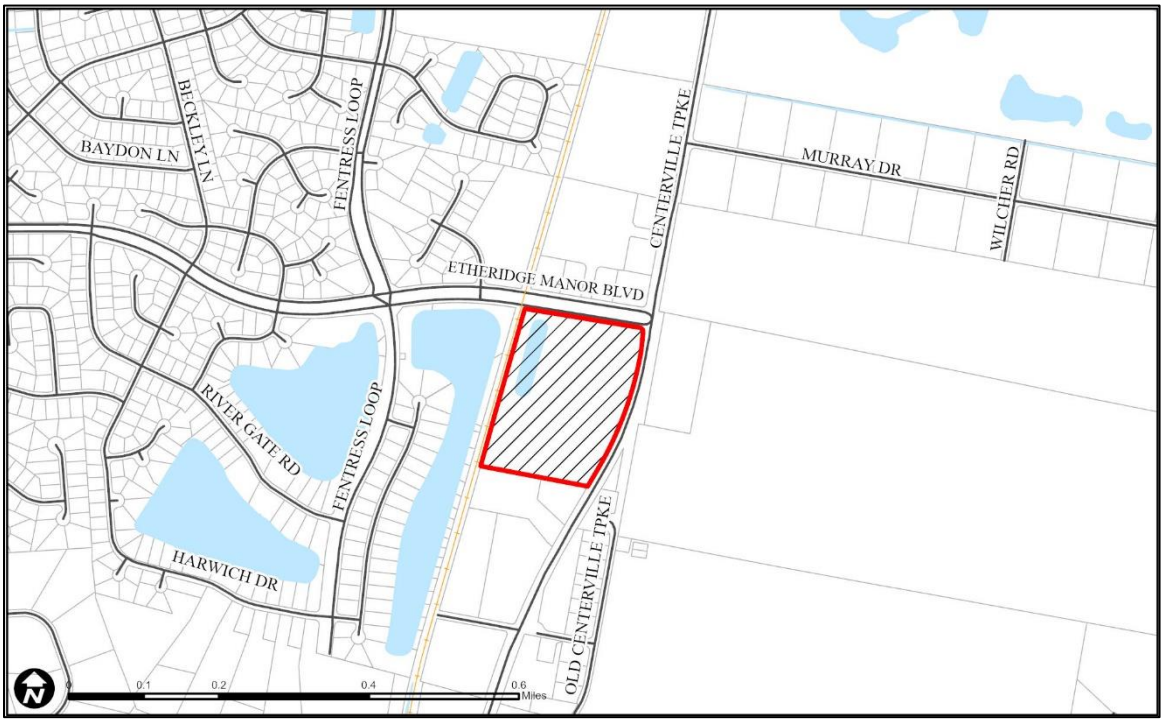
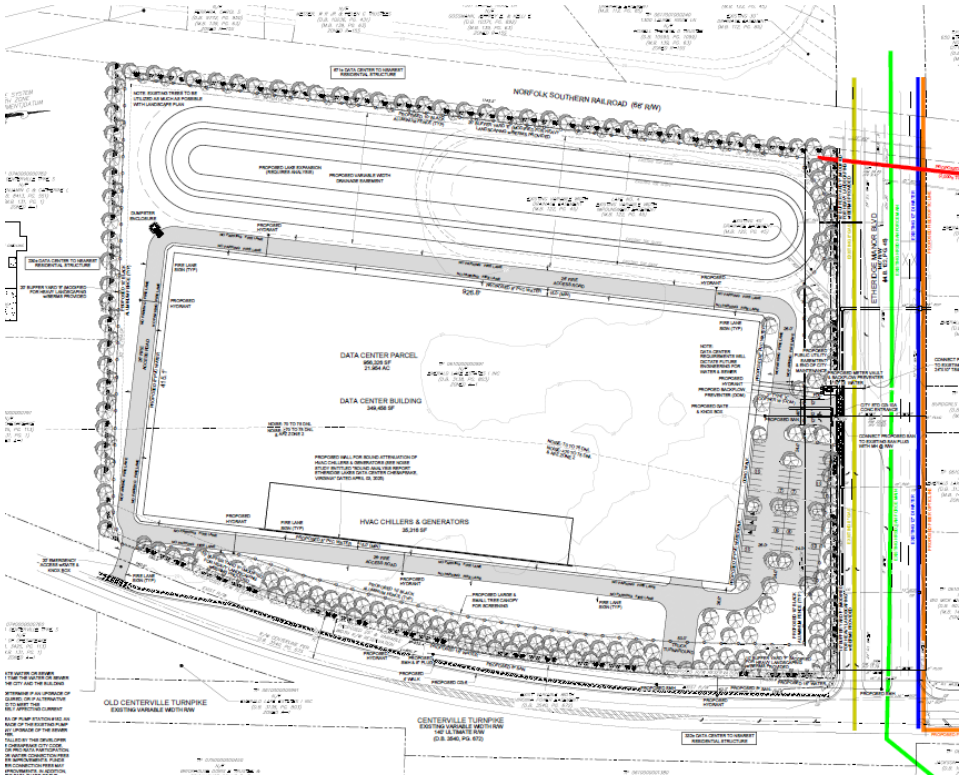
Name **Etheridge Lakes Data Center**
Application Number **PLN-REZ-2025-002**
Staff Recommendation **Approval with Proffers**

Staff Report Version May 5, 2025



Proposal: A conditional zoning reclassification of approximately 22.6 acres from A-1, Agricultural District, to M-1, Light Industrial District.	
Location: On the west side of Centerville Turnpike, south of Etheridge Manor Boulevard	**Tax Parcel:** 0610000000991
Applicant / Owner: EMERALD LAKE ESTATES I, INC.	**Planning Area:** Great Bridge
Staff Planner: Alyssa Neil	**Planning Commission Hearing Date:** May 14, 2025

General Development Plan (GDP)



Rendering

Project Proposal and Background

Project Proposal

The applicant/owner seeks approval of a conditional zoning reclassification of approximately 22.6 acres from A-1, Agricultural District, to M-1, Light Industrial District. The project site is in the Suburban Overlay district located on the south side of Etheridge Manor Boulevard, west of Centerville Turnpike. Adjacent zoning districts and uses include: vacant commercial zoned property to the north; a residential use, farm market, and agricultural land to the east; a single-family residential use to the south; and railroad tracks along the western boundary line separating the project site from the Carriage House Estates residential subdivision to the west.

The purpose of the rezoning is to allow a 349,458 square foot data center to be constructed on the subject property, with a 35,316 square foot utility area proposed for the HVAC chillers and emergency generators. The total building footprint will be 384,774 square feet. Data centers are large buildings filled with computing equipment, including storage drives, network hardware, and servers that manage, store, process, and share large amounts of data. It is anticipated that the proposed data center will have thirty (30) to fifty (50) employees. Although the facility would be manned twenty-four (24) hours a day, not all employees would be on-site at the same time as there would be three (3) separate shifts with a small overlap in the number of employees on-site during shift changes.

The closest single-family residential structure is to the south, approximately 230 feet from the proposed building. The closest residential structure to the proposed use on the east side of the property across Centerville Turnpike is 332 feet and the closest residential structure on the west side of the property is 671 feet separated from the proposed use by the Norfolk and Southern Railroad, as well as two stormwater BMP's, one on-site and one off-site.

The project site is located in both the 70-75 decibel (dB) Day-Night Average (DNL) noise zone, greater than 75 dB DNL, and partially within Accident Potential Zone two (APZ II). Data centers, which are classified under SIC 7374 according to the Department of Development & Permits – Zoning Division, broadly include higher intensity activities, such as coding, data entry, and/or processing facilities. As such, these facilities are generally not a permitted or conditional use in the A-1, Agricultural District, nor the Fentress Airfield Overlay District, which allows for limited commercial and industrial development that does not place significant demands on existing infrastructure. The applicant/owner has submitted a voluntary proffer limiting to the use of the property only to SIC 7374 with a definition for the use, such that a typical Computer Processing and Data Preparation facility would not be permitted.

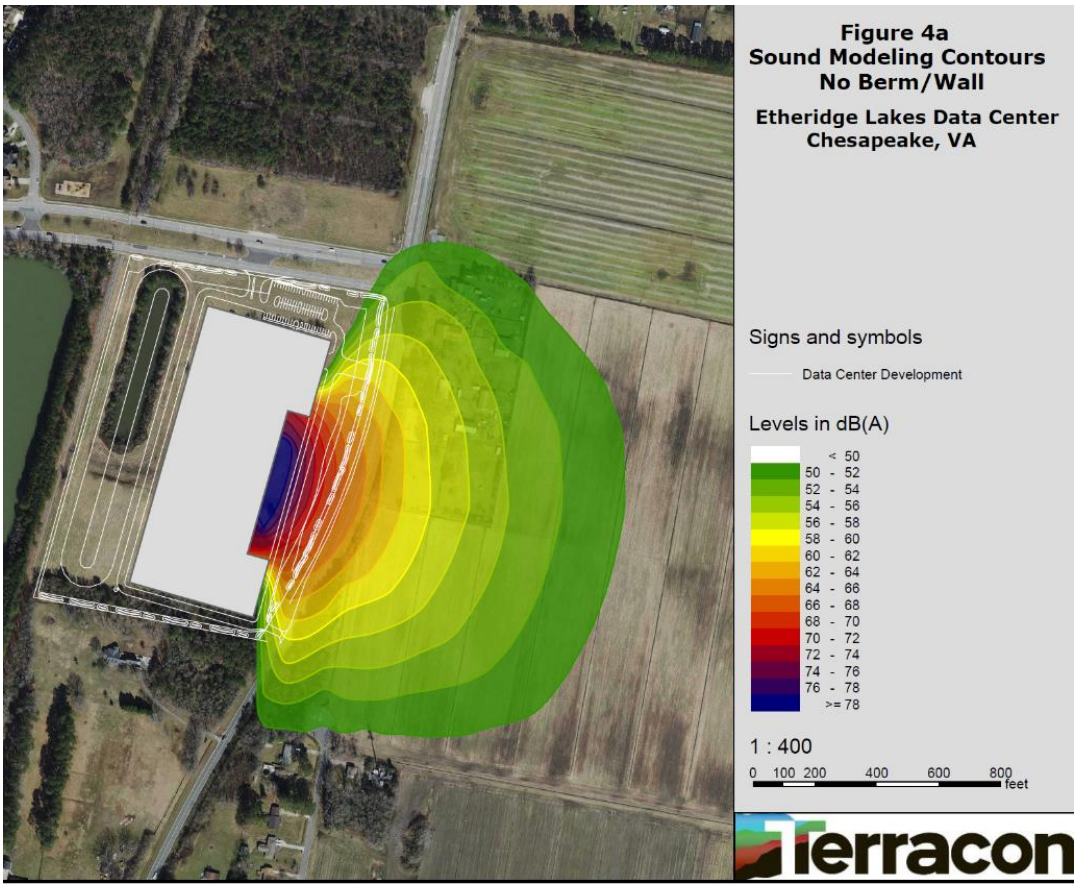
The subject parcel has frontage on both Centerville Turnpike and Etheridge Manor Boulevard. The main point of access to the site will be from Etheridge Manor Boulevard. A secondary access point equipped with a fence and Knox Box lock will be provided on Centerville Turnpike for emergency vehicles only. The applicant has proffered right-of-way dedication and a sidepath trail facility along Centerville Turnpike. An analysis of the existing stormwater pond in conjunction with the proposed development will be required to determine to what extent the existing pond will need to be expanded. The proposed expansion area has been shown on the rezoning exhibit.

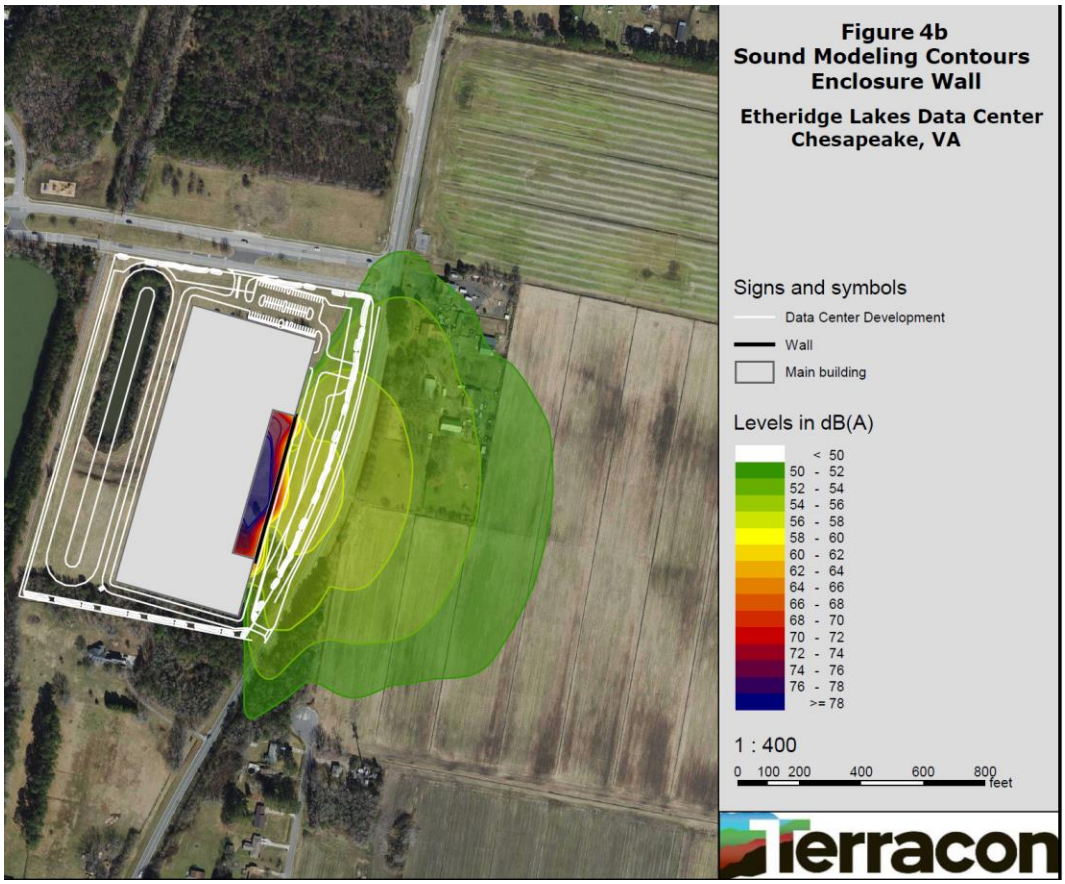
As depicted on the rezoning exhibit, the applicant/owner is requesting a setback reduction from the one hundred fifty (150) feet required by the Overlay District to fifty (50) feet on Centerville Turnpike and approximately one hundred twenty (120) feet to the nearest corner of the proposed building to Etheridge Manor Boulevard. This setback reduction is authorized by Section 12-405.C.2. of the Chesapeake

Zoning Ordinance (CZO), provided that sufficient landscaping is approved by City Council that screens the building from public view from the street. Landscape buffer yards along both street frontages will include berms, double rows of trees, and will be enhanced with thirty percent (30%) more plant material than required. A modified landscape buffer yard 'E', with berming and thirty percent (30%) more plant material than required will be installed along the south and west property lines, where existing vegetation does not provide comparable screening.

The parking standards set forth in the CZO are currently two-fold and require parking to be determined based on both zoning classification and use. Without a floor plan, staff is unable to accurately determine the parking calculation; however, it is vastly more than the parking needed to serve the use because data centers are an emerging market and were not contemplated when the parking standards were adopted. On March 25, 2025, an initiating resolution was approved by City Council requesting the Planning Commission to consider and make recommendations related to assessing minimum parking standards. A proffer has been included to ensure that adequate parking will be provided as determined by the standards in place at the time of final site plan review.

A sound analysis report prepared by Terracon and dated April 3, 2025, has been provided by the applicant/owner. The report details sound level modeling that was completed to assess the daily operational noise, as well as emergency conditions when backup generators are temporarily operational. Sound level contributions associated with the project ranged from 38-55 decibels (dB(A)). Sound modeling contour images are provided below and in the full sound analysis report included as a supplemental document. The first image below depicts the sound modeling contours without a berm or wall and the second image below depicts the contours with an enclosure wall.





The building will be thirty-five feet (35') in height and be constructed with tilt-up concrete providing durability and security. Natural tones provide a neutral appearance and will help to blend the building in with proposed vegetation; changes of material and color will be used to reduce the apparent size of the building and break down its volume. All rooftop and ground level mechanical equipment will be screened from adjacent roadways and surrounding properties.

Voluntary proffers include development in substantial conformance with the rezoning exhibit, general compliance with the building renderings, a maximum building height of thirty-five feet (35') or forty feet (40') with rooftop mechanical equipment, screening of ground level and roof top mechanical equipment, to address and mitigate roadway impacts caused by construction, a definition for data center, fencing, landscaping, fire protection systems, lighting, noise, and a trail facility. The applicant/owner has also proffered set times for construction activity and testing of onsite generators, that all on-site transmission or power lines required for interconnection be placed underground, and that there will be no electric substation constructed on the property.

Background

On June 19, 1990, City Council approved R(C)-89-10, Wo Shep Mor Partnership, allowing for a conditional zoning reclassification of 266.8 acres from A-1, Agricultural District, to R-15s, Residential District (115.2 acres), R-12(a)s, Residential District (109.2 acres), B-1, Neighborhood Business District (15 acres), and A-1, Agricultural District (27.4 acres). One of the proffers associated with this rezoning prohibited a rezoning of the remaining A-1, Agricultural District, which is the site of the proposed rezoning, until the adjacent commercial properties to the north were developed and occupied. On April 15, 2025, City Council approved an accelerated proffer modification request removing this proffer.

Staff Analysis

Comprehensive Plan

The 2035 Comprehensive Plan Land Use section designates the subject parcel as Low Density Residential, it is in the Suburban Overlay, and in the Fentress Airfield Overlay District. Low-density residential uses are not appropriate in the Fentress Airfield Overlay District, which protects incompatible land uses and encourages agricultural uses and some light industrial and commercial uses that are more compatible with aircraft noise levels. Therefore, the proposed use of a data center can be compatible with the surrounding area, provided adequate buffering and thoughtful design are considered.

