



City of Eustis

P.O. Drawer 68 • Eustis, Florida 32727-0068 • (352) 483-5430

TO: Eustis City Commission

FROM: Tom Carrino, City Manager

DATE: April 18, 2024

RE: **SECOND READING**

Ordinance Number 24-21: Approving a Conditional Use Permit for a Monopine Communication Tower with a height of 180 feet, located within Pine Meadows Subdivision on Future Acorn Meadows Loop - Street A

Introduction:

Ordinance Number 24-21 approves a Conditional Use Permit for allowance of a monopine communication tower, with a height of 180 feet, located within Pine Meadows subdivision on Future Acorn Meadows Loop – Street A. (Alternate Key Number 1408041).

Background:

- a. The site will be developed with a 548- lot mixed product single family residential subdivision located 240.43-acres on north and south sides of Pine Meadows Golf Course Road, with frontage on County Road (CR) 44, within the Suburban Residential (SR) and Mixed commercial/ Industrial (MCI) Land Use District. The Design District for this building is Rural Neighborhood and Rural District.

The Map shows the approximate location of the proposed communications tower



- b. The site will be developed with a 548- lot mixed product single family residential subdivision located 240.43-acres on north and south sides of Pine Meadows Golf Course Road, with frontage on County Road (CR) 44, within the Suburban Residential (SR) and Mixed commercial/ Industrial (MCI) Land Use District. The Design District for this building is Rural Neighborhood and Rural District.

Applicant's Request:

The applicant requests a Conditional Use Permit to allow a monopine communication tower, with a height of 180 feet, located within Pine Meadows subdivision on Future Acorn Meadows Loop – Street A.

Analysis:

The standards of review must show the conditional use is consistent with the City's Comprehensive Plan, Land Development Regulations and City Code. Accordingly, staff has reviewed this conditional use request with consideration of the following:

Section 109-4 Use Regulations Table of the City's Land Development Regulations allows a wireless communication Antenna and/or towers as a conditional use for MCI land use district.

The standards of review must show the conditional use is consistent with the City's Land Development Regulations, and City Codes, which are shown below.

The exterior appearance would not vary much as the 180' communication Tower, within a compound of 50' x 50' is designed as monopine which blends it into the surroundings.

Additional Applicable Policies and Codes:

Staff has reviewed this conditional use request with consideration of the following.

Section 102-30 (Conditional Uses) of the Land Development Regulations (LDRs) provides for uses that are generally compatible with the use characteristics of a future land use district, but which require individual review of:

"Location, design, intensity, configuration, and public facility impact, in order to determine the appropriateness of the use of any particular site in the district and their compatibility with adjacent uses."

The Conditional Use review allows the City Commission to attach conditions, limitations, and requirements to a conditional use permit to prevent or minimize adverse effects upon other properties in the neighborhood. These conditions can include limitations on size, intensity of use, bulk and location, landscaping, lighting, provision of adequate ingress and egress, duration of the permit, and hours of operation.

Policy Implications:

Approval or denial of this waiver request to grant approval to allow a monopine communication tower, with a height of 180 feet, located within Pine Meadows subdivision on future Acorn Meadows Loop – Street A. could set a precedent for the review of similar requests in the future.

Alternatives:

1. Approve Ordinance Number 24-21.
2. Deny Ordinance Number 24-21.

Community Input:

The department has properly advertised the Ordinance in the newspaper; notified surrounding properties within 500 feet, and posted the property. To date, there has been no opposition received to the proposed development, nor any feedback at all related to this Conditional Use request.

Budget/Staff Impact:

There would be no direct cost to the city associated with the action. There would be no additional staff time beyond the normal plan review process and inspection.

Conclusion:

Staff recommends conditional approval of the conditional use request for the 180' Monopine Communication Tower within a 50' x 50' compound. This recommendation is based on the following discussion:

The tower's design, consistent with surroundings and initially supporting Verizon Wireless, accommodates three additional providers, addressing a capacity gap, particularly for the future Pine Meadows community. The tower serves public and emergency services, enhancing wireless service and resident safety. Its Monopine design blends into the surroundings. **However, approval is conditional upon the submission of a geotechnical report to our engineering staff for future site plan DRC submittal review.**

Prepared By:

Sherri Takaloo, Senior Planner

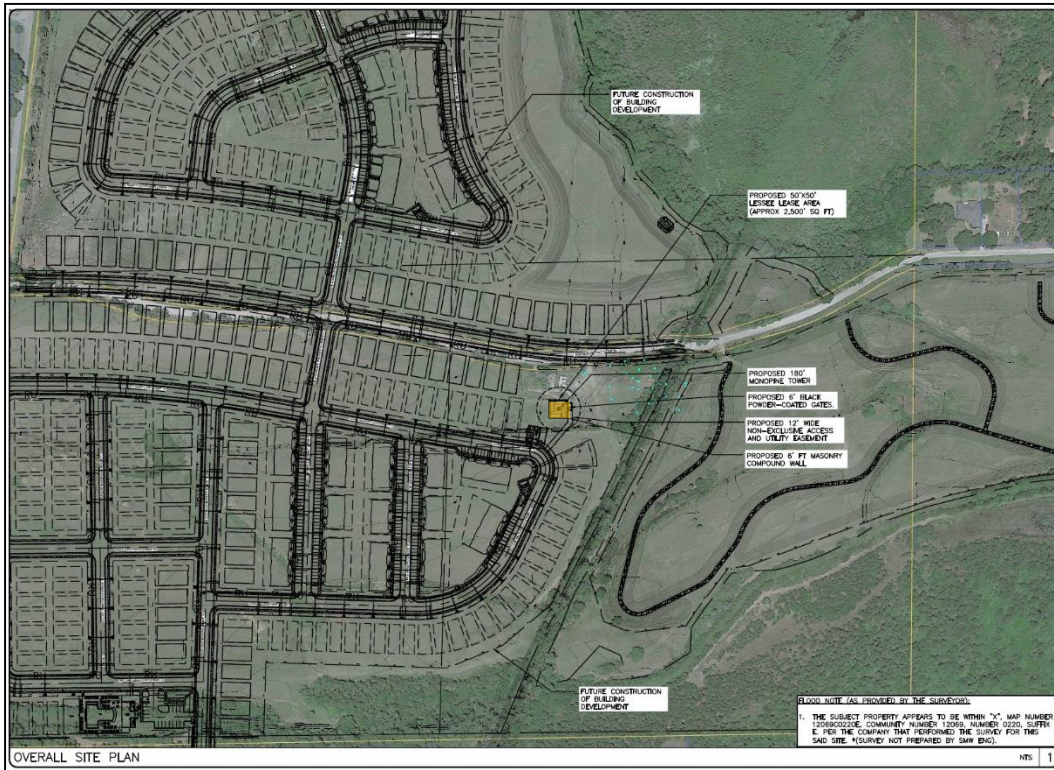
Reviewed By:

Jeff Richardson, AICP, Deputy Development Services Director

Mike Lane, AICP, Development Services Director

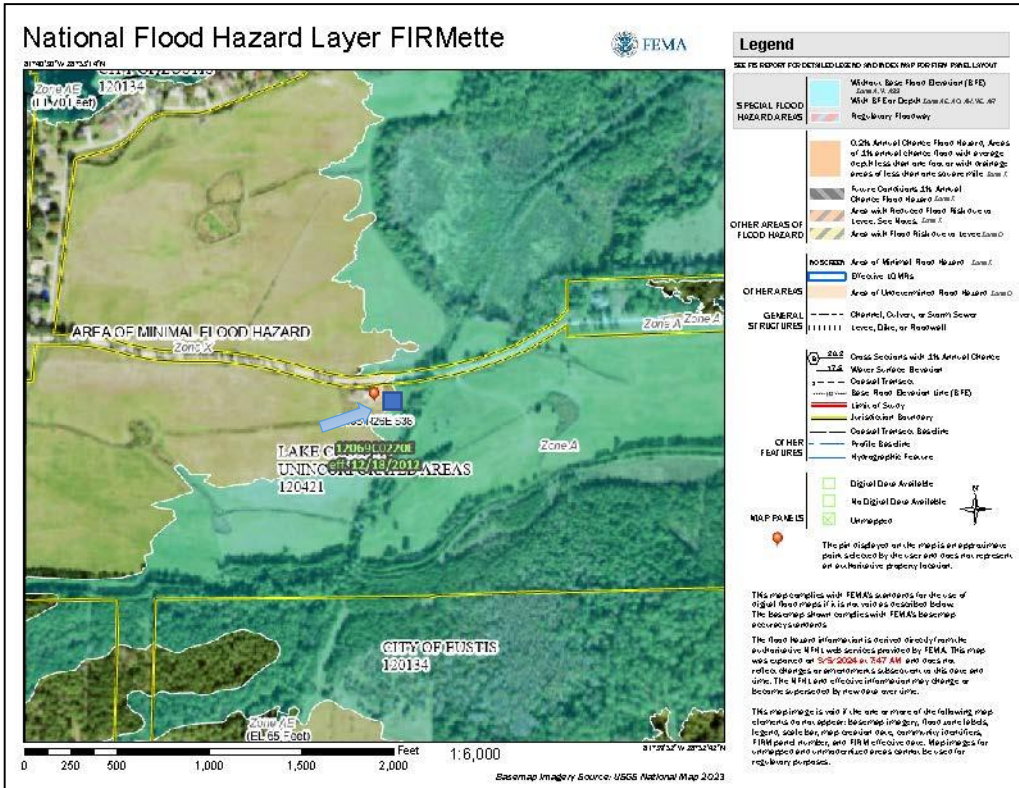
Attachment:

1. Maps, documents and more detailed information for the proposed communication tower
2. Proposed Ordinance Number 24-21

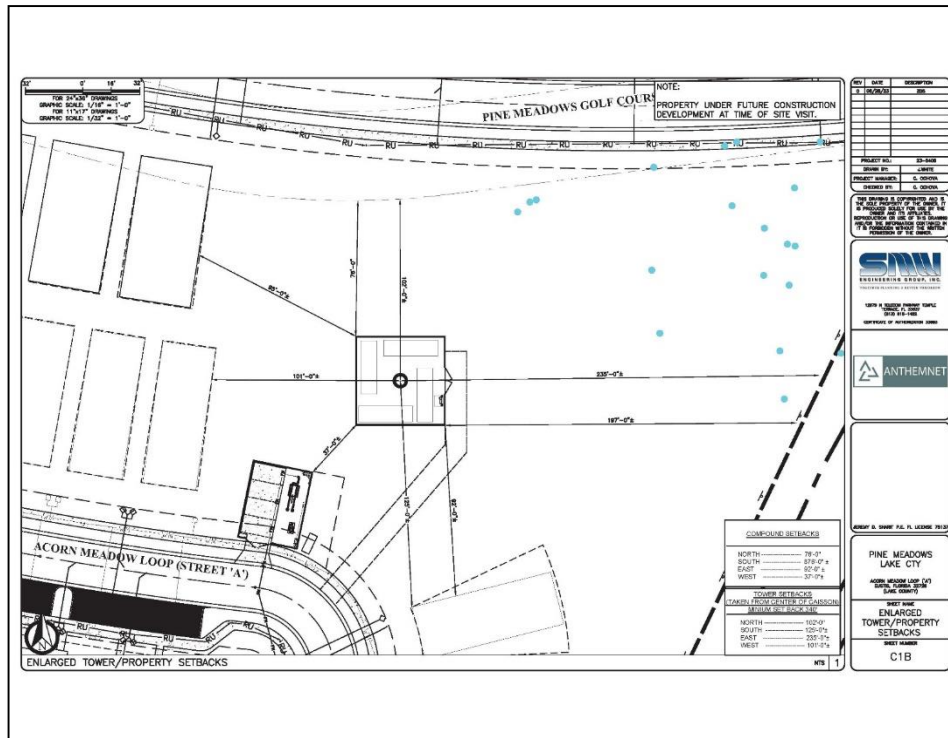


Future Development Site Plan & Location of the Communication Tower



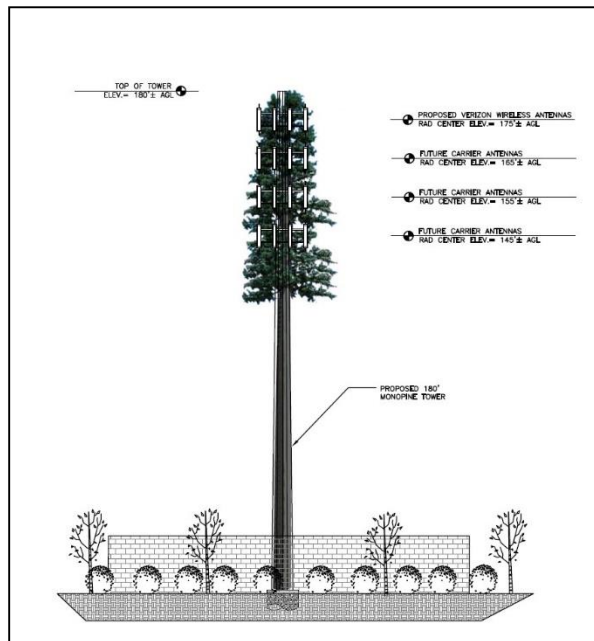


The Communication Tower Location seems to be subject to Flood Zone (FEMA 2012 FIRM Maps)

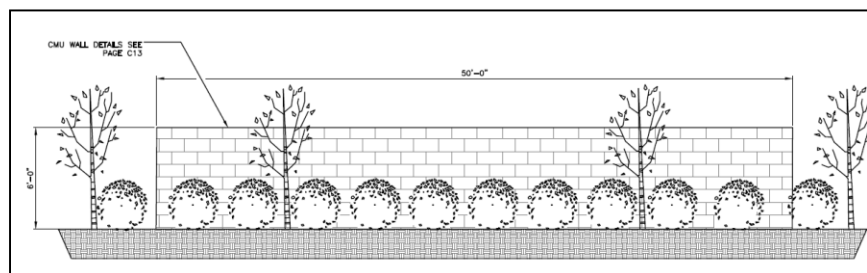


Proposed Communication Tower setbacks:

- The closest future property lot line in 101 feet to the west.
- The proposed tower is approximately 1,055' from the nearest lot line of an existing residential use (Alt key 3848038).



