



**COUNTY OF ALBEMARLE PLANNING**  
**STAFF REPORT SUMMARY**

<b>Proposal:</b> SP202300017, Walnut Creek Substation	<b>Staff:</b> David Benish, Development Process Manager
<b>Planning Commission Public Hearing:</b> October 22, 2024	<b>Board of Supervisors Hearing:</b> January 15, 2025
<b>Owner:</b> Dominion Energy Virginia,	<b>Applicant:</b> Dominion Energy Virginia
<b>Acreage:</b> 10.95 acres	<b>Special Use Permit/Zoning Map Amendment:</b> Energy and communications transmission facilities under Sections 18-10.2.2(6) of Zoning Ordinance
<b>TMPs:</b> 10100-00-00-012C0, 10100-00-00-012C1, 10100-00-00-012C2 <b>Location:</b> 2419, 2443, 2447 Old Lynchburg Rd. just south of the intersection of Old Lynchburg Rd and Red Hill Rd.	<b>Zoning/By-right use:</b> RA, Rural Areas - agricultural, forestal, and fishery uses; residential density (0.5 unit/acre in development lots)
<b>Magisterial District:</b> Samuel Miller	<b>Entrance Corridor:</b> No
<b>School Districts:</b> Red Hill (Elementary); Walton (Middle); Monticello (High)	<b>Proffers:</b> None
<b>Proposal:</b> Request to establish a new electric substation including new equipment, fencing, and stormwater management on 3 parcels totaling 10.95 acres.	<b>Requested # of Dwelling Units:</b> N/A
<b>DA:</b> <b>RA:</b> X (Rural Area 4)	<b>Comp. Plan Designation:</b> Rural Areas – preserve and protect agricultural, forestal, open space, and natural, historic, and scenic resources/ density (0.5 unit/ acre in development lots)
<b>Character of Property:</b> Three rural residential parcels, each containing residences, which have been or will be torn down and removed from site. Rolling topography.	<b>Use of Surrounding Properties:</b> Rural, rural residential
<b>Factors Favorable:</b> 1. Meets utility needs and supports continued electric power availability and reliability. 2. the location immediately adjacent to existing power lines/ROWs limits the impact to the character of the area. 3. Visibility can be minimized with adequate landscaping/plantings.	<b>Factors Unfavorable:</b> 1. The applicant has not documented sound levels to be generated from the facility; however, a condition of approval requires this information prior to issuance of a building permit. 2. Additional landscaping should be provided along the eastern and southern property lines; however, a condition of approval requires Planning Director approval of a revised landscape plan. 3. The site will have some visual impact until landscape screening matures.
<b>RECOMMENDATIONS:</b> Staff recommend approval of SP202300017, Walnut Creek Substation, with conditions.	

**STAFF CONTACT:**  
**PLANNING COMMISSION:**  
**BOARD OF SUPERVISORS:**

**David Benish, Development Process Manager**  
**October 22, 2024**  
**TBD**

**PETITION**

PROJECT: SP202300017 Walnut Creek Substation

MAGISTERIAL DISTRICT: Samuel Miller

TAX MAP/PARCEL: 10100-00-00-012C0, 10100-00-00-012C1, 10100-00-00-012C2, 10.95 ac.

LOCATION: 2419, 2443, 2447 Old Lynchburg Rd.

PROPOSAL: Request to establish a new Dominion Energy Virginia electric substation (switching station) to allow for new equipment, fencing, and stormwater management on 3 parcels totaling 10.95 acres.

PETITION: Section 18-10.2.2(6) Energy and communications transmission facilities (reference 18-5.1.12).

ZONING: Rural Areas – agricultural, forestal, and fishery uses; residential density (0.5 unit/acre in development lots)

OVERLAY DISTRICT: None

ENTRANCE CORRIDOR: No

COMPREHENSIVE PLAN: Rural Area – preserve and protect agricultural, forestal, open space, and natural, historic and scenic resources; residential (0.5 unit/ acre in development lots) in Rural Area 3 in the Comprehensive Plan.