One objective of the Quality of Life section of the Comprehensive Plan states that, "Consideration should always be given to the mitigation of any undesired impacts between adjacent uses; good design practices should be used to ensure land use compatibility." The applicant has proactively sited the HVAC chillers and generators in a location that helps mitigate noise impact by placing them farther from adjacent properties and tucked into three (3) sides of the building. In addition, considerable vegetation will be installed in order to buffer the use from differing uses and the public rights-of-way and improve the relationship between different uses in the community.

The Chesapeake Trails and Connectivity Plan designates both Etheridge Manor Boulevard and Centerville Turnpike to have separated biking/multi-use facilities to be a part of the core network, which is designated as critical for improving pedestrian and bicycle connectivity within Chesapeake. A sidewalk was previously constructed along Etheridge Manor Boulevard and the applicant has proffered installation of a sidepath trail facility along Centerville Turnpike.

City Council's Desired Outcomes

The subject property is the only remaining A-1, Agricultural District acreage that was part of a large rezoning consisting of approximately 266 acres that was approved by City Council on June 19, 1990. Since that time, the property has not been developed. The proposed rezoning to M-1, Light Industrial district, achieves City Council's desired outcome of economic prosperity by increasing the non-residential tax base, diversifying the tax base, and increasing jobs in the community.

The proposed rezoning also supports City Council's desired outcome of connectivity by providing a sidepath trail facility that is consistent with the updated 2050 Trails Map that was recently adopted by City Council on November 19, 2024, in conjunction with the Trails and Connectivity Plan.

Traffic

The 2050 Master Transportation Plan calls for Centerville Turnpike to be a 6-lane roadway. A reservation of one-half of the ultimate public right-of-way width along the entirety of the property's frontage on Centerville Turnpike will be required. As the proposed use projects a limited number of employees and a small number of trips to a site with existing infrastructure, the rezoning is exempt from the LOS for adequate road facilities according to the Department of Development and Permits.

Public Utilities

The project site will be served by public water and sewer services. The Department of Public Utilities has reviewed the proposal, and all comments have been satisfactorily addressed. Prior to final construction plan approval, the applicant/owner will be required to conduct CCTV sewer and water line

inspections to determine if the systems are fully functional and meet current City codes and standards. If the systems do not meet these criteria, then they must be entirely replaced the full distance to the main.

General Analysis

Development Standards:

CZO Section 8-302 provides the development standards for the M-1, Light Industrial zoning district and CZO Section 12-405.C. provides the development standards for discretionary land use applications in the Fentress Airfield Overlay District. The project site is a corner lot with two (2) front yards along Etheridge Manor Boulevard and Centerville Turnpike and two (2) side yards along the west and south property lines. Development of the site will, at a minimum, meet the more stringent code requirements of the Fentress Airfield Overlay District and the applicant has voluntarily proffered additional mitigation to help conceal the use from adjacent residential uses and the public rights-of-way.

According to CZO Section 8-302, the maximum lot coverage of buildings in the M-1, Light Industrial district is 50%. At a proposed lot coverage of 40.2%, the proposed use will not exceed this standard. A proffered condition limits the building height to thirty-five feet (35'), which matches the maximum allowed building height in the A-1, Agricultural District. Building height limitations set out in the CZO do not apply to rooftop mechanical equipment or parapet walls; therefore, within the proffers the applicant has clarified that the maximum building height with rooftop screening will be forty feet (40'). Minimum building setbacks of one-hundred fifty feet (150') from a public street are required by the Fentress Airfield Overlay District. This setback distance may be reduced up to a minimum setback of fifty feet (50'), if landscaping approved by City Council is provided that screens the building from public view from the street. As depicted on the rezoning exhibit, setbacks will vary between fifty feet (50') to one-hundred twenty feet (120') along Centerville Turnpike after the twenty-five foot (25') right-of-way dedication and between one hundred twenty feet (120') and one hundred fifty feet (150') along Etheridge Manor Boulevard. Berms will be installed along both street frontages in addition to enhanced landscape buffers consisting of 30% more plant material than required. The applicant has provided renderings, both with and without vegetation to depict how the use will be screened from the public right-of-way.

There is some existing vegetation along the southern property line that may be utilized. An enhanced buffer yard 'E' with a three-foot (3') berm and 30% more plant material will be required along this property line where existing vegetation is deemed insufficient by the Landscape Coordinator.

Although off-site vegetation cannot be counted towards buffer yard requirements, there is existing mature tree canopy with majority evergreen species along the eastern edge of the Carriage House Estates stormwater BMP that will further screen the use from the residential subdivision to the west. Images of this vegetation are depicted to the right and below. There are public easements on the pond and there is no forecast work to be done on the bank parallel with the railroad tracks. There is no known immediate or anticipated need that would necessitate the removal of any vegetation in this buffer

for any public reasons, and minor outfall work could occur if necessary and not require noticeable vegetation alterations. To meet on-site buffer yard requirements, the applicant/owner will be required to install a modified buffer yard 'E' consisting of a three-foot (3') berm and 30% more plant material.

Building Design:

The building will be a maximum of forty feet (40') in height (inclusive of rooftop equipment) and be constructed with tilt-up concrete to provide durability and security. Architectural renderings have been provided to ensure that building design, height, and materials are appropriate for the suburban and rural character of the surrounding area. Given the large massing of the proposed data center, the façade has mostly been articulated in a way that minimizes visual impacts and includes differentiation that breaks up the plane of the façade. As depicted on the provided renderings, neutral tones will be used to help blend the building in with existing and proposed landscaping. A voluntary proffer for development in general compliance with these renderings has been offered to allow some flexibility with building design and ensure staff can continue working with the applicant to explore strategies to further reduce the perception of the long exterior walls.

Noise:

A common concern associated with data centers is related to a low-frequency noise, generally produced from large HVAC equipment, that is rarely loud enough to violate a City's noise ordinance but is of a constant nature, sometimes affecting nearby residential uses. The City of Chesapeake's noise ordinance exempts noises generated by the operation of ventilation and air conditioning units (HVAC units) attached to a building or structure and noises resulting from lawful activities in the M-1, Light Industrial zoning district. As such, staff finds that the local noise ordinance inadequately addresses the continuous noise that could be generated by the proposed use of the property.

A sound analysis report prepared by Terracon is included in the supplemental documents. This report analyzes sound pressure level measurements using the A-weighting, which is a more common assessment designed to reflect how human hearing perceives sound; however, this scale does not effectively address the low-frequency noise that can be generated by data centers through HVAC equipment and roof top exhaust fans. The C-weighting that detects a flatter response giving more weight to low frequencies is a scale more useful for the low-frequency hums often associated with data centers. The Terracon report indicates that the applicant has proactively sited the HVAC chillers and generators in a manner that will be least disruptive to the majority of nearby residential uses. Based on the building dimensions and equipment location, the residential subdivision to the west of the project is

well below the 55 dB(A) threshold set forth for residential uses in the City's noise ordinance and below the background ambient sound measurements.

As shown in the analysis, the residence/business located east of Centerville Turnpike would be exposed to sound levels of 55 dB(A) and in excess of 55 dB(A) in the case of emergency operations. The Sound Analysis report recommends that the final design and construction should consider implementing quiet technology for the HVAC equipment and emergency generators, building intake and exhaust vents should use acoustic louvers/silencers where applicable, and providing a wall/berm that blocks the line of sight or encloses the HVAC and generator portion of the building. As depicted on the rezoning exhibit, a sound attenuation wall will be provided.

Because the constant nature of data center noise has been a prevalent problem, particularly where data centers are located near residential areas, staff has researched and consulted with localities in northern Virginia to get a better understanding of the issue and how it is being addressed. Prince William County, who has experienced rapid growth in data center development, is in the process of updating their noise ordinance. They have conducted extensive research and created a working group that includes citizens that live in close proximity to a data center and data center industry representatives. Since exposure to continuous noise from the data center has the potential to negatively impact the quality of life of nearby residential uses, staff has worked closely with the applicant to mitigate negative impacts and model a proffer after Prince William County's latest draft ordinance, which is more stringent than the City of Chesapeake's noise ordinance for residential uses.

Naval Operations:

The subject application has been reviewed by Navy representatives for both compatibility with the Fentress Airfield Overlay District and for impacts to the ROTHR on the Northwest Annex. Under the Standard Industrial Classification (SIC) manual, data centers are classified as SIC 7374 and 7376, which broadly include other higher intensity activities such as data entry, coding, and/or processing facilities. These SICs are generally not considered compatible within the Fentress Airfield Overlay District; however, because the applicant seeks to develop a data center of the server farm variety in which computing equipment and servers are housed and a limited number of on-site workers are employed, the proposed use has been deemed compatible within the Overlay District. The proposed use of the property as a data center facility and the activities therein can be classified as "warehousing and storage" of "communications" equipment, both of which are compatible uses under the Air Installation Compatible Use Zones (AICUZ) tables found in CZO Section 12-406.

A voluntary proffer on the property has been included to limit the proposed use of the site to a Data Center including any ancillary uses to support this use.

Based on the findings and comments received, staff recommends that PLN-REZ-2025-002 be approved with proffers.

Staff Findings

1. As proffered, the proposed rezoning is consistent with the 2035 Chesapeake Comprehensive Plan Quality of Life objective as thoughtful consideration has been given to mitigating undesired impacts between adjacent uses through good design practices.

2. The proposed rezoning supports City Council's desired outcomes of economic prosperity and connectivity by diversifying the tax base and improving bicycle and pedestrian connectivity.

3. As proffered, the proposed rezoning for a data center use is compatible with the objectives of the Fentress Airfield Overlay District and the compatibility requirements of the Comprehensive Plan for land uses in proximity to military installations.

Proffers dated May 7, 2025

1. The applicant/owner shall develop the property in substantial compliance with the plan entitled "Layout & Utility Plan Rezoning Exhibit of Etheridge Lakes Data Center" prepared by Hassell & Folkes, P.C. dated "April 15, 2025", provided however that reasonable adjustments due to final engineering data may be made at the time of final site plan review in accordance with Section 16-204 of the Zoning Ordinance. All preliminary and final site and subdivision plans are subject to the approval of the Director of Planning or designee and/or the Director of Development and Permits or designee. A copy of the final approved site plan shall be placed in the file with the Planning Department and Department of Development and Permits. The parking lot design may be modified prior to final site plan approval to provide the number of spaces required by the zoning ordinance in effect at that time with the approval of the Director of Planning or designee and/or the Director of Development and Permits or designee.

2. The applicant/owner agrees that the building will be constructed in general compliance with the building renderings entitled "Etheridge Manor Datacenter" prepared by Cox, Kliewer & Company, P.C., and dated "April 21, 2025," on file with the Planning Department, as determined by the Planning Director or designee. Notwithstanding the foregoing, the following design elements shall be included to reduce the apparent scale and length of the building: 1) changes in building materials, pattern, texture or color and 2) use of accent materials. Building elevations shall be submitted with the Final Site Plan submittal and approved by the Director of Planning or designee prior to final site plan approval.

3. The height of the building or any accessory structures shall not exceed thirty-five feet (35'). The height of the building with rooftop mechanical equipment and a parapet wall or comparable screening shall not exceed forty feet (40').

4. The applicant/owner shall screen ground level and roof top mechanical equipment from adjacent roadways and adjacent properties. Mechanical equipment not screened (blocked from view) as a result of its location relative to a principal building, other structures, and/or existing vegetation or landscape buffering, shall be screened by a visually solid fence, screen wall or panel, parapet wall, or other visually solid screen that shall be constructed of materials compatible with those used in the exterior construction of the principal building.

5. The applicant/owner proffers to make curb and gutter and other roadway improvements along the frontage of Centerville Turnpike as required by the Director of Development and Permits as determined appropriate to optimize safety along this principal arterial road.

6. The applicant/owner agrees that the only permitted use in the M-1 zoning district shall be SIC 7374 – Data Center. For purposes of this proffer Data Center shall be defined as a facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer and/or network equipment, systems, servers, appliances, and other associated components related to digital data operations. Such facility may also include air

handlers, power generators, water cooling and storage facilities, and other associated utility infrastructure to support sustained operations at a data center.

7. The applicant/owner proffers a not to exceed 10' high perimeter fence to be installed along the zoning required setbacks except where approximately shown on the Layout & Utility Plan Rezoning Exhibit. Chain-link fencing or barbed wire fencing are prohibited on this site.

8. The applicant/owner agrees to dedicate one-half of the Master Transportation Plan ultimate right-of way width along the entirety of the property's frontage on Centerville Turnpike, which shall be recorded prior to site plan approval.

9. The applicant/owner agrees to install and maintain berms, enhanced buffers, and all other landscaping as shown on the Layout & Utility Plan Rezoning Exhibit. Existing vegetation along the southern and western boundary lines shall be preserved and maintained to the greatest extent practicable to serve as a buffer. The applicant/owner shall submit a Final Landscape Plan pursuant to the Chesapeake Zoning Ordinance prior to final construction plan approval. At a minimum, said plan shall consist of 30% more plant material than required by the Buffer Yards "F" and "E" as depicted on the rezoning exhibit designated as "modified for heavy landscaping and berms". Said Landscape Plan and plant materials shall be subject to the review and approval of the City's Landscape Coordinator and shall be installed prior to the issuance of the Certificate of Occupancy. The landscape buffer and plant material shall be maintained in good condition for the duration of the use.

10. The applicant/owner shall install fire protection systems such as fire sprinklers and alternatives such as FM 200 as well as fire alarms monitoring/notification in accordance with the Building and Fire Codes including referenced standards. The adequacy of all fire protection systems shall be subject to the review and approval of the Fire Department and/or the Building Code Official by issuance of the appropriate Fire Permit and / or Building Permit including detailed plans, manufacturer's specifications, calculations and supporting documentation. Fire sprinklers will include requirements for ancillary fire protection equipment such as fire dept. connections and service fire hydrant within 50 feet, post indicator valves, standard fire protection notes, hydraulic calculations, and specifications including emergency access requirements to and within the site and sufficient for water for fire protection, all per the Fire Code and the PFM, Chapter 13 – Fire Protection.

11. The applicant/owner shall ensure that no lights that impair pilot vision or produce confusing patterns (color and/or pattern of layout) or which could be mistaken for any lighting system associated with aircraft/airfield operations will be constructed or installed. All projective lighting equipment (as defined in the Illumination Engineering Society Handbook), such as floodlights and searchlights and all protective lighting, such as street lights, shall have positive optical control such that no light is emitted above the horizontal plane. Compliance with this proffer shall be determined by the Director of the Department of Development and Permits or designee.

12. Any noise that emanates from any operation, activity, or source on the property, including, but not limited to, heating and cooling system(s), between the hours of 7:00 a.m. and 10:00 p.m. weekdays and from 9:00 a.m. to 10:00 p.m. on Saturdays, Sundays, and legal holidays observed by the local government shall be subject to the following maximum permissible sound levels: 52 dB(A) and 65 dB(C). Any noise that emanates from any operation, activity, or source on the

property, including, but not limited to, heating and cooling system(s) between the hours of 10:00 p.m. and 7:00 a.m. weekdays and from 10:00 p.m. to 9:00 a.m. on Saturdays, Sundays, and legal holidays observed by the City government, shall be subject to the following maximum permissible sound levels: 47 dB(A) and 60 dB(C). Such levels shall be measured at the Property boundary or at any point within any other property affected by the noise. When a noise source can be identified and its noise measured in more than one zoning district classification, the limits of the sound levels referenced in this proffer shall apply. Prior to the issuance of a building permit, the developer shall provide a sound study demonstrating compliance with the established standards. Satisfactory noise mitigation measures shall be installed and constructed to the satisfaction of the Zoning Administrator at any time after operation of the facility to address any violations to this proffer. Notwithstanding the above, any person(s), performing construction of public projects, repair, or maintenance work for such projects or person(s) performing work for private or public utilities for the repair of facilities or restoration of services shall not be subject to the levels enumerated above.

13. The only exclusion to the maximum permissible sound levels listed above is for construction activity, which shall be conducted between the hours of 7:00 a.m. and 8:00 p.m., except that no off-site vehicular movement associated with construction activity shall be conducted between the hours of 7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 5:00 p.m.

14. The applicant/owner shall address and mitigate impacts generated by the construction activity associated with the data center use of the property, including but not limited to roads, utilities, drainage, etc. The Director of Development and Permits or their designee shall be responsible for enforcing violations of this proffer. Repairs shall be made during the construction phase, with final mitigation provided after construction of the facility.

15. The applicant/owner shall install side-path trail facility along the entirety of the property's frontage on Centerville Turnpike prior to receiving a Certificate of Occupancy for this use. Design and construction of the facility should be in accordance with the Appendix B of the Chesapeake Trails & Connectivity Plan, as determined by the Director of Planning or designee, and be at least 10' in width unless granted an exception of 8' in constrained conditions.

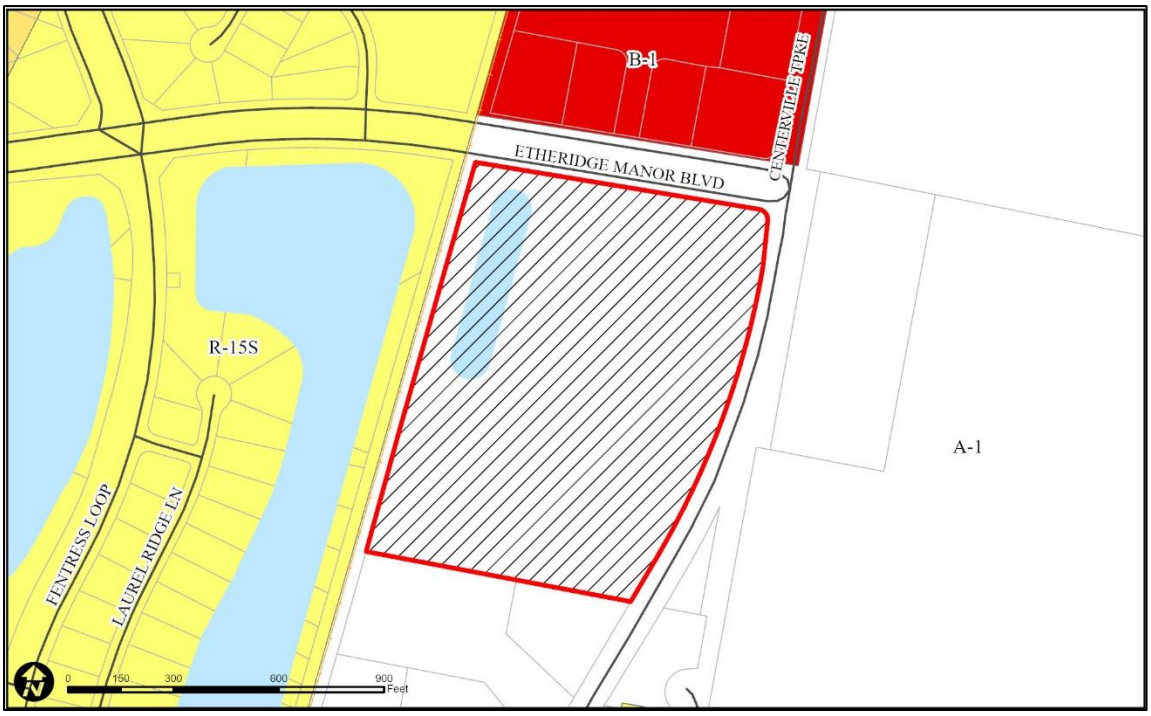
16. There shall be no electric substation constructed on the property, only switchgear equipment, transformers and related parts and pieces to supply power to the building for the intended use, which will either be inside of the building or outside of the building and will be properly screened.

