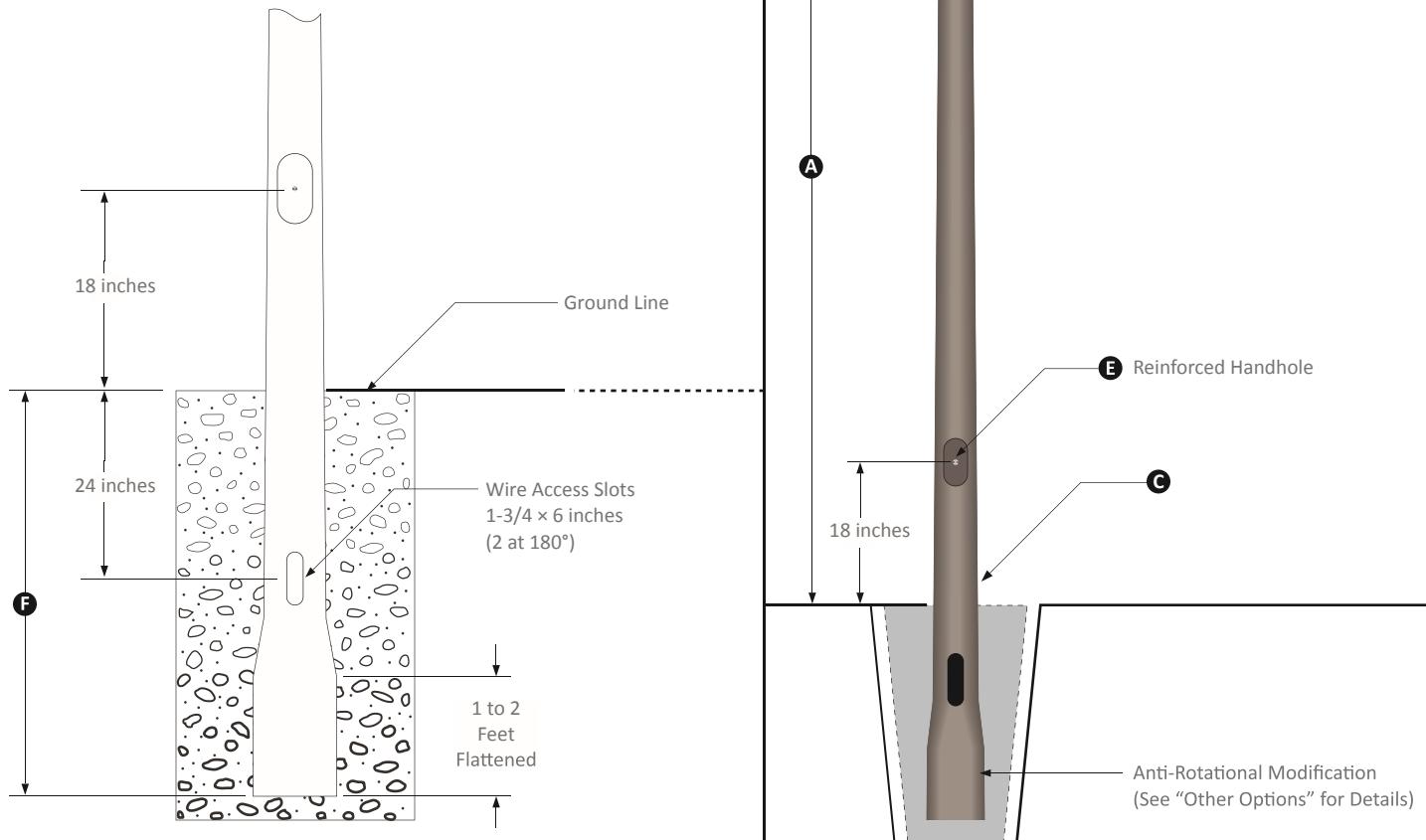
Maximum EPA with 1.3 Gust Factor:

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

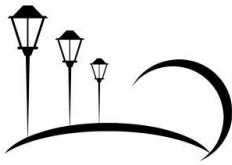
Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB8130	806-866 MHz	813 MHz	Unity	40 MHz	75°
MFB8133	806-866 MHz	813 MHz	3 dB	30 MHz	40°
MFB8135	806-866 MHz	813 MHz	5 dB	20 MHz	22°
MFB8580	806-866 MHz	858 MHz	Unity	40 MHz	75°
MFB8583	806-866 MHz	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



1460 E Wekiva Trail

Google Earth



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.