**CHARACTER OF THE AREA:** The surrounding area is a mixture of wooded and open lands, and rural-scale residential development. The site is located near a junction of two existing power lines/rights-of-way. The topography is rolling. A private school exists within the residence on the abutting parcel to the east of the site (Home Occupation HO202100017, Mountainside Arts). The home is approximately/school is approximately 250 feet from the edge of the limits of grading from the substation and an outbuilding/studio is the parcel is approximately 150 from the edge of grading for the substation. One house on the east side of Old Lynchburg Road and across from the site is approximately 150 from the edge of the grading for the station. Other homes on parcels surrounding the site are farther from the proposed facility (400-500 feet, or more).

Mt. Olivet Methodist Church is located approximately 600 feet south of the southwestern corner of the site (approx. 700 feet from the southwestern corner of the substation).

**PLANNING AND ZONING HISTORY**

(1990) SP199000013 – Special Use Permit request to establish a public garage on the parcel was denied.

(1990) SP199000071 – Special Use Permit request to locate a mobile home on the parcel was approved.

(1992) SUB199200077 – Subdivision request to subdivide the property into a total of three (3) parcels was approved.

**DETAILS OF THE PROPOSAL**

Construction of new electric power substation on 10.95 acres. The applicant has provided a description of the project (“Walnut Creek Substation Project Proposal,” Attachment 2) and Site Exhibit/Plans for the project (Attachment 3). The following are some of the major site and design elements of the proposal:

- New substation located near the junction of two existing power lines/rights-of-way
- Site development will require the removal of trees for the substation equipment.

- The site is 10.95 acres in total, with 4.9 acres of wooded tree canopy (45% of site).
- Transmission substation equipment will be 35 feet or less in height.
- New backbone H-frame, static, and transmission poles will be approximately 75 to 110 feet in height. These heights are consistent with other existing Dominion Energy electric transmission structures nearby.
- One prefabricated 24' x 70' control enclosure for housing substation controls will be installed onsite.
- 12-foot-high perimeter fencing will be installed around the site.
- Landscaping will be provided around the perimeter of the property and augment gaps in existing vegetation along the boundary (Landscape Exhibit and Details are found in the Concept Plan set (Attachment 3).
- Limits of disturbance (LOD) extend to property boundaries along in some locations, primarily the eastern boundary.
- Substation base material is gravel.
- Stormwater management facilities will be installed onsite. Site subject to DEQ Annual Standards and Measures review and approval process.

The proposed facility is intended to provide the community with increased reliability in electric service distribution.

### **COMMUNITY MEETING**

The required community meeting was held at Walton Middle School on January 31, 2024. Approximately 10 attended the meeting. Comments included:

- Concern that the use would change the rural character of the area
- Visibility of the site in from adjacent properties and roads
- Potential noise impacts from the facility to nearby residents
- Potential negative impact to adjacent small art school
- Environmental impacts, erosion and runoff from the site

### **ANALYSIS OF THE SPECIAL USE PERMIT REQUEST**

This special use permit, and all special use permits, are evaluated for compliance with the provisions of Chapter 18, Section 33.40b of the Code of Albemarle. Each provision of that section is addressed below. The provisions of the ordinance are in bold font and underlined.

**No substantial detriment. The proposed special use will not be a substantial detriment to adjacent lots.** The facility is proposed to be screened both new/installed landscaping and by existing vegetation around the perimeter of the site, except within the existing right-of-way where trees and shrubs are not permitted for safety and maintenance requirements (see "Landscape Exhibit" sheet in Attachment 3, Concept Plan set). There will be several new taller tower structures and poles that will not be screened, but there are existing electric towers that are visible, so the new towers will not create a new visual impact. The height of the new towers and poles (75 to 110 feet) are consistent with the height of the existing towers and poles within the rights-of-way. The applicant has submitted an analysis of the visual impact/visibility of the constructed substation from various viewpoints, including public roads and adjoining properties (Attachment 4).

Staff believe that the landscaping along the eastern and southern property line should be improved/augmented with additional landscaping, including trees, from what is proposed in the current Landscape Exhibit to better address the visual impacts in that area. Staff are recommending a condition of approval requiring the Planning Director's approval of the final landscape plan prior to the issuance of a building permit/commencement of construction.