17. All on-site transmission or power lines required for interconnection for this facility shall be placed underground. Off-site transmission or power lines required for interconnection shall go over the railroad track on existing tower(s), down the tower(s), and then underground to the project site.

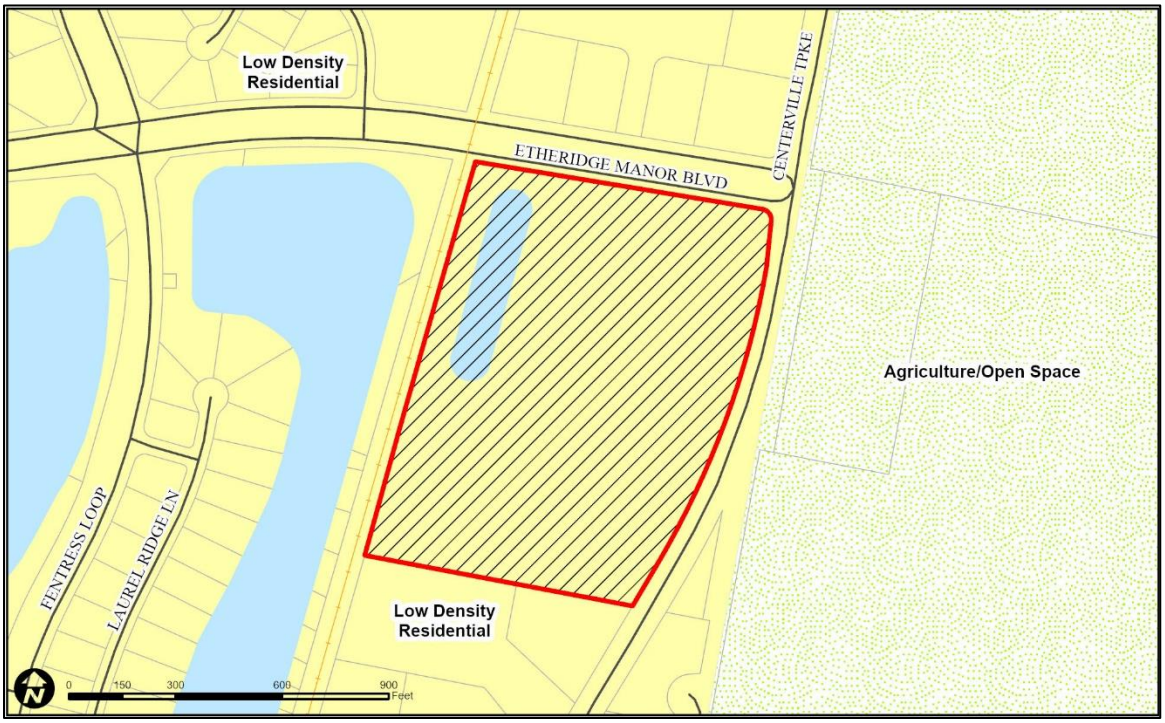
18. If the use of the site intensifies or the trips are more intense than anticipated in the traffic report, then a Traffic Impact Analysis will be required during the Final Site Plan review.

19. All required testing of on-site generators shall take place between the hours of 9:00 a.m. and 7:00 p.m., Monday through Friday. This proffer shall not preclude use of the generators for power generation during power outages.

Zoning Map



2035 Land Use Plan Map



Aerial Map


ETHERIDGE MANOR BLVD
CENTERVILLE TPKE
FENTRESS LOOP
LAUREL RIDGE LN
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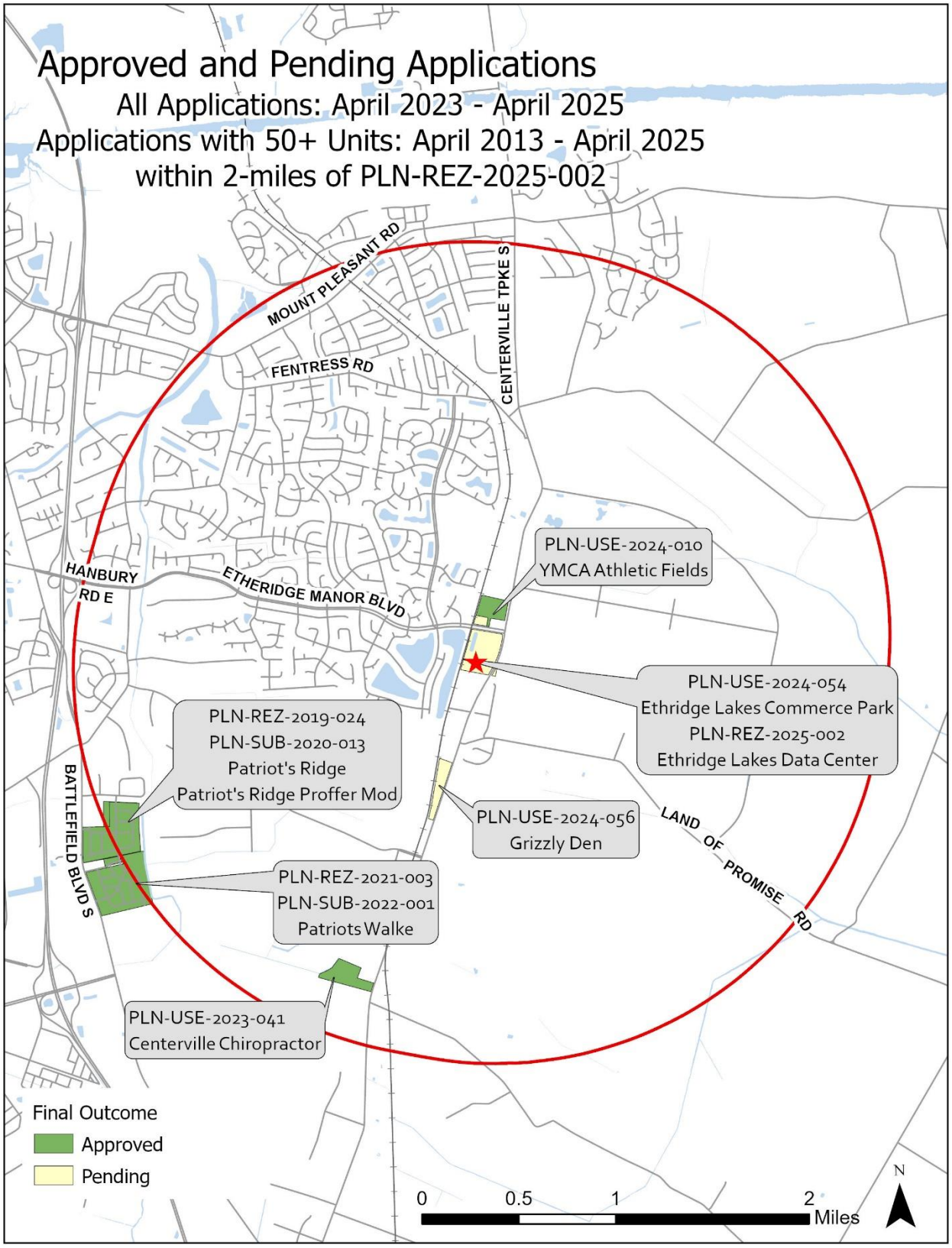
Approved and Pending Applications



Approved and Pending Applications within 2 miles of PLN-REZ-2025-002				
Application Number	**Project Name**	**Units**	**Built**	**Final Outcome**
PLN-REZ-2025-002	Etheridge Lakes Data Center	0	N/A	Pending
All Approved and Pending Applications from April 2023 - April 2025				
PLN-USE-2023-041	Centerville Chiropractor	0	N/A	Approved
PLN-USE-2024-010	YMCA Athletic Fields	0	N/A	Approved
PLN-USE-2024-054	Etheridge Lakes Commerce Park	0	N/A	Pending
PLN-USE-2024-056	Grizzly Den	0	N/A	Approved
Approved and Pending Applications with 50+ Units from April 2013 - April 2025				
PLN-SUB-2020-013	Patriot's Ridge	99	0	Approved
PLN-REZ-2019-024	Patriot's Ridge (Warren Rezon)	99	N/A	Approved
PLN-REZ-2019-024	Patriot's Ridge Proffer Mod	0	N/A	Approved
PLN-REZ-2021-003	Patriots Walke	135	N/A	Approved
PLN-SUB-2022-001	Patriots Walke	135	0	Approved

Public Outreach

In an effort to encourage robust stakeholder involvement as is required by Smart Growth, the applicant is encouraged to reach out to nearby community, property owners and civic leagues. To this end, the applicant did not include any additional outreach.

As required by state law, this request was advertised in the Virginian-Pilot on April 27, 2025 and May 4, 2025. Also, notification letters were mailed to adjacent properties on or about April 18, 2025. As required by the Zoning Ordinance, public notification signs were posted on the property by April 30, 2025.

Supplemental Documents

1. Departmental Review Comments
2. NAS Oceana, Planning Liaison Memorandum, dated February 10, 2025
3. Dominion Energy Electrical Service Availability Letter, dated March 28, 2025
4. Conceptual Plan, dated April 15, 2025
5. Sound Analysis Report, dated April 3, 2025
6. Etheridge Lakes Data Center Renderings, dated April 21, 2025

DEPARTMENTAL REVIEWING COMMENTS
PLN-REZ-2025-002 – Etheridge Lakes Data Center

DEVELOPMENT & PERMITS:

BUILDING: PROVIDED ON January 31, 2025

Advisory:

- No objections to rezoning. The building will an accessible route from the handicap parking to the building entry. Full review of accessibility features will be conducted at final site plan review.

ENGINEERING: PROVIDED ON February 6, 2025

Advisory:

- Proposed lot grading, drainage and site stormwater calculations will be reviewed at the final site construction plan phase of development. This infill development will be required to provide sufficient topography from surrounding lots to ensure no adverse grading impacts.

- NOTE: Further conditions may be required during the administration of applicable City Ordinances and Standards. Any site plan submitted with this application may require revision during detailed site plan review to meet all applicable City Codes and Standards. Final construction plans shall meet all applicable requirements prior to City approval.

LANDSCAPING: PROVIDED ON February 6, 2025

Advisory:
Landscape has no objection to the proposed rezoning, however, the following comments are made in an advisory capacity for future submittals: preliminary and final landscape plans will be required. Additional landscaping will be required to achieve compliance. Please refer to the Chesapeake Landscape Ordinance §19-600 for detailed explanations of landscape plan components.

- §19-601.D- Parking areas- additional trees are needed to satisfy tree placement and greenspace requirements. Please show what areas are being used to meet greenspace requirements.

- §19-601.E- Please refer to Fentress Airfield Overlay §12-400 for detailed explanations of specific buffer requirements within the overlay. Enhanced landscape buffer yards with 3’ berms are required around the entire perimeter of

the subject parcel due to code requirements regarding residential proximity to all four boundaries.

- §19-602.C- Tree canopy preservation is required at 10% of the site area. Trees that have been preserved during the clearing phase may be considered part of this requirement if qualifications have been met. Preserved trees must be clearly indicated on the landscape plan and on all sections of the site plan.

- As part of the City of Chesapeake's tree protection strategy for urban forestry, existing healthy trees on private property may count toward tree canopy requirements, provided tree protection is employed during construction in compliance with arboricultural industry standards, and the trees remain undamaged and viable at the end of the project. The developer is highly encouraged to contract the service of an ISA Certified Arborist to provide guidance during the entire development process.

- Further conditions may be required during the administration of applicable City Ordinances and Standards relevant to subsequent submittals. Any site plan submitted with this application may require revision during detailed site plan review to meet all applicable City Codes and Standards. Final construction plans shall meet all applicable requirements prior to City approval

ZONING: PROVIDED ON March 5, 2025

Advisory:

- The plan provided is conceptual in nature and does not meet the requirements of 18-201 of the CZO. Approval of a use of the parcel submitted does not constitute approval of the provided plan. Preliminary and final site plans that meet the code requirements, as outlined above, will be required for final approval.

- Approval of this plan does not exempt applicant from permitting requirements. All structures shall be permitted as primary or accessory, and defined in the CZO, through the permitting process and approved through inspection process.

- This plan is provided for approval of USE not for site development.

- Parking provided does not meet the minimum code requirement for site plan approval. Site plan must meet the appropriate amount of parking for the use at the time it is submitted for construction along with correct parking setbacks.

PUBLIC UTILITIES: PROVIDED ON APRIL 11, 2025

Advisory:

- Consider extending the 16" waterline along Centerville Turnpike to the southern property corner.

FIRE PREVENTION: PROVIDED ON JANUARY 28, 2025

Advisory:
The Fire Department has no objection to the rezoning application and preliminary site plan provided the following advisory comments are adequately addressed during the preliminary site plan or at minimum, during the final site plan approval process.

- Emergency Access - Due to the size of the proposed data center structure at 364,684 sf. a properly spaced secondary emergency access must be provided in accordance with the Fire Code, Appendix D, similar to the other scenarios whereby at minimum, a gated secondary access must be provided to Centerville Tpk. to include a Knox lock per PFM, Chapter 13, as well as for other locked gates and access to the interior of the data center since fire suppression and fire alarm systems will be required. In addition, the 20 ft. wide fire access road circling the Data Center must be increased to 26 ft. if the height of the data center is greater than 30 ft. Drive aisles proposed at less than 30 ft. (26 ft. and less mark entire drive aisle, more than 26 ft. and less than 30 mark one side of the drive aisle) must be provided with appropriate fire lanes marked in accordance with the PFM, Appendix 19 to ensure there are no obstructions to emergency access.

- Water for fire protection - Properly sized water mains containing fire hydrants that meet both distance and fire-flow demand in accordance with the Fire Code and PFM must be provided. Fire hydrants are required at 400 ft. to the furthest portion of a proposed structure as measured along the route fire apparatus must travel while laying fire hose. Hydraulic calculations utilizing PFM, Appendix 18 A - Water Demand for Fire Protection, must be provided to include a current documented flow from Public Utilities showing that the highest demand(s) can be met by the available supply including consideration of large water demands required for HVAC CHILLERS & GENERATORS associated with heat generated from servers within large data centers.

- Fixed fire protection systems - Fire protection systems such as fire sprinklers and alternatives such as FM 200 generally utilized for costly computer equipment systems such as for the data center or any pre-action combination thereof, as well as fire alarms monitoring/notification must be installed as determined by the Building Code Official. Fire sprinklers will include requirements for ancillary fire protection equipment such as fire dept. connections and service fire hydrant within 50 ft., post indicator valves, standard fire protection notes and specifications per the PFM, Chapter 13.

- Fire Code Operational Permit(s) - Required permits as may be applicable for such proposed use such as the data center where heat is generated and require large refrigeration equipment systems for cooling or other associated target hazards to ensure fire and life safety compliance with the Fire Code which can be issued during field fire inspection for certificate of occupancy.

POLICE: PROVIDED ON JANUARY 30, 2025

Advisory:
The CPTED standards outlined below would be applicable on all phases of this project:

- Would like to see design meet the Crime prevention through environmental Design (CPTED) standards. CPTED proposes that the proper design and effective use of the built space can lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life" the goal of CPTED is to reduce opportunities for crime that may be inherent in the design of structures or in the design of neighborhoods.

  CPTED is developed by several strategies:
  - Natural surveillance criminals are less likely to attempt a crime if they are at risk of being seen. Likewise, we are likely to feel safer when we can see and be seen. Any architectural design that enhances the chance of being seen is a form of Natural Surveillance.

  - Natural access control, part of creating a controlled space is focusing on entry and exit points which define ownership and the transition from public to private spaces into buildings, parks, parking lots and neighborhoods.

  - Territoriality or Territorial reinforcement is the use of physical attributes that express ownership such as well –defined property lines, fences, pavement treatments, signage, landscaping and lighting. I think that this strategy would be particularly beneficial in this project.

  - Maintenance, including cleaning, repairing and landscaping, needs to be performed routinely to encourage use of the space for the intended purpose and discourage abnormal and criminal use. Maintenance sends a clear signal that someone cares about space and is likely to defend it against intruders or vandals. Most likely this strategy will come into play after the space, or spaces become occupied

- Would like to review the Lightning, and detailed fencing plans on this project and be able to review elevations and if/when they become available.

- If this project requires Critical infrastructure protection the Cybersecurity and Infrastructure Security Agency (CISA) office is able to provide input on the project.

NAVY – NORTHWEST ANNEX: PROVIDED ON MARCH 11, 2025

Advisory:

- Upon initial review of the Etheridge Lakes Data Center, it does not appear that this facility will pose any impact with ROTHR based on its distance away. We looked up SIC code 7374 in an attempt to get a better understanding of what function the facility will be responsible for, along with what possible EMI generating equipment

may be present (such as solar panels, cell towers, motors,…). The SIC code is very generalized.

- Once the parcel is rezoned and the project proceeds, we would like to request more information about the facility as it becomes available. This will help us confirm that it will not have any impact to ROTHR.