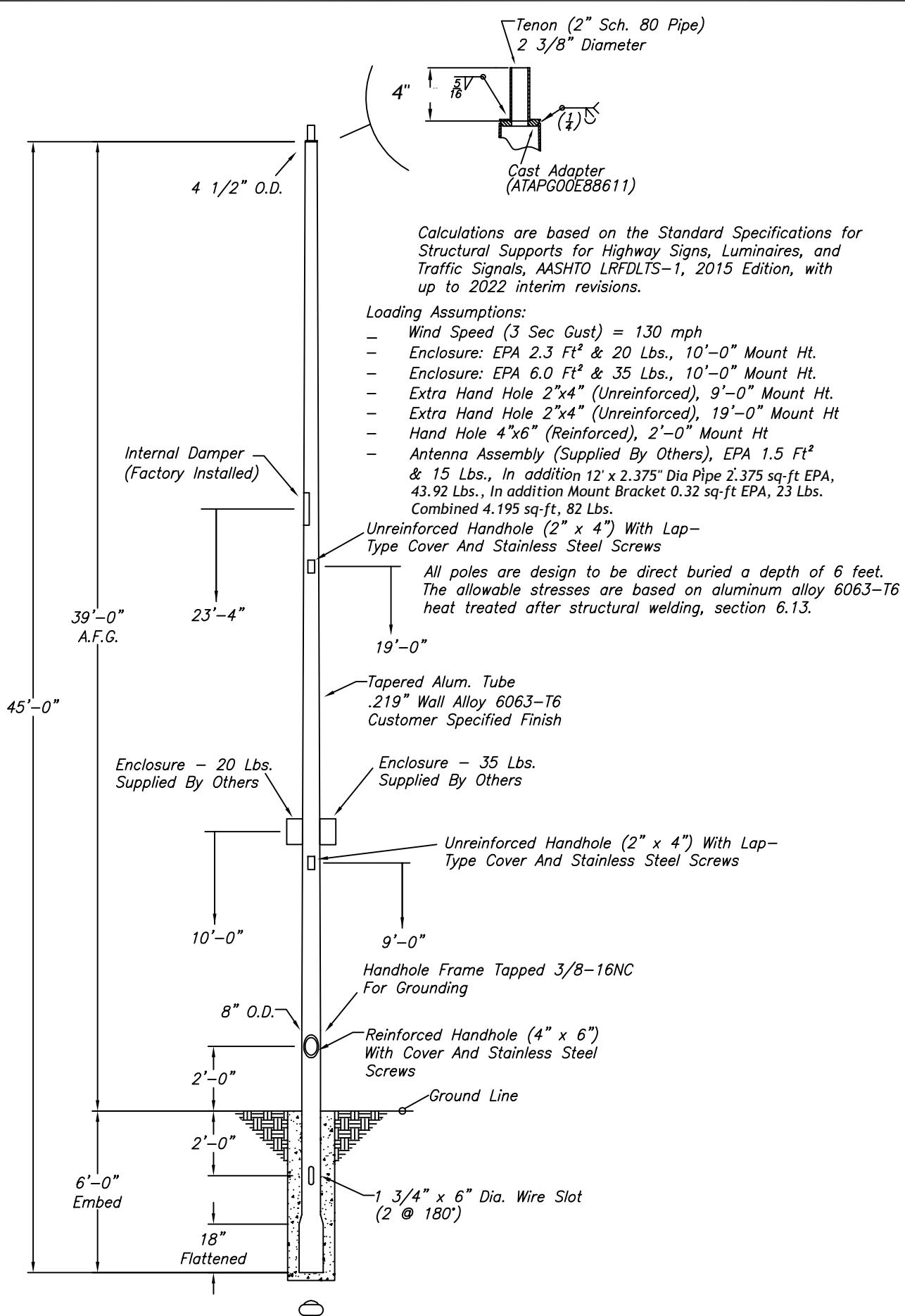
Regards,

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





WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

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

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:
Work Order No.:
Part Number:

PCTEL ANTENNA POLE, Orlando
SO148306
RTA39E8BD pole + MFB9155 antenna

February 27, 2024

Pole Cat. No.: PS44518-125-HB

MODIFIED

INPUT DATA

Design Standard:
2020 FBC

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

Pole Material:
Pole Material Specification:
Pole Shaft Shape:
Rooftop Mounted:

ALUMINUM
6063T6
ROUND
NO

Base Plate Material:
Base Plate Material Spec.:
Bolt Material Specification:
Weld Electrode Spec.:

ALUMINUM
356T6
F1554 Gr 55
RE4043

Wind Velocity: (V)
Exposure Category:
Structure Category:

160 mph
C
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)
Gust Factor: (G):

1.093 RIGID
0.85 Sec. 26.9.5

Pole Length: (L)
Pole Base Height AGL:
Tip Width: (b_t)
Butt Width: (b_b)
Nom. Wall Thickness: (t)

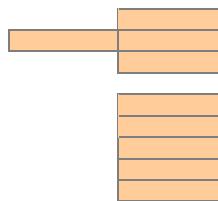
39 ft.
ft.
4.5 in.
8.00 in.
0.2190 in.

