



ALACHUA COUNTY DEVELOPMENT REVIEW COMMITTEE STAFF REPORT

Project Number: DR25-000008
Preliminary and Final Development Plan for
Duke Energy Archer Substation Improvements

SUBJECT: Equipment yard expansion and associated improvements for existing substation

APPLICANT/AGENT: NV5, Inc.

PROPERTY OWNER: Duke Energy Florida, Inc.

PROPERTY INFORMATION: Address: 15401 SW 103rd Ave.
Parcel Numbers: 04631-001-000, 04631-003-000
Future Land Use: Institutional and Rural Agriculture
Zoning: Agricultural (A)
Acreage: 21.94

CHRONOLOGY: Application submittal: 03/31/2025
Insufficiency Reports: 04/25/2025, 05/29/2025
Application Resubmittals: 05/05/2025, 06/30/2025
Sufficiency Determination: 08/04/2025
DRC Hearing: 08/21/2025

STAFF RECOMMENDATION: Approval with conditions

BACKGROUND AND SUMMARY OF PROPOSED PLAN:

This application proposes a Preliminary and Final Development Plan for the expansion of an equipment site and associated improvements for an existing substation facility on approximately 21.94 acres.

The existing substation has been operating since 1962 and predates the Comprehensive Plan and Unified Land Development Code (ULDC). Electric substations are allowed by right in all zoning categories except Conservation and Preservation; this is in accordance with Florida Statute 163.3208. The current ULDC provides criteria for the location of new electric substations and also provides criteria for the minimization of visual impacts through landscaped buffers (Sec. 404.50.6 *Electric Substation*). The buffer criteria as well as other development standards (landscaping, tree preservation, stormwater management, lighting standards) are applicable to the site.

The proposed substation plan includes equipment yard expansion (various equipment on gravel), a stormwater management facility, and landscaping.



Figure 1: Aerial of subject property

CONSISTENCY ANALYSIS:

Following is an analysis of the consistency of the proposed plan with the applicable policies of the Comprehensive Plan and Land Development Regulations.

COMPREHENSIVE PLAN ANALYSIS:

Future Land Use Element

The subject property has the Institutional (substation parcel) and Rural/Agricultural (additional parcel to the east) Future Land Use designations. The existing use is considered Institutional.

Policy 5.1.1 of the Future Land Use (Institutional Uses) states that potential locations for major future institutional uses are identified on the Future Land Use Maps. Institutional uses may be allowed in other land use categories designated on the Future Land Use Map, and implemented in accordance with the guidance and policies within this Section 5.0 and within the Comprehensive Plan as a whole.

Policy 5.1.2 identifies public utility, communications or infrastructure services (e.g. utility transmission and distribution facilities) as an institutional use.

Objective 5.5 Public Utility, Communication or Infrastructure Services - Infrastructure and utility structures, such as communication towers, personal wireless service facilities, radio and television antennas, water and sewer, and energy generation and distribution facilities shall be designed and located to eliminate or minimize adverse visual impacts on the landscape.

The existing substation predates Comprehensive Plan policies. Current state statutes and land development regulations require minimization of visual impacts through buffers, which is evaluated further in this staff report.

UNIFIED LAND DEVELOPMENT CODE:

Zoning District and Use Regulations

In accordance with Florida Statute 163.3208, Electric Substations are permitted as a limited use in all zoning districts except C-1 (Conservation) and Preservation. Sec. 404.50.6 provides standards for the placement or construction of new electric substations; however, this is not a new substation. The code also has buffer requirements, which are applicable to the expansion.

Sec. 404.50.6(2) requires that all electric substations provide a high-density buffer with vegetation and screening consistent with Table 407.43.2 and shall have a minimum width of 100-feet if adjacent to a residential use and a width of 75-feet for all other uses. Vegetative buffers and screening shall not be required to have a mature height in excess of 14 feet within aerial

access points to the substation equipment. The adjacent properties are agricultural and not residential and therefore a 75-foot buffer is required. Additional information on this is provided in the Landscaping and Buffering section of this staff report.

Natural and Historic Resources Protection

Conservation Areas and Management Plan

There are no conservation resources on this site.

Open Space

Non-residential development is not required to provide Open Space, unless there are conservation resources present on site (Sec. 407.52 Minimum open space requirement). There are no conservation resources for the subject property, and therefore no Open Space is provided.

Tree Preservation

Sec. 406.14 (b) *Minimum preservation required* requires a minimum of 20 percent of existing tree canopy to be retained; the development plan demonstrates that 83 percent of the existing canopy will be preserved. The existing trees are primarily around the perimeter of the site. The trees proposed to be removed within the interior of the site are all less than 45-inches and appropriately mitigated with replacement plantings and fee-in-lieu.

Sec. 406.13 *Relocation, Replacement, Mitigation* requires either relocation, replacement, or mitigation for the alteration of regulated trees. Due to the number and size of the trees removed and limited space to replant trees onsite, there is a mitigation deficit. Mitigation by replacement is proposed for 108 inches (see sheet S-098-D112 of Tree Removal Plan).