10 Feb 25

MEMORANDUM

From: NAS Oceana, Planning Liaison
To: File

Subj: CHESAPEAKE PLN-REZ-2025-002, ETHERIDGE LAKES DATA CENTER

Ref: (a) Email City of Chesapeake (Planning) Ms. A. Neil of 28 Jan 25
(b) City of Chesapeake Zoning Ordinance, §12-406

1. In subject application, the applicant desires to rezone the property from an Agricultural to a Light Industrial zoning classification. The property is located in both the 70 to 75 decibel (dB) Day-Night Average (DNL) noise zone, and the greater than 75 dB DNL, as well as partially within Accident Potential Zone II for Runway 05. The property is not encumbered by a U.S.-owned Restrictive Use Easement.

2. The applicant seeks the rezoning in order to develop a "data center." In this instance, the term data center is intended to describe what is also called a "server farm;" that is, a large facility in which are located racks of data/internet servers that provide processing and connectivity to internet-based systems, applications, programs, etc., and that do not employ a large number of on-site workers.

3. Under the Standard Industrial Classification manual, data centers are classified under the Codes 7374 and 7376, which broadly include other likely higher density/intensity activities such as data entry, coding, and/or processing facilities. These SICs are therefore not considered compatible within the Fentress Airfield Overlay District.

4. Because the applicant seeks to develop a data center *only* of the server farm variety, I have agreed with the Chesapeake staff that the use *is* compatible with NALF Fentress airfield operations. To this end, I concur with staff's conclusion that the data center facility and the activities therein can be classified as "warehousing and storage" of "communications equipment," both of which are compatible under § 12-406 of the zoning ordinance. Reference (b) pertains.

5. I understand that staff will recommend that the applicant provide assurances that, once the site is rezoned to Light Industrial, the business activities taking place there *may not* be upscaled to otherwise incompatible high density/intensity uses.

6. As is usual, I have invited any questions from the applicant about U.S. Navy flight operations at NALF Fentress.

J. C. LAUTERBACH, JR.

Copy to:
Chesapeake Planning Dept.

March 28, 2025

Doug Fuller, President
Emerald Lakes Estates, Inc
1401 Precon Drive
Chesapeake, Virginia 23320

Re: Electrical Service Availability – Etheridge Lakes Data Center, Chesapeake, Virginia
City of Chesapeake Tax Parcel 0610000000991

Dear Doug:

Dominion Energy will provide electrical service for the above-referenced location in accordance with the applicable Terms and Conditions for the Provision of Electric Service on file with, and approved by, the State Corporation Commission of Virginia. The planned capacity being served at the above-referenced location is 200 MVA.

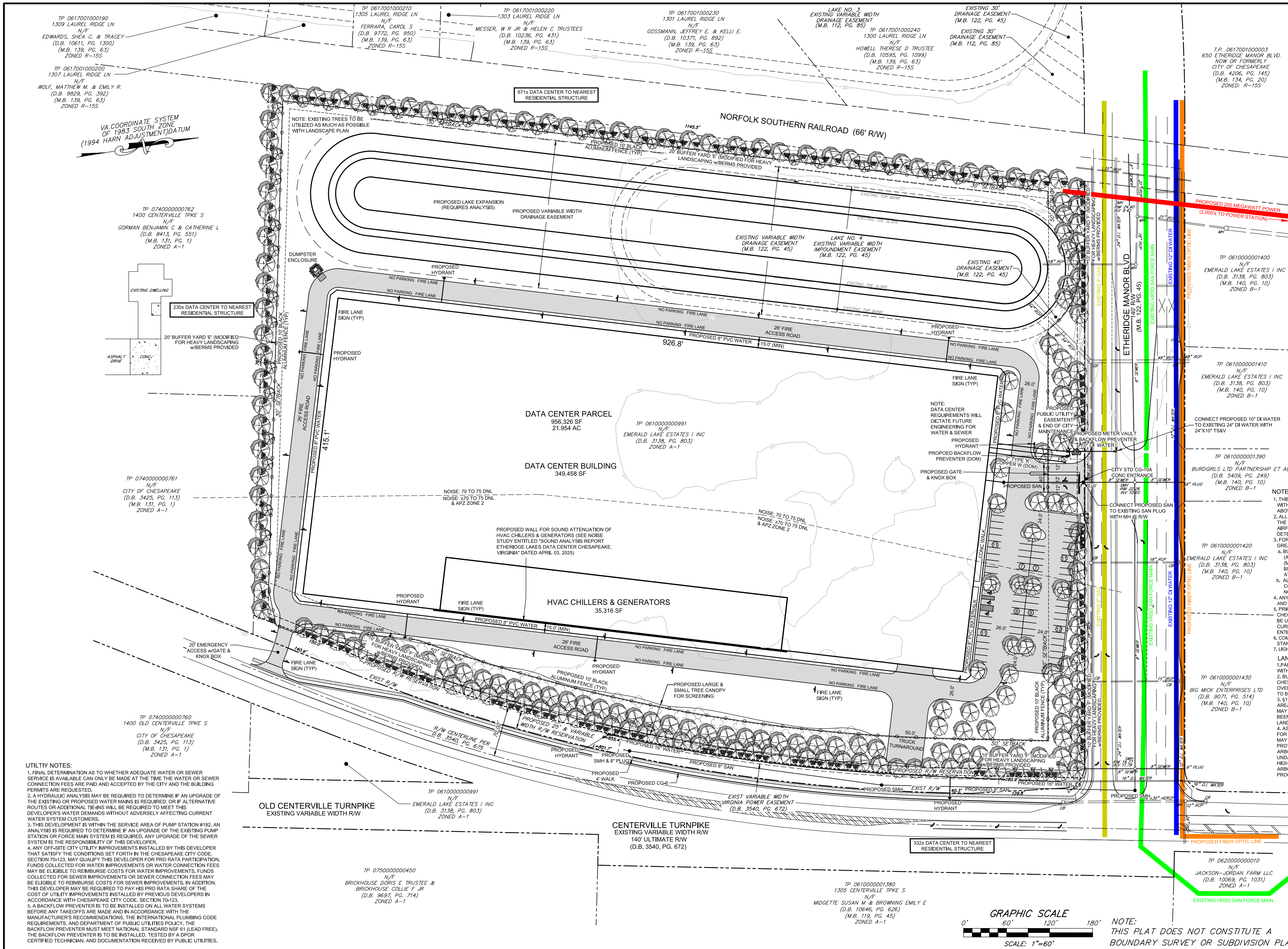
As a public utility, Dominion Energy is committed to serve all customer power requests and to develop a power plan to serve subject parcel mentioned above. In addition, execution, and submission of agreements, permits, easements, or contracts will be required in order to provide electrical service.
Dominion Energy is committed to delivering the requested capacity consistent with above referenced delivery study, assuming all necessary prerequisites have been completed and infrastructure construction is complete in the field to support the capacity request. Please note that any changes to the project or load ramp timelines can impact the estimated delivery dates.

Dominion Energy will strive to reduce project durations where possible as additional project specific information becomes available. It is important to note that this information is based on the existing conditions in what is a very dynamic load area and the timely submission of required documents. Dominion Energy is committed to delivering utility electric service for this project to support your business objectives and will devote appropriate resources to make this project successful.

Should you have any questions or need additional information, I can be reached using the contact information below.

Sincerely,

Dan Kociola
Senior Economic Development Market Specialist
Dominion Energy Virginia
3072 Centreville Road, Herndon, VA
703-559-9825
Daniel.j.kociola@dominionenergy.com



LOCATION MAP 1"=2000'

PARKING DATA

PARKING REQUIRED
1 SPACE PER EMPLOYEE (30)
TOTAL SPACES REQUIRED: 30 SPACES

PARKING PROVIDED
75-SPACES (INCLUDES 3 ACCESSIBLE SPACES)

SITE DATA

TAX PARCEL: 0610000000991
TOTAL SITE AREA: 22.612 AC.
R/W RESERVATION: 0.658 AC.
NET SITE AREA: 21.954 AC.
EXISTING ZONING : A-1
PROPOSED ZONING : M-1
BUILDING FOOTPRINT: 384,774 SF
BUILDING LOT COVERAGE: 40.23%
BUILDING LOT COVERAGE ALLOWED: 50%
BUILDING HEIGHT: 35' (MAX)
PROPOSED BUILDING HEIGHT: 35'
FENTRESS AIRFIELD OVERLAY DISTRICT
NOISE ZONE 70-75 DNL & >70 TO 75 DNL
ACCIDENT POTENTIAL ZONE 2 &
ACCIDENT POTENTIAL CLEAR ZONE
PROPOSED USE: DATA CENTER
SIC CODE: 7374
MAXIMUM NUMBER OF EMPLOYEES: 30

MAXIMUM IMPERVIOUS COVER:
BUILDING 384,744 SQ. FT.
PAVEMENT/ WALKS 116,500 SQ. FT.
TOTAL MAX. IMPERVIOUS 501,244 SQ. FT.

REFERENCES:
(D.B. 3138, PG. 803)
(D.B. 3540, PG. 672)
(M.B. 122, PG. 45)

NOTES:

1. THIS DEVELOPMENT OR SUBDIVISION IS LOCATED PARTIALLY OR WHOLLY WITHIN AN AIRCRAFT NOISE AND/OR ACCIDENT ZONE AND MAY BE SUBJECT TO ABOVE AVERAGE NOISE LEVELS OR TO AIRCRAFT ACCIDENTS.
2. ALL LIGHTING SHALL BE DIRECTED DOWNWARD TOWARD THE INTERIOR OF THE DEVELOPMENT. NO LIGHTING SHALL BE USED THAT INTERFERES WITH AIRFIELD OPERATIONS. THE EXTENT OF LIGHT INTERFERENCE, IF ANY, WILL BE DETERMINED BY THE U.S. NAVY.
3. FOR NON-RESIDENTIAL CONDITIONAL USES IN NOISE CONTOURS 65 DNL OR GREATER, NOISE LEVEL REDUCTION SHALL BE REQUIRED AS FOLLOWS:
   a. BUILDINGS AND STRUCTURES SUPPORTING USES IDENTIFIED AS A (ASSEMBLY), B (BUSINESS), E (EDUCATIONAL), I(INSTITUTIONAL), AND M (MERCANTILE) AS IDENTIFIED IN THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)SHALL CONFORM WITH THE APPLICABLE SOUND ATTENUATION MEASURES SET OUT IN THE USBC.
   b. ALL OTHER OCCUPIED BUILDINGS AND STRUCTURES LOCATED IN NOISE CONTOURS 65 DNL OR GREATER MUST ACHIEVE AN OUTDOOR TO INDOOR NOISE LEVEL REDUCTION OF THIRTY-FIVE (35) DB.
4. ANY ROOFTOP MECHANICAL EQUIPMENT SHOULD BE SCREENED FROM THE ROW AND ADJACENT USES.
5. PRIOR TO FINAL CONSTRUCTION PLAN APPROVAL, CONTRACTOR MUST CHECK (CCTV) ANY EXISTING SEWER STUB/LATERAL AND WATER SERVICE TO BE USED, TO DETERMINE IF THEY ARE FULLY FUNCTIONAL AND MEET CURRENT CITY CODES AND STANDARDS. IF NOT, THEY MUST BE REPLACED ENTIRELY ALL THE WAY TO THE MAIN.
6. COMPLIANCE WITH CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN STANDARDS WILL BE ACCOMPLISHED DURING SITE PLAN REVIEW.
7. LIGHTING PLAN AND FENCING PLAN WILL BE PROVIDED WITH FINAL SITE PLAN.

LANDSCAPE GENERAL NOTES:

1.PARKING AREA GREENSPACE REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE CHESAPEAKE LANDSCAPE ORDINANCE §19-601.D.
2. BUFFER YARD REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE CHESAPEAKE LANDSCAPE ORDINANCE §19-601.E & THE FENTRESS AIRFIELD OVERLAY §12-400. ENHANCED LANDSCAPE BUFFER YARDS WITH 3' BERMS ARE TO BE PROVIDED ON THE NORTH, EAST & SOUTH PERIMETER.
3. §19-602.C- TREE CANOPY PRESERVATION IS REQUIRED AT 10% OF THE SITE AREA. TREES THAT HAVE BEEN PRESERVED DURING THE CLEARING PHASE MAY BE CONSIDERED PART OF THIS REQUIREMENT IF QUALIFICATIONS HAVE BEEN MET. PRESERVED TREES MUST BE CLEARLY INDICATED ON THE LANDSCAPE PLAN AND ON ALL SECTIONS OF THE SITE PLAN.
4. AS PART OF THE CITY OF CHESAPEAKE'S TREE PROTECTION STRATEGY FOR URBAN FORESTRY, EXISTING HEALTHY TREES ON PRIVATE PROPERTY MAY COUNT TOWARD TREE CANOPY REQUIREMENTS, PROVIDED TREE PROTECTION IS EMPLOYED DURING CONSTRUCTION IN COMPLIANCE WITH ARBORICULTURAL INDUSTRY STANDARDS, AND THE TREES REMAIN UNDAMAGED AND VIABLE AT THE END OF THE PROJECT. THE DEVELOPER IS HIGHLY ENCOURAGED TO CONTRACT THE SERVICE OF AN ISA CERTIFIED ARBORIST TO PROVIDE GUIDANCE DURING THE ENTIRE DEVELOPMENT PROCESS.

UTILTIY NOTES:

1. FINAL DETERMINATION AS TO WHETHER ADEQUATE WATER OR SEWER SERVICE IS AVAILABLE CAN ONLY BE MADE AT THE TIME THE WATER OR SEWER CONNECTION FEES ARE PAID AND ACCEPTED BY THE CITY AND THE BUILDING PERMITS ARE REQUESTED.
2. A HYDRAULIC ANALYSIS MAY BE REQUIRED TO DETERMINE IF AN UPGRADE OF THE EXISTING OR PROPOSED WATER MAINS IS REQUIRED; OR IF ALTERNATIVE ROUTES OR ADDITIONAL TIE-INS WILL BE REQUIRED TO MEET THIS DEVELOPER'S WATER DEMANDS WITHOUT ADVERSELY AFFECTING CURRENT WATER SYSTEM CUSTOMERS.
3. THIS DEVELOPMENT IS WITHIN THE SERVICE AREA OF PUMP STATION #182. AN ANALYSIS IS REQUIRED TO DETERMINE IF AN UPGRADE OF THE EXISTING PUMP STATION OR FORCE MAIN SYSTEM IS REQUIRED. ANY UPGRADE OF THE SEWER SYSTEM IS THE RESPONSIBILITY OF THIS DEVELOPER.
4. ANY OFF-SITE CITY UTILITY IMPROVEMENTS INSTALLED BY THIS DEVELOPER THAT SATISFY THE CONDITIONS SET FORTH IN THE CHESAPEAKE CITY CODE, SECTION 70-123, MAY QUALIFY THIS DEVELOPER FOR PRO RATA PARTICIPATION. FUNDS COLLECTED FOR WATER IMPROVEMENTS OR WATER CONNECTION FEES MAY BE ELIGIBLE TO REIMBURSE COSTS FOR WATER IMPROVEMENTS. FUNDS COLLECTED FOR SEWER IMPROVEMENTS OR SEWER CONNECTION FEES MAY BE ELIGIBLE TO REIMBURSE COSTS FOR SEWER IMPROVEMENTS. IN ADDITION, THIS DEVELOPER MAY BE REQUIRED TO PAY HIS PRO RATA SHARE OF THE COST OF UTILITY IMPROVEMENTS INSTALLED BY PREVIOUS DEVELOPERS IN ACCORDANCE WITH CHESAPEAKE CITY CODE, SECTION 70-123.
5. A BACKFLOW PREVENTER IS TO BE INSTALLED ON ALL WATER SYSTEMS BEFORE ANY TAKEOFFS ARE MADE AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, THE INTERNATIONAL PLUMBING CODE REQUIREMENTS, AND DEPARTMENT OF PUBLIC UTILITIES POLICY. THE BACKFLOW PREVENTER MUST MEET NATIONAL STANDARD NSF 61 (LEAD FREE). THE BACKFLOW PREVENTER IS TO BE INSTALLED, TESTED BY A DPOR CERTIFIED TECHNICIAN, AND DOCUMENTATION RECEIVED BY PUBLIC UTILITIES.

LAYOUT & UTILITY PLAN

REZONING EXHIBIT
OF
ETHERIDGE LAKES DATA CENTER
T.P. 0610000000991
FOR
EMERALD LAKE ESTATES I INC
PLEASANT GROVE BOROUGH
CHESAPEAKE, VA
APRIL 15, 2025
1" = 60'
SHEET 1 OF 1

HASSELL & FOLKES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
870 GREENBRIER CIRCLE, SUITE 100
CHESAPEAKE, VIRGINIA 23320
PHONE: (757) 361-5212 FAX: (757) 366-9481
WWW.HFPC-ONLINE.COM

Sound Analysis Report

Etheridge Lakes Data Center
Chesapeake, Virginia

April 3, 2025

Prepared for:

Emerald Lake Estates I, Inc.
1401 Precon Dr Ste 102
Chesapeake, VA 23320

Terracon

Nationwide
Terracon.com

- Environmental
- Facilities
- Geotechnical
- Materials

10841 South Ridgeview Road
Olathe, KS 66061
P (913) 599 6886
Terracon.com

April 3, 2025

Emerald Lake Estates I, Inc.
1401 Precon Dr Ste 102
Chesapeake, VA 23320

Attn: Mr. Doug Fuller
P: 757-406-7419
E: dfuller@preconmarine.com

Re: Proposal for Sound Study
Etheridge Lakes Data Center
Chesapeake, VA
Terracon Proposal No: K3251062

Dear Mr. Fuller:

Terracon is pleased to submit the revised Sound Analysis Report for the above-mentioned project in general accordance with Terracon Proposal No. PK325062 dated March 18, 2025. This report presents the findings of the sound analysis prepared using provided conceptual site plans for the proposed Etheridge Lakes Data Center project in Chesapeake, Virginia.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact Bill Kaufell (717) 237-2897 or via email at wckaufell@terracon.com.