Relatedly, grading of the site will occur up to the property line, particularly along the eastern property line. This could compromise existing vegetation on the adjacent properties, which can contribute to the screening of the site. Staff pursued with the applicant whether the substation and/or its limits of disturbance (LOD) could be reduced in size or otherwise moved further south on the site and further away from the eastern property line. This would potentially allow some existing vegetation to remain or provide added space for new screening materials. According to the applicant, technical criteria, right-of-way and line locations and related tie-ins to those lines limit the ability to move further away from the eastern boundary to any significant degree.

While it appears a larger scale shift of the site is not possible, staff believe that the limits of disturbance should shift away from the property line to the extent feasible to better protect vegetation on the adjacent properties. Staff are recommending a condition of approval requiring the Planning Director's final approval of the limits of disturbance in this area as it relates of landscaping and preservation of existing vegetation along both side of the property line.

Additionally, staff are concerned with ensuring that the facility will not generate noise that will be a detriment to adjacent properties. The applicant has stated the substation will not create any significant noise; however, the applicant has not provided any sound information on the proposed equipment. Pending the provision of additional information or study verifying expected sounds levels, staff are recommending a condition requiring a sound study (or other adequate documentation) to ensure the new equipment meets zoning ordinance decibel level limits of 55 dba nighttime and 65 dba daytime hours at the property lines. Public facilities such as substations are exempt from the noise regulations of the County Code. Assuring that acceptable noise levels can be met is important at the time of project approval.

**Character of the nearby area is unchanged. Whether the character of the adjacent parcels and the nearby area will be changed by the proposed special use.**

The existing character of the nearby area is rural woodlands and open space, and rural residential. The area contains wooded areas to the north, east, south, and west. Rural scale residential lots surround the area and around the subject site. The immediate area also contains two power line corridors that intersect this area and contribute to what is the existing character of the area.

While the substation adds new components to the powerline corridor, once adequate landscaped/screened, and that landscape grows/matures, the impact will not be significant and is not significantly different from the character created by the existing power lines and rights of way. Staff's opinion is that, in the short term, the character of the area will be minimally changed due to the industrial character of the facility. However, as screening trees mature this impact will be mitigated.

**Harmony. Whether the proposed special use will be in harmony with the purpose and intent of this chapter,**

Section 1.4(D) of the Zoning Ordinance states that one of the purposes of the Ordinance is to: "Facilitate providing adequate police and fire protection, disaster evacuation, civil defense, transportation, water, sewerage, flood protection, schools, parks, forests, playgrounds, recreational facilities, airports and other public requirements."

Adequate provision of electric service is an important public service and consistent with one of the purposes and intent of the Zoning Ordinance

**Harmony. ...with the uses permitted by right in the district**

Public utilities are in harmony with and supportive of residential uses in the district.

**Harmony. ...with the regulations provided in section 5 as applicable,**

**5.1.12 PUBLIC UTILITY STRUCTURES/USES**

*a. The proposed use at the location selected will not endanger the health and safety of workers and/or residents in the community and will not impair or prove detrimental to neighboring properties or the development of same;*

Existing access will be utilized for the substation (prior driveway entrance). There is no endangerment to workers or neighboring properties.

*b. Public utility buildings and structures in any residential zone shall, wherever practical, have the exterior appearance of residential buildings and shall have landscaping, screen planting and/or fencing, whenever these are deemed necessary by the commission;*

There are no regularly inhabited buildings proposed, only equipment at the substation. Security fencing and other safety measures will be installed to reasonably protect the public welfare. The facility will be required to meet state stormwater management requirements and erosion and sediment control measures.

A lighting plan (Exterior Lighting Photometrics) has been provided for the site. Staff are recommending a condition of approval requiring Planning Director approval primarily to ensure lighting will be consistent with County requirements and limit spillover to adjacent properties.

Staff addressed issues with landscaping in prior sections of the report.

*c. Such structures as towers, transmission lines, transformers, etc., which are abandoned, damaged or otherwise in a state of disrepair, which in the opinion of the zoning administrator pose a hazard to public safety, shall be repaired/removed to the satisfaction of the zoning administrator within a reasonable time prescribed by the zoning administrator;*

The proposal is to construct a new facility. No existing equipment, towers or poles are proposed to be removed as part of this proposal. If constructed, the facility will be subject to this requirement.