A fee-in-lieu payment is required when relocation or mitigation by replacement onsite is not feasible and is based on the adopted fee schedule rate of \$130 per caliper inch for the mitigation. There is still a remaining deficit of 414 inches which will require a fee-in-lieu payment of \$53,820 prior to the issuance of Construction Permit.

GENERAL DEVELOPMENT STANDARDS

Outdoor Lighting

UDLC Chapter 407 Article 13 requires a photometric plan for all commercial, industrial, institutional, and multi-family. Additional lighting proposed as part of the expansion is designed to light up drive aisles for safe navigation inside the substation. The lighting is only turned on in situations such as meteorological events requiring manning of the substation, after-hours equipment maintenance and other similar emergency situations. The photometric plan for the

additional lighting proposed as part of the expansion project demonstrates that the maintained illumination levels at the property line are 0.0 footcandles, which is less than the 0.5 footcandles allowed for adjacent uses.

Landscaping and Buffering

A 75-foot-wide high-density buffer with vegetation and screening is required around the perimeter of the site per Sec. 404.48.5. The buffer is appropriately shown and labeled. There is existing vegetation in much of the buffer, and this will be supplemented with new landscape material in order to meet the requirements of Sec.407.43.1 – *Required buffers*. A 6-foot-tall vinyl fence will also be provided as screening to meet the high-density buffer requirements. The fence will be located interior to the vegetation, so that the existing and proposed trees will be on the outside of the fence.

The stormwater basin is also appropriately landscaped and meets the requirements of Sec. 407.43.2(e) – *Landscaping requirements - Stormwater management facilities*.

The Tree Canopy Plan demonstrates that 36 percent of the site will be under tree canopy within 20 years, which meets the 30 percent minimum coverage required in Sec.407.43.2 (a) – *Landscaping Requirements – Site tree canopy*.

Prior to the installation of a new permanent irrigation system or addition to an existing system, an irrigation plan must be submitted to and approved by the Alachua County Environmental Protection Department through the [Alachua County Citizenserve Portal](#). The irrigation system shall comply with the Landscape Irrigation Design and Maintenance Standards found in Article VI of Part II, Title 7, Chapter 77 of the Alachua County Code. Temporary systems are exempt from the design standard requirements but must register through the Portal.

Access Management

This is an existing substation with existing access from SW 103rd Ave, which is a county maintained road.

Stormwater Management

The stormwater management facility complies with the requirements of Article 407, Article 9 and is appropriately landscaped.

Concurrency

A Final Certificate of Levels of Service Compliance (CLSC) for all public facilities will be issued upon Final Development Plan Approval and will be valid for one year. Provided that construction has commenced within the allowable period, the project shall have reserved capacity for a period of no more than two years from commencement of construction.

STATE AND FEDERAL PERMIT

The issuance of a state or federal permit shall not obligate the County to grant approval of any local permit and shall not be deemed to satisfy the requirements of the ULDC. As well, the issuance of this permit does not indicate that Alachua County believes that the applicant has all federal and state permits necessary prior to commencing construction.

The applicant is advised that conflict with a subsequently issued state or federal permit may cause a need to apply for an amendment to this development plan approval. Upon approval of a development plan, the applicant shall obtain all required state and federal permits prior to commencement of the development. Upon issuance of a required state or federal permit, the applicant shall furnish a copy of such permit to the applicable County department.

DEVELOPMENT PLAN EXPIRATION:

According to Section 402.47(b) *Time limitation for expiration of development plans*, an approved Final Development Plan shall expire unless a complete application for a construction, building or other required permit has been accepted by the appropriate reviewing department within 12 months of the date of final approval and that such development is continuing in good faith. Applications for extension of time limit may be processed pursuant to Article 6 or Article 10 of Chapter 402 of the ULDC.

STAFF RECOMMENDATION:

Staff has found the proposed Preliminary and Final Development Plan to be consistent with the Comprehensive Plan and requirements of the Unified Land Development Code.

Staff recommends **approval with conditions** of the Preliminary and Final Development Plan for Duke Energy Substation Improvements.

CONDITIONS:

1. Prior to issuance of Construction Permit:
 - a. Pay tree mitigation fee of \$53,820 to Alachua County Parks and Conservation Lands, via the Growth Management Department, or provide a revised plan demonstrating compliance with tree mitigation requirements.
 - b. Provide documentation of the existing roadway and driveway connection at the intersection of SW 154th Street and SW 103rd Avenue and connection to the site. Should any damage to the roadway occur as a result of construction, the roadway

will be repaired. The driveway connection to the roadway will be milled and overlaid with 1.5-inches of SP12.5 for a distance of 10-feet beyond the station gate.

- c. The property owner/applicant shall follow all Florida Fish and Wildlife Conservation Commission guidelines and obtain any required state permits regarding Gopher Tortoise protection, prior to clearing vegetation, grading or filling the site [Sec. 406.05, ULDC; Sec. 406.28, ULDC].