Sincerely,
Terracon

Al Dunay
Senior Scientist- Acoustics

Bill Kaufell
Acoustics Group Leaver/Approved Project Reviewer

Table of Contents

Figures

1.0 Report Summary

Table 1

Topic	Overview Statement
Project Description	The development of the Etheridge Lakes Data Center in Pleasant Grove Borough, Chesapeake, Virginia, involves the construction of a 350,000 SF data center on a 22-acre tract of vacant agricultural land. Figure 1 presents the Rezoning Exhibit provided as the conceptual layout for the data center. The scope of the sound analysis included pre-construction ambient sound level measurements at the property to document the baseline ambient sound levels and computer modeling of the proposed facility's sound emissions to predict future sound levels for comparison with local noise impact thresholds.
Ambient Site Conditions	Ambient sound measurements were recorded at two locations on the property continuously from 11:00 AM Tuesday, March 25, 2025 through Thursday, March 27, 2025. The locations of the sound level measurement sites within the property are illustrated on Figure 2. The sound level data are presented in the time-history for each measurement day in Graphs 1 through 3 and in Attachment A. The proximity of the Fentress Airfield results in sound levels that are elevated significantly during flight operations. The property is located within the 70-75 Ldn and the >70-75 Ldn noise contour used for zoning purposes and sound levels are influenced intermittently by the flight operations at the base periodically during daytime and nighttime hours. Aircraft noise was evident during the measurement period due to flight operations, as indicated on the graphs. The measured sound levels also reflect ambient conditions including local roadway noise, community sounds, and natural sounds (insects, birds, etc.). Local ambient sound levels are significantly altered when the Fentress Airfield is in operation, as noted in the sound level data. Daily sound levels fluctuate from 45-55 dB(A) without naval operations. Overnight sound level averages drop to 30-40 dB(A) intermittently without interference from transportation and naval sound intrusions. Sound level monitoring indicated: Daytime (6am-10pm) 51-55 Leq in dB(A), Nighttime (10pm-6am) 41-49 dB(A) Leq in dBA, Ldn 54-55 dB(A).
Operational Sound	Sound level modeling was completed to assess the daily operational noise, as well as emergency conditions when backup generators are temporarily operational. Sound level contributions associated with the project at the sensitive receptor locations ranged from 38-55 dB(A). Based on the building dimensions and equipment location, the **residential subdivision to the west of the project is well below the 55 dBA threshold and below the background ambient sound measurements.** The residence/business (3W's Farm Market) located east of Centerville Turnpike South would be exposed to sound levels in excess of the local noise ordinance of 55 dB(A). Emergency operations would increase the sound levels at the modeled receptors approximately 2-4 dB(A). Based on the ambient monitoring data presented in Section 5, the projected sound levels for the majority of the receptors would be at or below background ambient conditions. In addition, the corridor is located in a zone that has been designated > 75 Ldn and is routinely exposed to daily naval aircraft noise. The outdoor equipment used for the project should follow best management practices (BMPs) for the reduction of environmental sound emitted from the facility. As the project moves from zoning/land use approval into final design and construction, the designers should consider implementing quiet technology for the HVAC equipment and emergency generators. Additional consideration should be given during final design to a wall/berm that blocks the line of sight or encloses the HVAC and generator portion of the building.

2.0 Introduction

This report presents the results of our Sound Analysis services completed for the proposed Etheridge Lakes Data Center located in Chesapeake, Virginia. The proposed property is located east of the Fentress neighborhood, south of Etheridge Manor Boulevard and west of Centerville Turnpike South (see Figure 1). Proposed site activities include site grading and construction of a 350,000 SF data center. The project site is located Pleasant Grove Borough, Chesapeake, Virginia at latitude 36°40'56.6"N and longitude 76°11'22.0"W.

The purpose of these services was to provide an estimate of the background acoustical environment and the operational sound levels related to the data center development, including:

- Ambient Sound Monitoring
- Operational Sound Modeling

Project plans used to develop sound modeling:

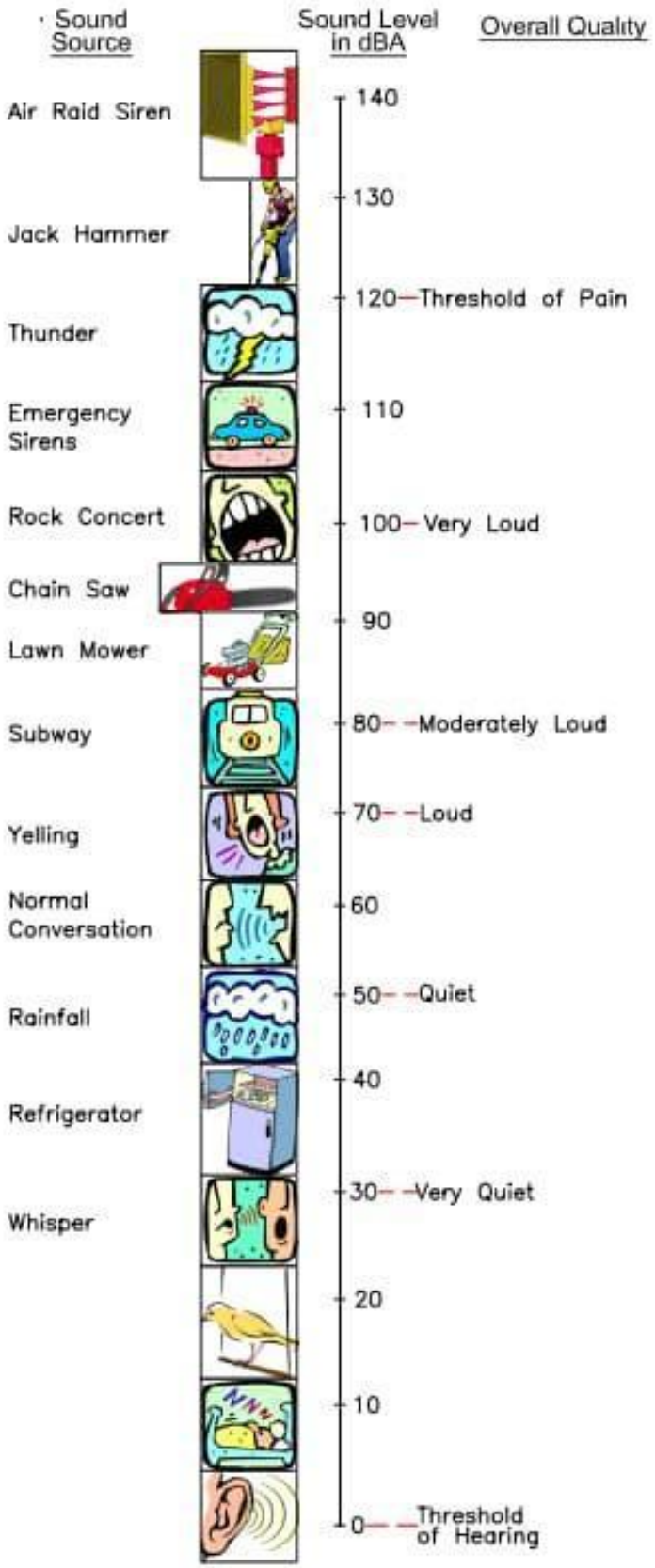
- 02/28/2025- Etheridge Lakes Data Center Rezoning Exhibit (Figure 1)

3.0 Fundamentals of Noise

Noise is defined as "unwanted sound." Therefore, it can be considered a psychological phenomenon and not physical. The roar of racecars adds to the excitement of spectators and hence would be considered sound. This same roar may annoy nearby neighbors, thereby becoming noise. Similarly, the roar of a waterfall at 70 dB(A) may be pleasing to the ear and perceived as sound, while sound produced by traffic or industrial activities at that same intensity could justifiably be considered noise. Factors playing a role in the perception of sound include magnitude, amplitude, duration, frequency, source, and receiver. Nevertheless, researchers have established a fair correlation between the measurement of sound, the A-weighted decibel (dB(A)), and its associated perceived human response. The graphic below outlines common noise sources with associated sound levels in dB(A).

Environmental sound levels are generally presented in terms of A-weighted decibels (dB(A)). The decibel (dB) scale is used to measure sound level. However, because the human ear does not respond equally to all frequencies, the A-weighted scale has been developed to place an emphasis on those frequencies which are more detectable to the human ear. This is an adjusted measurement of noise that takes into account the sensitivity of the human ear to the various sound frequencies which we can hear. The A-weighted scale, which has been in existence for over 40 years, is generally used in community and city noise ordinances and is expressed in units of dB(A) (decibels in the A-weighting).

Because sound is actually an energy level, it must be recorded on a logarithmic scale and expressed in logarithmic units called decibels (dB). Given this scale, a doubling of amplitude will result in a three-decibel increase in total level. Typically, a change in sound level between 2 and 3 dB(A) is barely perceptible, while a change of 5 dB(A) is readily noticeable by most people. A 10 dB(A) increase is usually perceived as a doubling of loudness; conversely, noise is perceived to be reduced by one-half when a sound level is reduced by 10 dB(A).


Sound Source
Sound Level in dBA
Overall Quality
Air Raid Siren
Jack Hammer
Thunder
Emergency Sirens
Rock Concert
Chain Saw
Lawn Mower
Subway
Yelling
Normal Conversation
Rainfall
Refrigerator
Whisper
140
130
120—Threshold of Pain
110
100—Very Loud
90
80—Moderately Loud
70—Loud
60
50—Quiet
40
30—Very Quiet
20
10
0—Threshold of Hearing

The metric frequently used when evaluating environmental sound levels is the equivalent continuous sound pressure level, or Leq. The Leq represents the average sound level for a given time period that would have the same total sound energy as the fluctuating sound levels over the measured time period. Along with the Leq, another frequently used metric when considering environmental sound levels and their effect on people is the day-night average sound level, the Ldn. The Ldn does not represent the sound level heard at any particular time but represents the average noise level over a 24-hour period, with sound levels between 10 PM and 7 AM artificially increased by 10 dB before averaging. The Ldn considers that household sound levels are typically lower during the evening and night than in the daytime and any exterior sound levels occurring between 10 PM and 7 AM are perceived to be louder and are more noticeable than the same exterior sound levels would be perceived during the daytime. Other acoustical statistics such as L(90) are generally considered to be representative of the background or ambient level of a noise environment. L(90) is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level. The maximum sound level (Lmax) was used for this assessment.

As sound waves propagate from a source to a receiver, the sound level changes in magnitude and frequency content. Sound propagates outward spherically from a point source and decreases by 6 dB for each doubling of distance. When the propagation path is close to the ground, ground absorption affects the attenuation. Acoustically hard sites (pavement) would have minimal ground absorption while a soft site (grass) would further reduce the sound at a rate 1.5 dB per doubling of distance. Additional sound reductions occur as a result of atmospheric effects and shielding (barrier in path of source/receiver).

4.0 Regulatory Setting

The project is located in Chesapeake, Virginia. The noise ordinance is contained in the Chesapeake Code of Ordinances: Chapter 26- Environment: Article V. Noise: Sec. 26-130. - Measurement procedure; maximum permitted levels. The sound level impact thresholds for a residential land use designation from the ordinance are outlined in Table 2 below.

Table 2

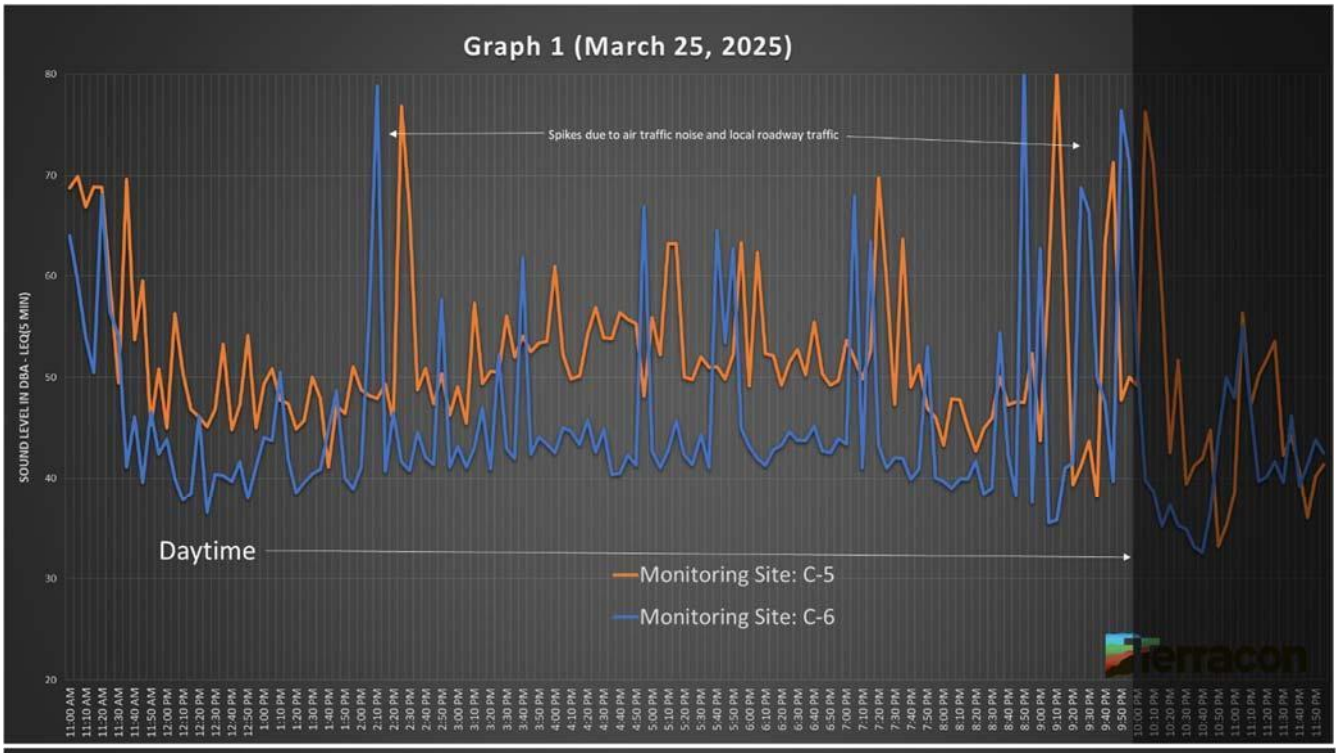
Area Zoning Classification or Land Use Designation in Mixed Use and Planned Unit Developments	Maximum dB(A) or Measurement of Overall Sound Pressure Level
Residential	55