The Proposed communication tower is within a 2,500 sq.ft (50' x 50' compound), The height of the masonry wall around the compound is 6 feet.



Part of Project Engineer Report



Report Date: July 26, 2023

Client: Anthemnet, Inc.
5944 Luther Lane
Dallas, TX 75225
Attn: Ashley Duewall
(909) 202-3437
ashley@anthemnet.com

Structure: Proposed 180-ft Monopole
Site Name: Pine Meadows Lake City
Site Reference #: N/A
Site Address: Acorn Meadow Loop
City, County, State: Eustis, Lake County, FL
Latitude, Longitude: 28.882806°, -81.669884°

PJF Project: A00023-0171.001.7102

We understand that there may be some concern on the part of local building officials regarding the reliability of communication poles. Communication structures are designed in accordance with the Telecommunications Industries Association / Electronic Industries Association Standards TIA-222-H, "Structural Standards for Antenna Supporting Structures, Antennas, and Small Wind Turbine Support Structures." This is a nationally recognized standard and is modeled after the American National Standards Institute document ANSI A58.1. The TIA-222-H standard was developed by professional engineers experienced in the design of communication structures. Much of these specific design criteria are often not available in local building codes.

The pole and its foundation will be designed per the 2020 Florida Building Code, 7th Edition (2018 International Building Code with state amendments) and the TIA-222-H standard (exception #5 of Section 1609.1.1) using Load and Resistance Factor Design (LRFD) methodology. This design methodology is also used in building design and is discussed in American Institute of Steel (AISC) and American Concrete Institute (ACI) design standards.

This pole shall be designed with a basic design wind speed of 132 mph for use in the TIA-222-H Standard Exposure Category C, a topographic factor, $K_{zt} = 1.0$, and Risk Category II shall be used in this design.

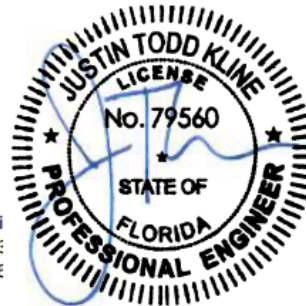
The monopole for this site will be designed as a "bend-over" pole. This means that the bottom of the pole will be intentionally over-designed in an attempt to limit the fall radius of the pole. This pole will be designed with the top 60-ft meeting the design wind criteria, but the remaining structure will be strong enough to resist considerably more than the design wind. When steel becomes overstressed, it does not suddenly break, it will bend and buckle. In the unlikely event that this pole should collapse, the upper portion of the pole would be overstressed first and would buckle. The upper portion of the pole would then swing down and hang from this level or, at worst, break off resulting in a fall radius of up to 60-ft. Once the upper portion is no longer upright catching the full force of the wind, the stresses in the lower portion of the pole are reduced, making a further collapse of the pole unlikely.

We at Paul J. Ford and Company appreciate the opportunity of providing our continuing professional services to you and Anthemnet, Inc.. If you have any questions or need further assistance on this or any other projects, please give us a call.

JUSTIN T. KLINE, P.E. - FL LICENSE #0000079560
PAUL J FORD & CO. - #EB-0002848

Respectfully Submitted by:
Paul J. Ford and Company

Nathan C. Miller, PE
Project Engineer
nmiller@pauljford.com BKK



This item has been electronically signed and sealed by Justin T. Kline, P.E. using a digital signature and date.

Printed Copies of this document are not considered signed and sealed, and the signature must be verified on electronic copies.

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www.PaulJFord.com

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07/27/2023

Employee Owned



Antenna Structure Registration

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[FCC Site Map](#)

TOWAIR Determination Results

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A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(50:1): NO FAA REQ-RWY 10499 MTRS OR LESS @ 5474.81 MTRS (5.47480) KM AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	28-50-52.00N	081-37-49.00W	MID-FLORIDA LAKE	EUSTIS, FL	50.9	975.3999999999998

PASS SLOPE(50:1): NO FAA REQ-RWY 10499 MTRS OR LESS @ 4561.94 MTRS (4.56189) KM AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	28-55-15.00N	081-39-7.00W	UMATILLA MUNI	LAKE UMATILLA, FL	30.8	762.0

Your Specifications

NAD83 Coordinates

Latitude 28-52-58.1 north
Longitude 081-40-11.5 west

Measurements (Meters)

Overall Structure Height (AGL) 54.9
Support Structure Height (AGL) 54.9
Site Elevation (AMSL) 21

Structure Type

MTOWER - Monopole

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower:

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