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)
Butt Section Modulus: (S_{sq})
Butt Section Mod. - Diag.: (S_{diag})
Weight of Pole
Bolt Area Excl. Thread

5.35 in²
10.1 in³
10.1 in³
188.8 lbf
0.00 in²

WIND LOAD ANALYSIS

Segment	A _{sq} ft ²	A _{diag} ft ²	Centroid Hgt ft	Kz	Cf (sq)	Kd = 0.95	Table 26.6-1 F (sq) lbf	GLM (sq) ft*lbf
					Table 29.3.1	qz (sq) psf		
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	67
Attachment 3	0.9		5	0.85	1	52.9	40	40
							Summation Σ	637 11651

COMPONENT ANALYSES

POLE

Orthogonal Bending
Axial
Shear

Actual Stress / All. Stress
8275 24049 psi
66 17129 psi
119 6462 psi

Unity Check(s)

fb/Fb
fa/Fa
fv/Fv

SUMMARY

POLE
Moment
Shear
Axial
CSR

11651
637
354
0.35

ft*lbf
lbf
lbf

<< 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

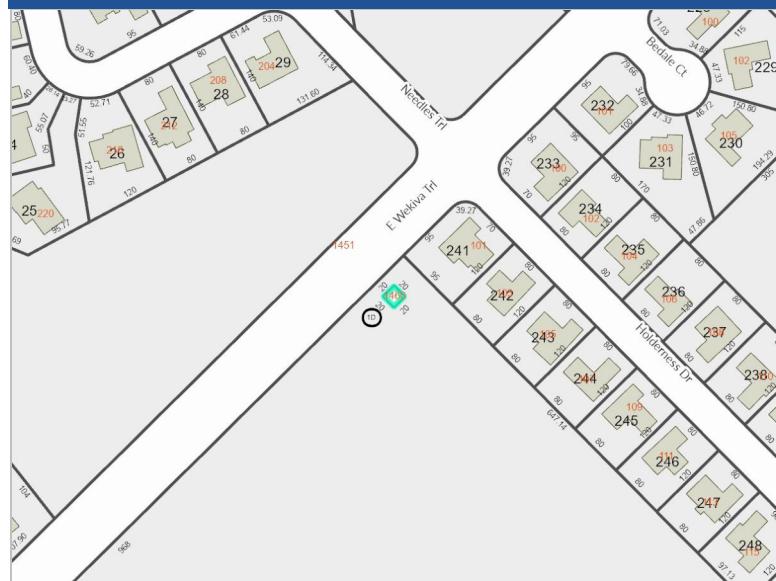


Property Re or r



Pre 05-21-29-300-001D-0000
Property Address LONGWOOD, FL 32 9

Pre Location



Ste View

Sorry, No Image Available at this Time

Pre nform tion

Pre	05-21-29-300-001D-0000
Owner(s)	SUNSHINE WATER SERVICES COMPANY
Property Address	LONGWOOD, FL 32 9
Mng	500 W MONROE ST STE 3600 CHICAGO, IL 60661-36 1
S b s on N me	
T x D str t	01-COUNTY-TX DIST 1
DOR Use o e	91-GAS/ELECTRIC/TELEPHONE ETC
Exempt o ns	None
AG ss f on	No

Ve S mm ry

	2024 Work ng V es	2023 ert fe V es
V u tion Metho	Cost/Market	Cost/Market
Number of Bui ings	0	0
Depre i te B g V ue		
Depre i te EXFT V ue		
L n V ue (M rk)	\$100	\$100
L n V ue Ag		
Just/M rk		
Port bi ity A j		
S ve Our Homes A j	\$0	\$0
Non-Hx 10% p (AMD 1)	\$0	\$0
P&G A j	\$0	\$0
Assesse V ue	\$100	\$100

2023 ert fe T x Summ ry

2023 T x Amount w/o Exemptions/ p \$1.33
2023 T x Bi Amount \$1.33

* Does NOT IN LUDE Non A V orem Assessments

Leg Des ription

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	ri y	ssessmen	Val e	Exemp	Val es	Taxable Val e					
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											
Descrip i n		Date	B k	Page	mn	Q alified	Va l/Imp				
WARRANTY DEED		05/0 / 978	0 70	6 5	\$ 00	No	Vacant				
Land											
Me d	Fr n age	Dep		Uni s	Uni s Price	Land Val e					
LOT					\$ 00.00	\$ 00					
Building Information											
Permits											
Permit #	Descrip i n	gency		mn	CO Da e	Permit Da e					
Extra Features											
Descrip i n	Year B il		Uni s		Val e	New C s					
Zoning											
Z ning	Z ning Des rip i n	F re Land Use			F re Land Use Des rip i n						
PD		PUBS			Planned Development						
Utility Information											
Fire S a i n	P wer	P ne n al g)	Wa er Pr vider	Sewer Pr vider	Garbage Pi k p	Recycle	Yard Was e Ha ller				
3.00	DUKE	CENTURY LINK	SUNSHINE WATER SERVICES	SUNSHINE WATER SERVICES	NA	NA	NA				
Political Representation											
C mmis s i ner	US C ongress	S a e H se		S a e Sena e	V ing Precinc						
Dist 3 - Lee Constantine	Dist 7 - Cory Mills	Dist 39 - DOUG BANKSON		Dist 0 - Jason Brodeur	34						
School Information											
Elemen	ary Sc	I Dis ric	Middle Sc	I Dis ric	Hig	Sc	I Dis ric				
Wekiva		Teague			Lake Brantley						
Copyright 2024 © Seminole County Property Appraiser											



**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 elandesk@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