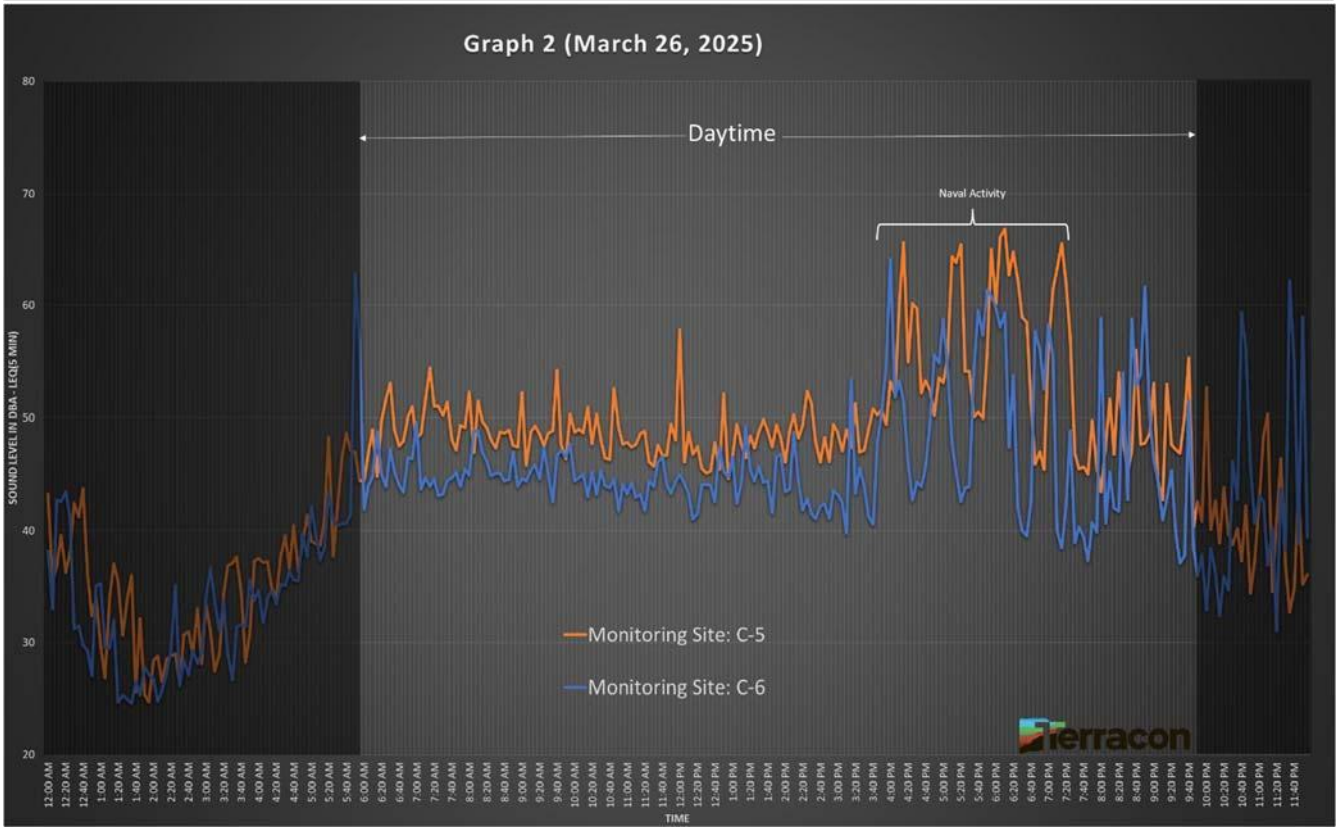
5.0 Existing Site Conditions

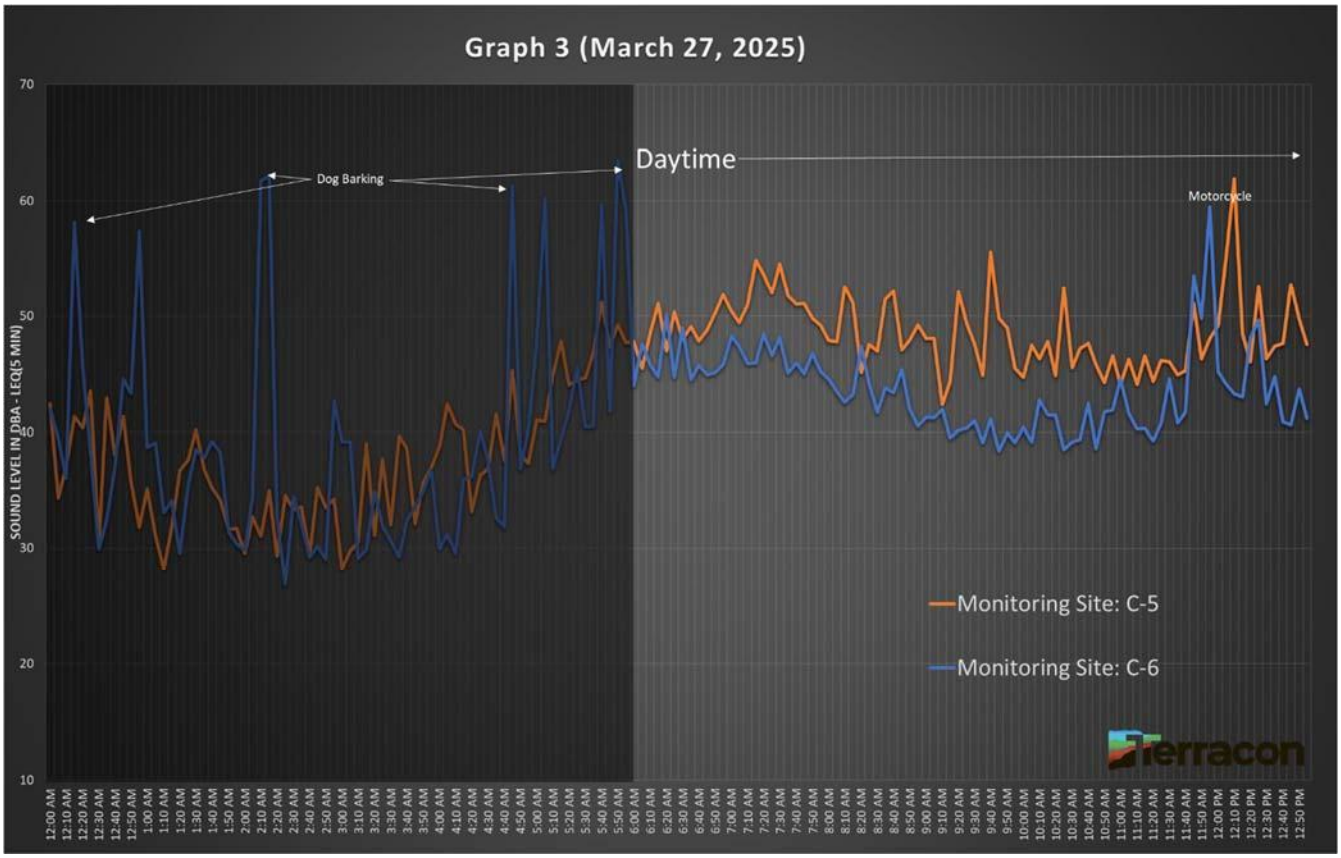
Ambient sound measurements were recorded at two locations on the property continuously from 11:00 AM Tuesday, March 25, 2025 through Thursday, March 27, 2025. The locations of the sound level measurement sites around the perimeter of the property are illustrated on Figure 2. The sound level data are presented in the time-history for each measurement day in Graphs 1 through 3 below. Additional monitoring data is located in Attachment A.

The proximity of the Fentress Airfield results in sound levels that are elevated significantly during flight operations. The property is located within the 70-75 Ldn and the >70-75 Ldn noise contour used for zoning purposes and sound levels are influenced intermittently by the flight operations at the base periodically during daytime and nighttime hours. Aircraft noise was evident during the measurement period due to flight operations, as indicated on the graphs. The measured sound levels also reflect ambient conditions including local roadway noise, community sounds, and natural sounds (insects, birds, etc.). Local ambient sound levels are significantly altered when the Fentress Airfield is in operation, as noted in

the sound level data. Daily sound levels fluctuate from 45-55 dB(A) without the naval operations while the overnight sounds levels drop to 30-40 dB(A) intermittently without interference from transportation and naval sound intrusions.







6.0 Operational Sound

The Etheridge Lakes Data Center is proposed as a 350,000 square foot (SF) data building that will be 35' in height. The building layout contained in the preliminary zoning plans (Figure 1) includes a 35,000 SF utility area proposed for the HVAC chillers and emergency generators. The data building will house servers, networks, storage and associated facilities which require robust cooling systems and standby power generation resources. Sound level modeling was completed to assess the daily operational noise, as well as emergency conditions when backup generators are temporarily operational. Monthly testing of the generators would also likely be required.

The sound emissions associated with the facility were estimated based on equipment used at similar facilities of this size and shape. Equipment sound emissions were modeled for the chiller compressors, cooling fans and back-up generators in octave bands based on the manufacturer's ratings and assumed elevations/locations of the equipment within the area containing the utility equipment. It was assumed that 10 >500 ton chillers, 10 cooling fans and 10 (2.5 MW) emergency generators are contained within the utility area outlined in Figure 1.

Sound Modeling Methodology

The future operating acoustical environment for the proposed sources was simulated using the SoundPLAN v.5.1 software. SoundPLAN implements International Organization for Standardization (ISO) ISO-9613-2 1996 (Attenuation of sound during propagation outdoors – Part 2: General method of calculation), which is an international standard method for calculating sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. A three-dimensional topographical model was created to assess the sound propagation of the proposed facility. A digital terrain model was created using existing ground elevations and contours obtained from topographic mapping derived from USGS mapping at 1-meter intervals.

SoundPLAN is capable of either predicting A-weighted sound levels at discrete receptors (single locations) or calculating sound contours given the three-dimensional terrain. Sound level projections were calculated for the closest representative sensitive receptor locations (19 receptors) within approximately 1/2-mile radius of the project boundaries. In addition, sound contour modeling was used for the proposed site to graphically display the future acoustical environment and illustrate the influence of the facility on adjoining properties.

Sound Modeling Results

The sensitive receptor modeling locations are located on Figure 3. The operational sound level projections for each of the sensitive receptors outlined on Figure 3 are found in Table 3 – Sound Modeling Results. Sound level contributions associated with the project at the sensitive receptor locations ranged from 38-55 dB(A). Sound modeling contours are included in Figure 4a, 4b and 5. Based on the building dimensions and equipment location, the residential subdivision to the west of the project is well below the 55 dBA threshold and below the background ambient sound measurements. The residence/business (3W's Farm Market) located east of Centerville Turnpike South would be exposed to sound levels in excess of the local noise ordinance of 55 dB(A). Emergency operations would increase the sound levels at the modeled receptors approximately 2-4 dB(A). Based on the ambient monitoring data presented in Section 5, the projected sound levels for the majority of the receptors would be at or below background ambient conditions. In addition, the corridor is located in a zone that has been designated > 75 Ldn and is routinely exposed to daily naval aircraft noise.

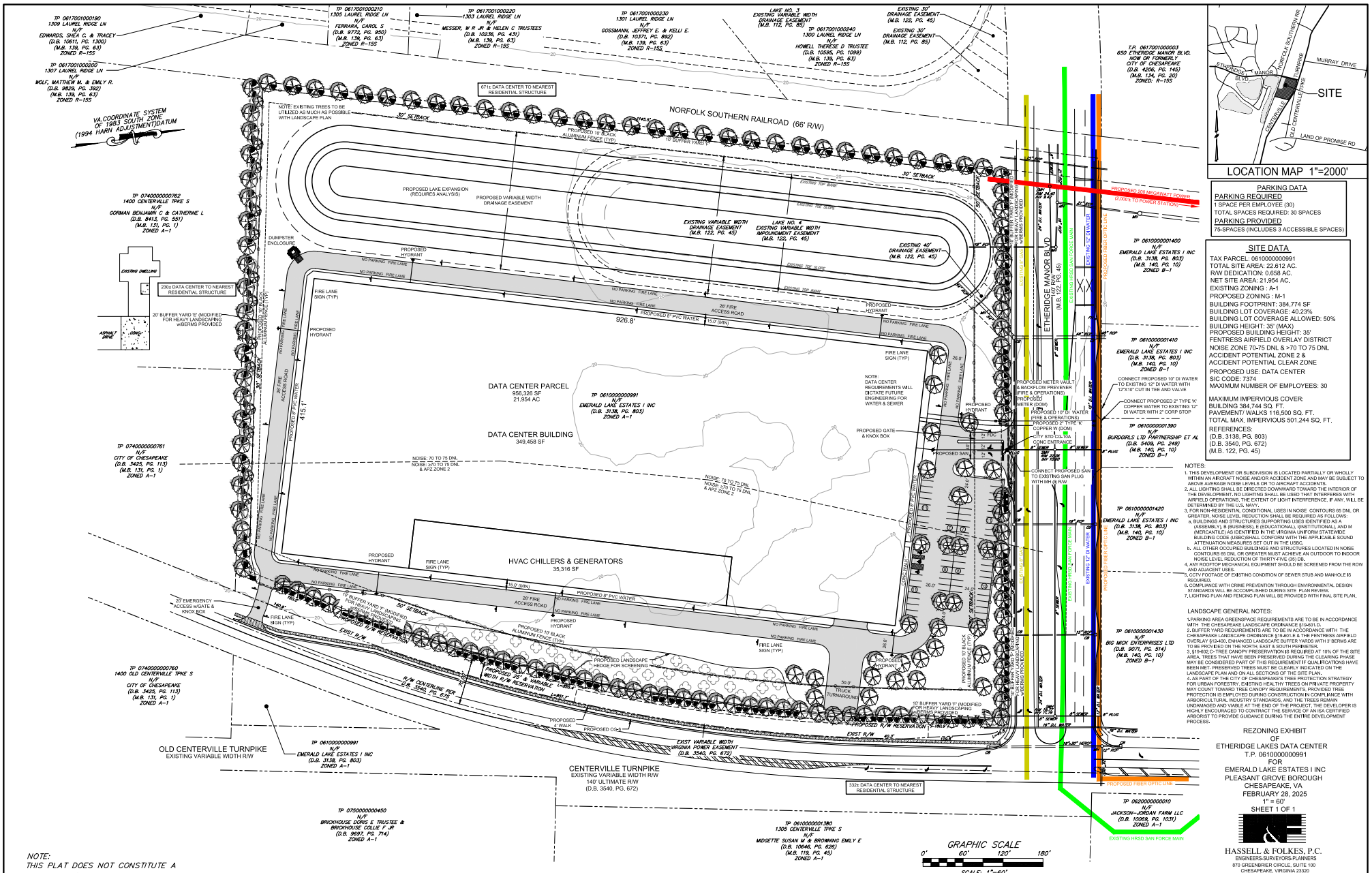
Sound Mitigation and Best Management Practices

The final design of the outdoor equipment used for the project should follow best management practices (BMPs) for the reduction of environmental sound emitted from the facility. As the project moves from zoning/land use approval into final design and construction, the designers should consider implementing quiet technology for the HVAC equipment and emergency generators. Building intake and exhaust vents should use acoustic louvers/silencers where applicable. The team should consider providing a wall/berm that blocks the line of sight or encloses the HVAC and generator portion of the building. An enclosure wall was preliminary modeled for the standard operating condition (Figure 4b) to illustrate the reduction in sound to the east of the property.

Table 3: Sound Modeling Results in dB(A)

Modeled Receptor ID	Limit Day dB(A)[1]	Standard Operations Sound Level in dB(A)	Emergency Operations Sound Level in dB(A)
1	55	41	41
2	55	**55**	**58**
3	55	50	52
4	55	48	50
5	55	46	49
6	55	40	42
7	55	42	43
8	55	46	48
9	55	39	40
10	55	40	40
11	55	40	41
12	55	40	41
13	55	43	46
14	55	40	44
15	55	41	44
16	55	40	43
17	55	39	42
18	55	38	41
19	55	40	43

Figures



LOCATION MAP 1"=2000'

PARKING DATA

PARKING REQUIRED
1 SPACE PER EMPLOYEE (30)
TOTAL SPACES REQUIRED: 30 SPACES

PARKING PROVIDED
75-SPACES (INCLUDES 3 ACCESSIBLE SPACES)

SITE DATA

TAX PARCEL: 0610000000991
TOTAL SITE AREA: 22.612 AC.
R/W DEDICATION: 0.658 AC.
NET SITE AREA: 21.954 AC.
EXISTING ZONING : A-1
PROPOSED ZONING : M-1
BUILDING FOOTPRINT: 384,774 SF
BUILDING LOT COVERAGE: 40.23%
BUILDING LOT COVERAGE ALLOWED: 50%
BUILDING HEIGHT: 35' (MAX)
PROPOSED BUILDING HEIGHT: 35'
FENTRESS AIRFIELD OVERLAY DISTRICT
NOISE ZONE 70-75 DNL & >70 TO 75 DNL
ACCIDENT POTENTIAL ZONE 2 &
ACCIDENT POTENTIAL CLEAR ZONE
PROPOSED USE: DATA CENTER
SIC CODE: 7374
MAXIMUM NUMBER OF EMPLOYEES: 30

MAXIMUM IMPERVIOUS COVER:
BUILDING 384,744 SQ. FT.
PAVEMENT/ WALKS 116,500 SQ. FT.
TOTAL MAX. IMPERVIOUS 501,244 SQ. FT.

REFERENCES:
(D.B. 3138, PG. 803)
(D.B. 3540, PG. 672)
(M.B. 122, PG. 45)

NOTES:
1. THIS DEVELOPMENT OR SUBDIVISION IS LOCATED PARTIALLY OR WHOLLY WITHIN AN AIRCRAFT NOISE AND/OR ACCIDENT ZONE AND MAY BE SUBJECT TO ABOVE AVERAGE NOISE LEVELS OR TO AIRCRAFT ACCIDENTS.
2. ALL LIGHTING SHALL BE DIRECTED DOWNWARD TOWARD THE INTERIOR OF THE DEVELOPMENT. NO LIGHTING SHALL BE USED THAT INTERFERES WITH AIRFIELD OPERATIONS, THE EXTENT OF LIGHT INTERFERENCE, IF ANY, WILL BE DETERMINED BY THE U.S. NAVY.
3. FOR NON-RESIDENTIAL CONDITIONAL USES IN NOISE CONTOURS 65 DNL OR GREATER, NOISE LEVEL REDUCTION SHALL BE REQUIRED AS FOLLOWS:
   a. BUILDINGS AND STRUCTURES SUPPORTING USES IDENTIFIED AS A (ASSEMBLY), B (BUSINESS), E (EDUCATIONAL), I(INSTITUTIONAL), AND M (MERCANTILE) AS IDENTIFIED IN THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)SHALL CONFORM WITH THE APPLICABLE SOUND ATTENUATION MEASURES SET OUT IN THE USBC.
   b. ALL OCCUPIED BUILDINGS AND STRUCTURES LOCATED IN NOISE CONTOURS 65 DNL OR GREATER MUST ACHIEVE AN OUTDOOR TO INDOOR NOISE LEVEL REDUCTION OF THIRTY-FIVE (35) DB.
4. ANY ROOFTOP MECHANICAL EQUIPMENT SHOULD BE SCREENED FROM THE ROW AND ADJACENT USES.
5. CCTV FOOTAGE OF EXISTING CONDITION OF SEWER STUB AND MANHOLE IS REQUIRED.
6. COMPLIANCE WITH CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN STANDARDS WILL BE ACCOMPLISHED DURING SITE PLAN REVIEW.
7. LIGHTING PLAN AND FENCING PLAN WILL BE PROVIDED WITH FINAL SITE PLAN.

LANDSCAPE GENERAL NOTES:
1. PARKING AREA GREENSPACE REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE CHESAPEAKE LANDSCAPE ORDINANCE §19-401.D.
2. BUFFER YARD REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE CHESAPEAKE LANDSCAPE ORDINANCE §19-401.E & THE FENTRESS AIRFIELD OVERLAY §12-400, ENHANCED LANDSCAPE BUFFER YARDS WITH 3' BERMS ARE TO BE PROVIDED ON THE NORTH, EAST & SOUTH PERIMETER.
3. §19-402.C- TREE CANOPY PRESERVATION IS REQUIRED AT 10% OF THE SITE AREA, TREES THAT HAVE BEEN PRESERVED DURING THE CLEARING PHASE MAY BE CONSIDERED PART OF THIS REQUIREMENT IF QUALIFICATIONS HAVE BEEN MET. PRESERVED TREES MUST BE CLEARLY INDICATED ON THE LANDSCAPE PLAN AND ON ALL SECTIONS OF THE SITE PLAN.
4. AS PART OF THE CITY OF CHESAPEAKE'S TREE PROTECTION STRATEGY FOR URBAN FORESTRY, EXISTING HEALTHY TREES ON PRIVATE PROPERTY MAY COUNT TOWARD TREE CANOPY REQUIREMENTS. PROVIDED TREE PROTECTION IS EMPLOYED DURING CONSTRUCTION IN COMPLIANCE WITH ARBORICULTURAL INDUSTRY STANDARDS, AND THE TREES REMAIN UNDAMAGED AND VIABLE AT THE END OF THE PROJECT. THE DEVELOPER IS HIGHLY ENCOURAGED TO CONTRACT THE SERVICE OF AN ISA CERTIFIED ARBORIST TO PROVIDE GUIDANCE DURING THE ENTIRE DEVELOPMENT PROCESS.

REZONING EXHIBIT
OF
ETHERIDGE LAKES DATA CENTER
T.P. 0610000000991
FOR
EMERALD LAKE ESTATES I INC
PLEASANT GROVE BOROUGH
CHESAPEAKE, VA
FEBRUARY 28, 2025
1" = 60'
SHEET 1 OF 1

HASSELL & FOLKES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
870 GREENBRIER CIRCLE, SUITE 100
CHESAPEAKE, VIRGINIA 23320
PHONE: (757) 361-9212 FAX: (757) 366-0481
WWW.HFPC-ONLINE.COM

GRAPHIC SCALE
0' 60' 120' 180'
SCALE: 1"=60'

NOTE:
THIS PLAT DOES NOT CONSTITUTE A BOUNDARY SURVEY OR SUBDIVISION PLAT.