*d. In approval of a public utility use, the commission shall be mindful of the desirability of use by more than one utility company of such features as utility easements and river crossings, particularly in areas of historic, visual or scenic value, and it shall, insofar as practical, condition such approvals so as to minimize the proliferation of such easements or crossings, as described by the comprehensive plan.*

The proposal will not affect any critical resources. No critical natural, scenic or historic resources were found on the site.

**Consistency with the Comprehensive Plan. The use will be consistent with the Comprehensive Plan.**

*Objective 10: Support provision of private electric, telephone, natural gas, wireless, and fiber optic service when its provision is in keeping with other aspects of the Comprehensive Plan.*

*Strategy 10d: Locate utilities to minimize impacts on the visual and natural environment.*

Staff's opinion is that the proposal does not conflict with the above-noted objective and strategy in the Comprehensive Plan if revisions are made to landscape plan and grading limits to improve screening of the site, particularly along the eastern and southern boundaries of the site, and that noise generated from the substation will meet County ordinance decibel level limits.

The existing power lines are part of the character of the area. While the substation will add additional equipment within and adjacent to the existing power line right-of-way, it will not substantially change the prevailing character of this area, if properly landscaped/screened. Ground equipment visual impacts can be mitigated with screening and tower structure visual impacts already exist. The proposal supports the provision of electric service and will provide for increased reliability in electric service distribution.

**SUMMARY**

**Staff find the following factors favorable to this request:**

1. The project helps to meet utility needs and supports continued electric power availability and reliability.
2. The location immediately adjacent to existing power lines/ROWs limits the impact/change in the character of the area.
3. Visibility of the site can be minimized with adequate landscaping/plantings.

**Staff find the following factors unfavorable to this request:**

1. Additional landscaping is insufficient along eastern and southern property lines and site grading is proposed up to the property line which can affect the health of existing vegetation on the adjacent properties. A condition of approval requires Planning Director approval of a revised landscape plan and limits of disturbance to address these concerns.
2. The applicant has not documented sound levels to be generated from the facility; however, a condition of approval requires this information prior to the issuance of a building permit/commencement of construction.
3. The site will have some visual impact until landscape screening matures

**RECOMMENDATION**

Based on the findings contained in this staff report, staff recommend the approval of SP202300017 Walnut Creek Substation with the following conditions:

1. Development of the use must be in general accord (as determined by the Director of Community Development, or the Director's designee) with the Concept Plan entitled "Walnut Creek Substation Site Exhibit," provided in Attachment 3, and as revised pursuant to the

following conditions of approval regarding proposed landscaping, limits of disturbance, and exterior lighting photometrics. To be in general accord with the plan, development must reflect:

- a. Location of the substation and related infrastructure
- b. Limits of disturbance and wooded areas to remain

Land disturbance includes, but not limited to, grading, excavation, filling of land, the felling of trees, and removal of stumps, shall be limited to the areas within the Limits of Disturbance (LOD) on the Concept Plan (Site Exhibits).

Minor modifications, with the approval of the Zoning Administrator and Director of Planning, to the Concept Plan that do not conflict with that essential element listed above may be made to ensure compliance with the Zoning Ordinance, and state or Federal laws.

2. Planning Director approval of the final landscape plan (Landscape Exhibit and Details) and Limits of Disturbance (Site Exhibit and Landscape Exhibit) prior to the issuance of a building permit/commencement of construction. Planning Director approval of Limits of Disturbance (Site Exhibit and Landscape Exhibit).

3. Planning Director approval of the Exterior Lighting Photometrics plan prior to the issuance of a building permit/commencement of construction.

4. Submittal of a sound study or other documentation to the satisfaction of the Planning Director must be provided to demonstrate compliance with decibel level limits of the zoning ordinance for Rural Area properties prior to the issuance of a building permit/commencement of construction.

## **ATTACHMENTS**

Attach 1 - [SP2023017 Walnut Creek Substation - Location Map](#)

Attach 2 - [SP2023017 Walnut Creek Substation - Applicant's Project Narrative](#)

Attach 3 - [SP2023017 Walnut Creek Substation - Site Exhibits/Plans](#)

Attach 4 - [SP2023017 Walnut Creek Substation - Site Visibility Exhibits](#)