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project No.	K3251062
Scale:	AS SHOWN
Client:	Emerald Lake
Date:	?

Terracon

5465 Greenwich Rd
Virginia Beach, VA 23462-6511

MONITORING SITE LOCATION

Etheridge Lakes Data Center

Etheridge Manor Boulevard Chesapeake, VA

FIGURE

2

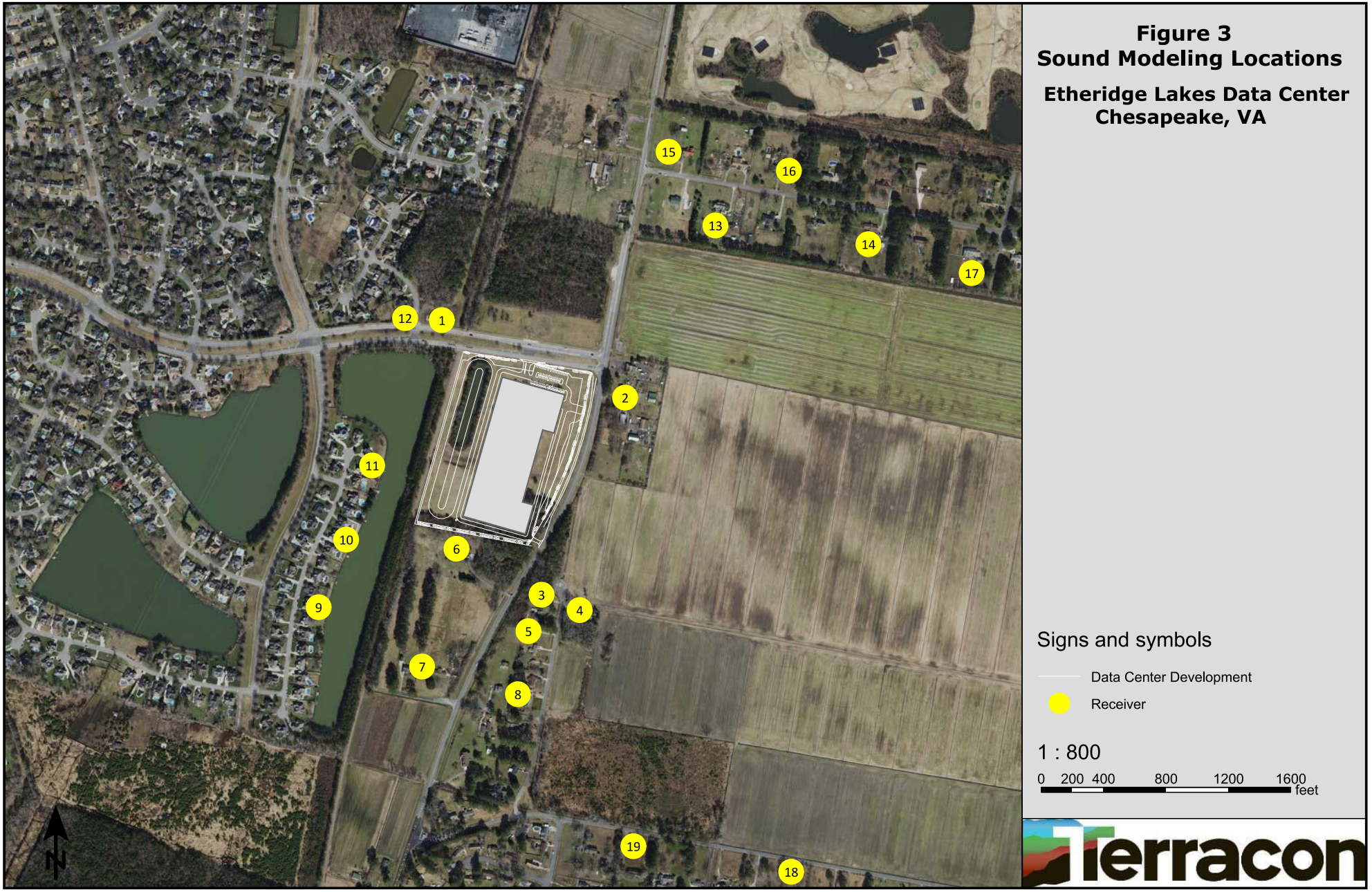


Figure 3
Sound Modeling Locations

Etheridge Lakes Data Center
Chesapeake, VA

Signs and symbols

Data Center Development

Receiver

1 : 800

0 200 400 800 1200 1600 feet

Terracon

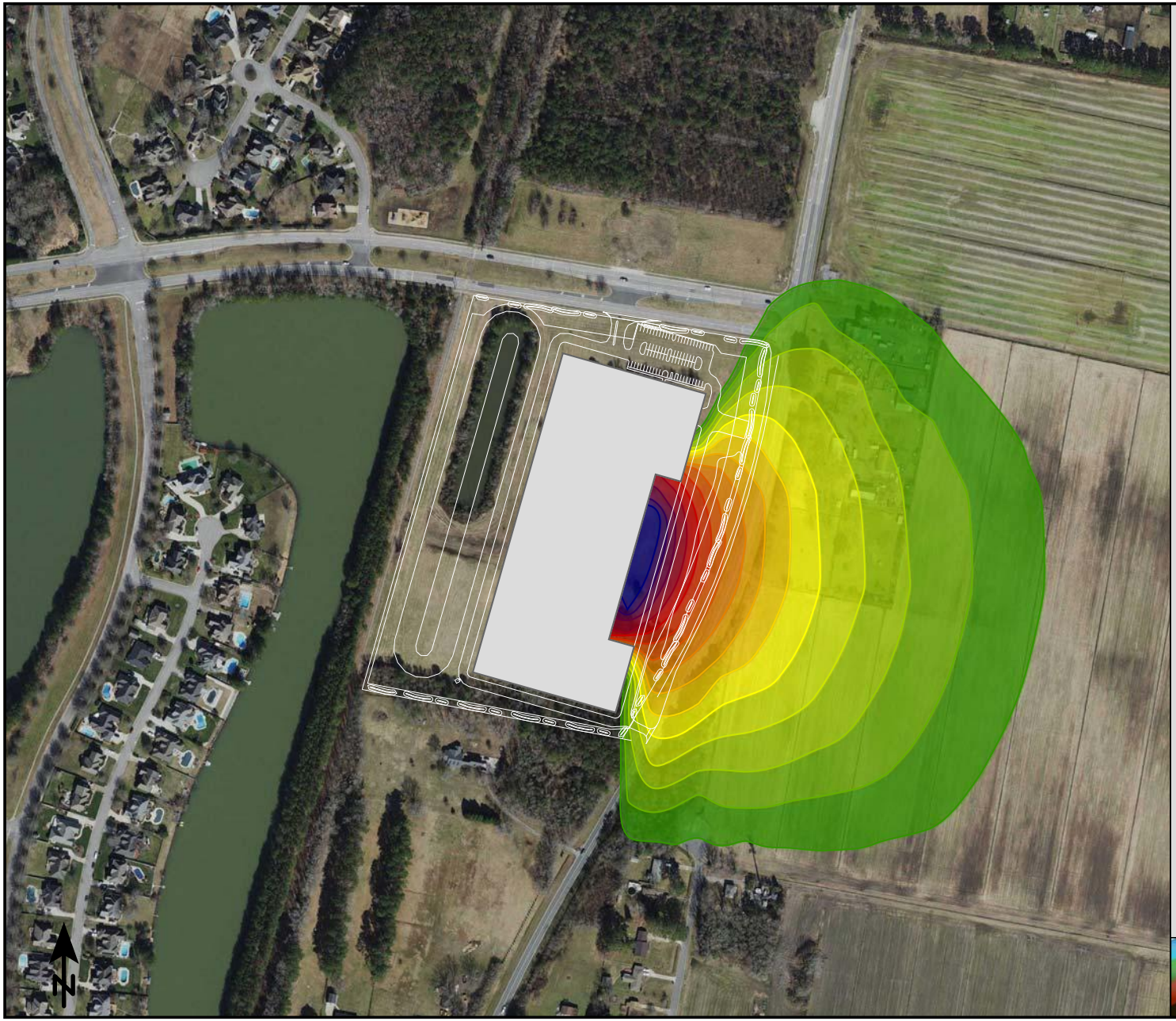


Figure 4a
Sound Modeling Contours
No Berm/Wall

Etheridge Lakes Data Center
Chesapeake, VA

Signs and symbols

Data Center Development

Levels in dB(A)

< 50
50 - 52
52 - 54
54 - 56
56 - 58
58 - 60
60 - 62
62 - 64
64 - 66
66 - 68
68 - 70
70 - 72
72 - 74
74 - 76
76 - 78
>= 78

1 : 400

0 100 200 400 600 800 feet

Terracon

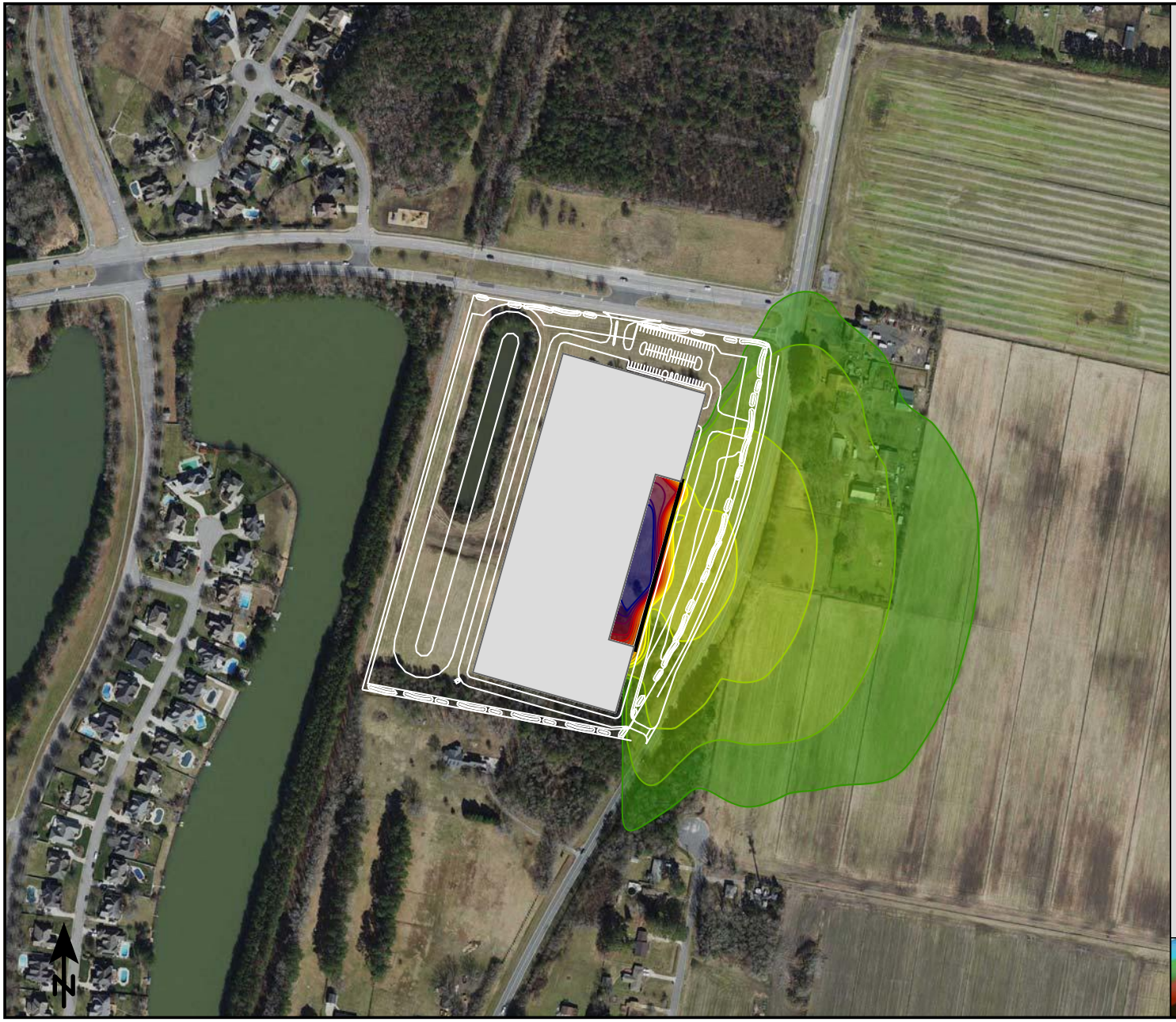


Figure 4b
Sound Modeling Contours
Enclosure Wall

Etheridge Lakes Data Center
Chesapeake, VA

Signs and symbols

- Data Center Development
- Wall
- Main building

Levels in dB(A)

< 50
50 - 52
52 - 54
54 - 56
56 - 58
58 - 60
60 - 62
62 - 64
64 - 66
66 - 68
68 - 70
70 - 72
72 - 74
74 - 76
76 - 78
>= 78

1 : 400

0 100 200 400 600 800 feet

Terracon

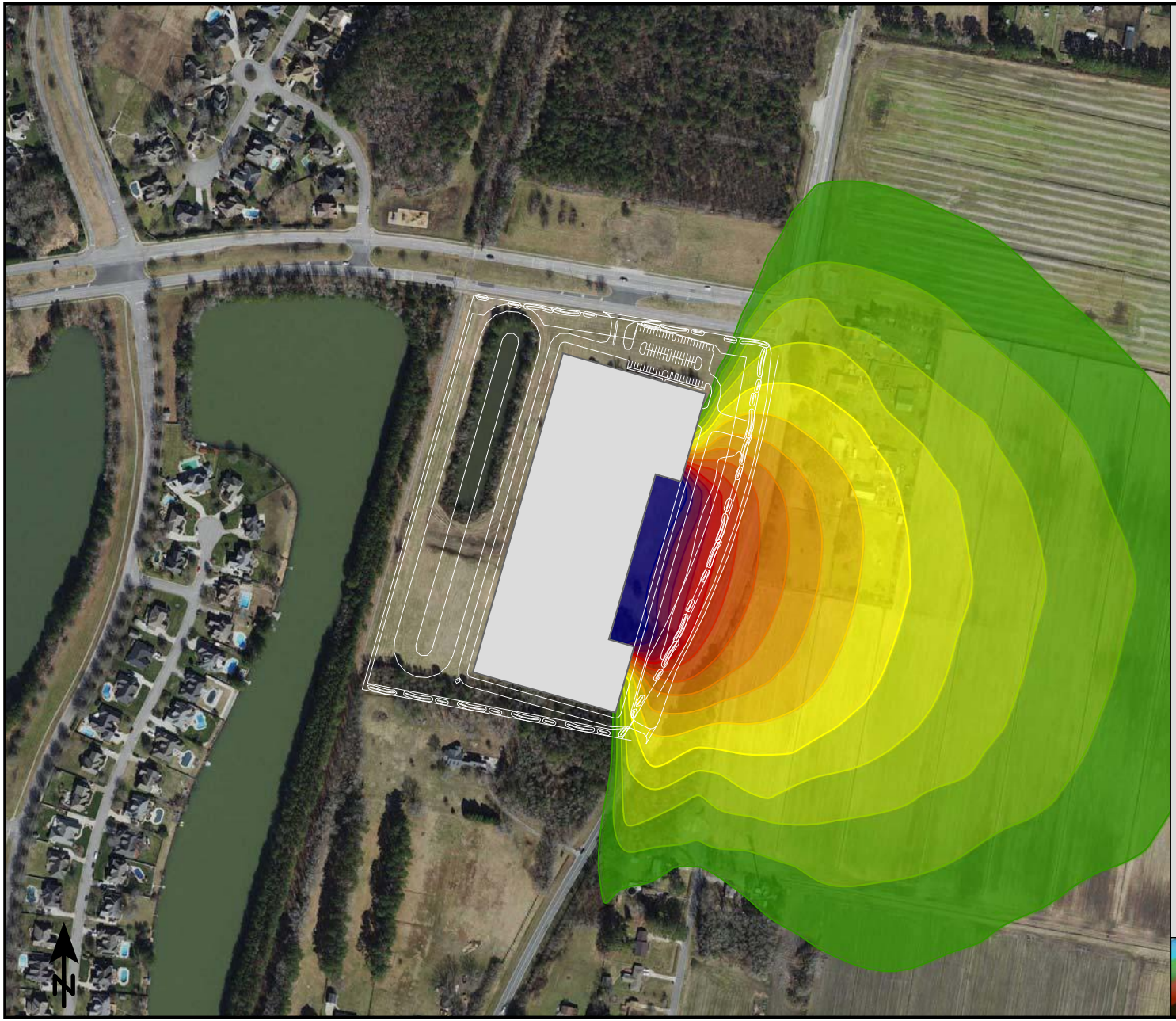


Figure 5
Sound Modeling Contours
Emergency Generators
No Berm/Wall

Etheridge Lakes Data Center
Chesapeake, VA

Signs and symbols

Data Center Development

Levels in dB(A)

< 50
50 - 52
52 - 54
54 - 56
56 - 58
58 - 60
60 - 62
62 - 64
64 - 66
66 - 68
68 - 70
70 - 72
72 - 74
74 - 76
76 - 78
>= 78

1 : 400

0 100 200 400 600 800 feet

Terracon

Attachments

Attachment 1 – Sound Monitoring Data

Noise Monitoring Site Sketch

Extended Ambient Noise Measurement

Site # C-05 **Description: 50949-50999 Etheridge Manor Blvd, Chesapeake VA 23322**

36.68234 N, 76.18819 W

MONITORING INFORMATION

Notes:

Date:	3/25/2025
Start Time:	11:00 AM
Date:	3/27/2025
End Time:	4:00 PM
5 Meter ID:	#5, #SN520984
Response Rate:	Slow

3/25/2025	
Time	**Leq(h) (dBA)**
11:00 AM	66.1
12:00 PM	50.4
1:00 PM	48.2
2:00 PM	66.5
3:00 PM	53.0
4:00 PM	55.3
5:00 PM	58.1
6:00 PM	54.3
7:00 PM	60.6
8:00 PM	47.7
9:00 PM	70.3
10:00 PM	66.7
11:00 PM	49.4

3/26/2025		3/27/2025	
Time	**Leq(h) (dBA)**	**Time**	**Leq(h) (dBA)**
12:00 AM	39.7	12:00 AM	39.9
1:00 AM	32.7	1:00 AM	35.4
2:00 AM	29.4	2:00 AM	33.1
3:00 AM	34.4	3:00 AM	35.9
4:00 AM	38.1	4:00 AM	40.1
5:00 AM	44.9	5:00 AM	46.8
6:00 AM	49.4	6:00 AM	49.2
7:00 AM	50.5	7:00 AM	52.0
8:00 AM	49.2	8:00 AM	49.5
9:00 AM	49.7	9:00 AM	49.5
10:00 AM	49.2	10:00 AM	47.4
11:00 AM	47.7	11:00 AM	46.6
12:00 PM	50.1	12:00 PM	53.6
1:00 PM	48.4	1:00 PM	49.0
2:00 PM	49.1	2:00 PM	62.5
3:00 PM	49.2	3:00 PM	69.2
4:00 PM	58.4	4:00 PM	51.1
5:00 PM	60.6		
6:00 PM	61.9		
7:00 PM	59.2		
8:00 PM	50.2		
9:00 PM	49.6		
10:00 PM	44.0		
11:00 PM	43.9		

North Arrow

Site Specifics

Pavement Type:	Grade:	Site Surface:	Employee:
NA	Flat undeveloped lot	soft	KR

Atmospheric Conditions :
See attached data sheet

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project No.	K3251062
Scale:	AS SHOWN
Client:	Emerald Lake
Date:	

terracon
5465 Greenwich Rd
Virginia Beach, VA 23462-6511

SITE LOCATION
Etheridge Lakes Data Center
Etheridge Manor Boulevard
Chesapeake, VA

Exhibit A-1

Noise Monitoring Site Sketch

Extended Ambient Noise Measurement

Site # C-06 **Description: 1400 Centerville TPK S, Chesapeake VA 23322**

36.68090 N 76.19034 W

MONITORING INFORMATION

Notes:

Date:	3/25/2025
Start Time:	11:00 AM
Date:	3/27/2025
End Time:	4:00 PM
5 Meter ID:	#6 #SN520985
Response Rate:	Slow

3/25/2025	
Time	Leq(h) (dBA)
11:00 AM	59.6
12:00 PM	41.2
1:00 PM	44.5
2:00 PM	68.1
3:00 PM	51.9
4:00 PM	56.4
5:00 PM	56.4
6:00 PM	43.4
7:00 PM	58.7
8:00 PM	70.0
9:00 PM	67.7
10:00 PM	44.0
11:00 PM	46.9

3/26/2025		3/27/2025	
Time	Leq(h) (dBA)	Time	Leq(h) (dBA)
12:00 AM	38.7	12:00 AM	50.5
1:00 AM	29.1	1:00 AM	36.6
2:00 AM	29.0	2:00 AM	54.2
3:00 AM	33.0	3:00 AM	34.9
4:00 AM	35.7	4:00 AM	50.7
5:00 AM	53.3	5:00 AM	56.4
6:00 AM	45.5	6:00 AM	46.4
7:00 AM	45.1	7:00 AM	46.7
8:00 AM	46.2	8:00 AM	43.9
9:00 AM	45.9	9:00 AM	40.4
10:00 AM	44.2	10:00 AM	40.8
11:00 AM	44.2	11:00 AM	50.5
12:00 PM	44.3	12:00 PM	44.8
1:00 PM	45.6	1:00 PM	43.0
2:00 PM	43.7	2:00 PM	62.8
3:00 PM	48.4	3:00 PM	60.4
4:00 PM	55.3	4:00 PM	48.0
5:00 PM	56.6		
6:00 PM	55.2		
7:00 PM	50.0		
8:00 PM	55.1		
9:00 PM	44.2		
10:00 PM	50.7		
11:00 PM	53.7		

North Arrow

Site Specifics

Pavement Type:	Grade:	Site Surface:	Employee:
NA	Flat undeveloped lot	soft	KR

Atmospheric Conditions :
See attached data sheet

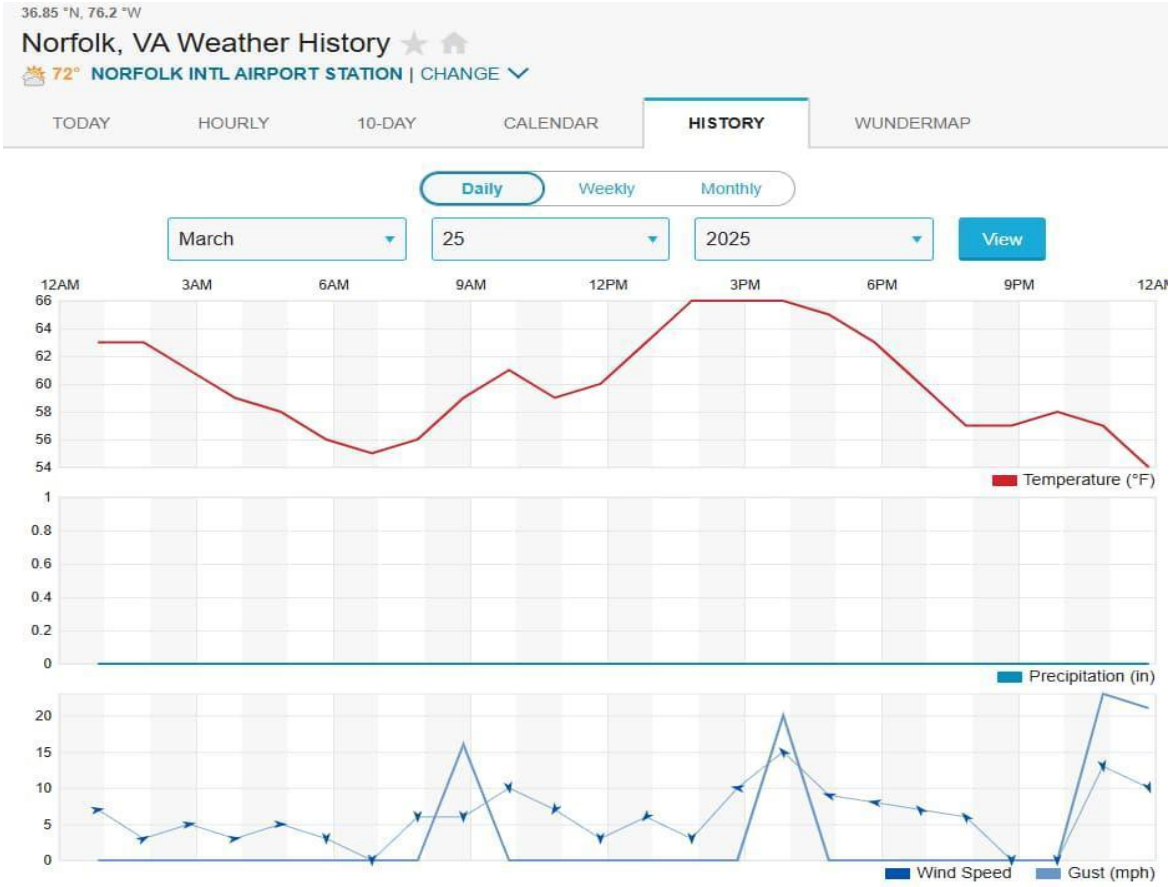
DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project No.	K3251062
Scale:	AS SHOWN
Client:	Emerald Lake
Date:	?

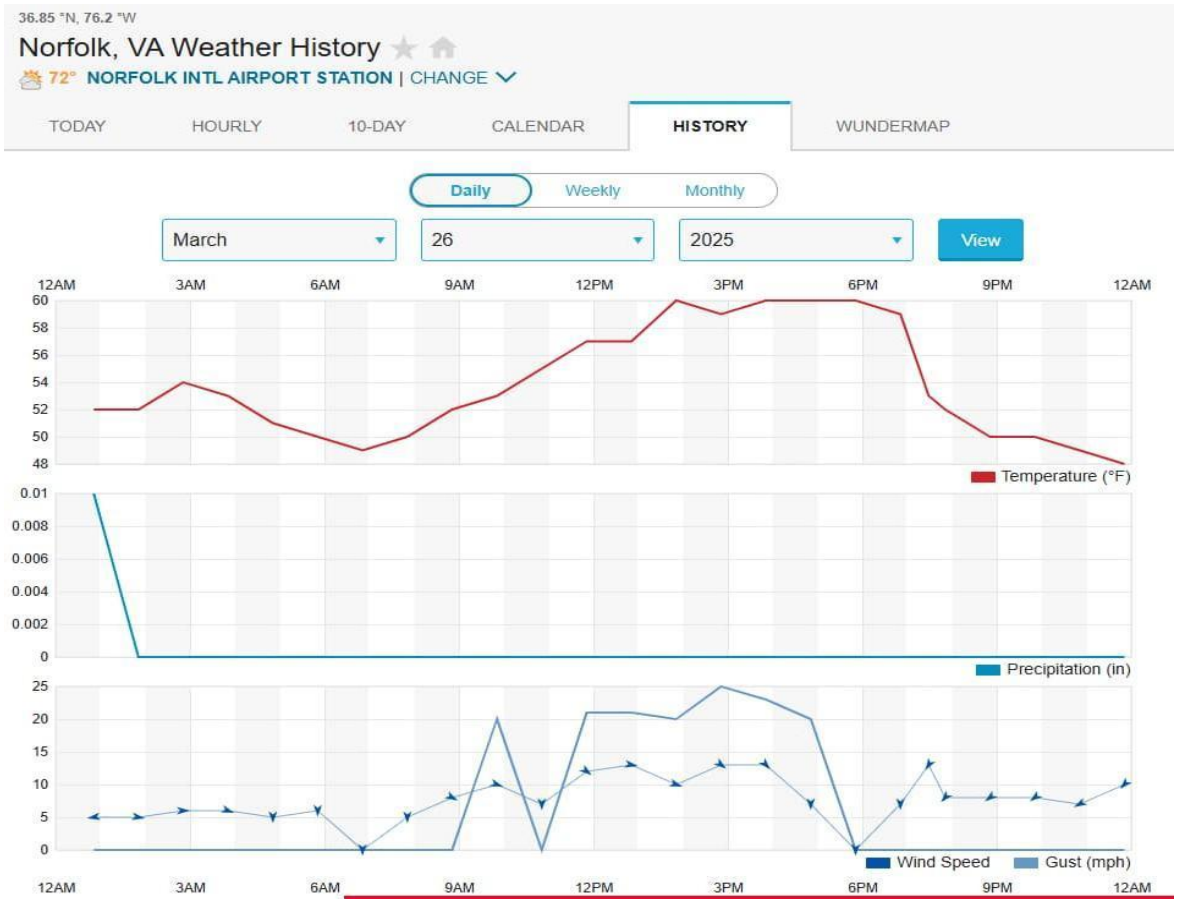
terracon
5465 Greenwich Rd
Virginia Beach, VA 23462-6511

SITE LOCATION
Etheridge Lakes Data Center
Etheridge Manor Boulevard
Chesapeake, VA

Exhibit
A-1



Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:51 AM	63 °F	54 °F	72 %	W	7 mph	0 mph	29.83 in	0.0 in	Cloudy
1:51 AM	63 °F	41 °F	45 %	WSW	3 mph	0 mph	29.83 in	0.0 in	Cloudy
2:51 AM	61 °F	49 °F	64 %	W	5 mph	0 mph	29.83 in	0.0 in	Partly Cloudy
3:51 AM	59 °F	50 °F	72 %	W	3 mph	0 mph	29.84 in	0.0 in	Fair
4:51 AM	58 °F	50 °F	75 %	W	5 mph	0 mph	29.86 in	0.0 in	Fair
5:51 AM	56 °F	49 °F	77 %	VAR	3 mph	0 mph	29.87 in	0.0 in	Fair
6:51 AM	55 °F	47 °F	74 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
7:51 AM	56 °F	44 °F	64 %	VAR	6 mph	0 mph	29.95 in	0.0 in	Fair
8:51 AM	59 °F	35 °F	41 %	VAR	6 mph	16 mph	29.97 in	0.0 in	Fair
9:51 AM	61 °F	33 °F	35 %	N	10 mph	0 mph	29.97 in	0.0 in	Fair
10:51 AM	59 °F	35 °F	41 %	NNE	7 mph	0 mph	29.97 in	0.0 in	Fair
11:51 AM	60 °F	37 °F	42 %	VAR	3 mph	0 mph	29.97 in	0.0 in	Fair
12:51 PM	63 °F	35 °F	35 %	NE	6 mph	0 mph	29.95 in	0.0 in	Fair
1:51 PM	66 °F	31 °F	27 %	VAR	3 mph	0 mph	29.90 in	0.0 in	Fair
2:51 PM	66 °F	34 °F	30 %	E	10 mph	0 mph	29.87 in	0.0 in	Fair
3:51 PM	66 °F	36 °F	33 %	SE	15 mph	20 mph	29.86 in	0.0 in	Fair
4:51 PM	65 °F	36 °F	34 %	ESE	9 mph	0 mph	29.85 in	0.0 in	Fair
5:51 PM	63 °F	38 °F	40 %	E	8 mph	0 mph	29.87 in	0.0 in	Fair
6:51 PM	60 °F	38 °F	44 %	SE	7 mph	0 mph	29.89 in	0.0 in	Fair
7:51 PM	57 °F	39 °F	51 %	SE	6 mph	0 mph	29.89 in	0.0 in	Cloudy
8:51 PM	57 °F	41 °F	55 %	CALM	0 mph	0 mph	29.94 in	0.0 in	Cloudy
9:51 PM	58 °F	42 °F	56 %	CALM	0 mph	0 mph	29.94 in	0.0 in	Cloudy
10:51 PM	57 °F	42 °F	57 %	N	13 mph	23 mph	29.97 in	0.0 in	Mostly Cloudy
11:51 PM	54 °F	45 °F	72 %	NNW	10 mph	21 mph	30.00 in	0.0 in	Light Rain



Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:51 AM	52 °F	46 °F	80 %	E	5 mph	0 mph	29.94 in	0.0 in	Cloudy
1:51 AM	52 °F	47 °F	83 %	W	5 mph	0 mph	29.96 in	0.0 in	Mostly Clo
2:51 AM	54 °F	45 °F	72 %	W	6 mph	0 mph	29.96 in	0.0 in	Cloudy
3:51 AM	53 °F	43 °F	69 %	WNW	6 mph	0 mph	29.96 in	0.0 in	Fair
4:51 AM	51 °F	42 °F	71 %	VAR	5 mph	0 mph	29.96 in	0.0 in	Fair
5:51 AM	50 °F	38 °F	63 %	VAR	6 mph	0 mph	29.99 in	0.0 in	Fair
6:51 AM	49 °F	36 °F	61 %	CALM	0 mph	0 mph	30.01 in	0.0 in	Fair
7:51 AM	50 °F	38 °F	63 %	VAR	5 mph	0 mph	30.03 in	0.0 in	Fair
8:51 AM	52 °F	34 °F	50 %	WNW	8 mph	0 mph	30.04 in	0.0 in	Fair
9:51 AM	53 °F	34 °F	48 %	WNW	10 mph	20 mph	30.06 in	0.0 in	Fair
10:51 AM	55 °F	31 °F	40 %	VAR	7 mph	0 mph	30.06 in	0.0 in	Fair
11:51 AM	57 °F	30 °F	36 %	NW	12 mph	21 mph	30.06 in	0.0 in	Fair
12:51 PM	57 °F	29 °F	34 %	W	13 mph	21 mph	30.06 in	0.0 in	Fair
1:51 PM	60 °F	24 °F	25 %	WNW	10 mph	20 mph	30.04 in	0.0 in	Fair
2:51 PM	59 °F	21 °F	23 %	NW	13 mph	25 mph	30.04 in	0.0 in	Fair
3:51 PM	60 °F	18 °F	20 %	NW	13 mph	23 mph	30.04 in	0.0 in	Fair
4:51 PM	60 °F	16 °F	18 %	VAR	7 mph	20 mph	30.05 in	0.0 in	Fair
5:51 PM	60 °F	17 °F	19 %		0 mph	0 mph	30.07 in	0.0 in	Fair
6:51 PM	59 °F	17 °F	20 %	VAR	7 mph	0 mph	30.09 in	0.0 in	Fair
7:29 PM	53 °F	33 °F	47 %	NNE	13 mph	0 mph	30.11 in	0.0 in	Fair
7:51 PM	52 °F	33 °F	49 %	NE	8 mph	0 mph	30.12 in	0.0 in	Fair
8:51 PM	50 °F	28 °F	43 %	NE	8 mph	0 mph	30.16 in	0.0 in	Fair
9:51 PM	50 °F	27 °F	41 %	NE	8 mph	0 mph	30.17 in	0.0 in	Fair
10:51 PM	49 °F	29 °F	46 %	ENE	7 mph	0 mph	30.19 in	0.0 in	Fair
11:51 PM	48 °F	30 °F	50 %	NE	10 mph	0 mph	30.18 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:51 AM	50 °F	30 °F	46 %	NE	5 mph	0 mph	30.20 in	0.0 in	Fair
1:51 AM	42 °F	31 °F	65 %	SSW	5 mph	0 mph	30.21 in	0.0 in	Fair
2:51 AM	42 °F	31 °F	65 %	WSW	3 mph	0 mph	30.22 in	0.0 in	Fair
3:51 AM	45 °F	33 °F	63 %	WNW	3 mph	0 mph	30.22 in	0.0 in	Fair
4:51 AM	44 °F	33 °F	65 %	N	3 mph	0 mph	30.23 in	0.0 in	Fair
5:51 AM	43 °F	35 °F	74 %	CALM	0 mph	0 mph	30.24 in	0.0 in	Fair
6:51 AM	41 °F	33 °F	73 %	S	5 mph	0 mph	30.26 in	0.0 in	Fair
7:51 AM	46 °F	35 °F	66 %	CALM	0 mph	0 mph	30.28 in	0.0 in	Fair
8:51 AM	51 °F	34 °F	52 %	CALM	0 mph	0 mph	30.29 in	0.0 in	Fair
9:51 AM	53 °F	26 °F	35 %	N	10 mph	0 mph	30.30 in	0.0 in	Fair
10:51 AM	54 °F	34 °F	47 %	NNW	7 mph	0 mph	30.32 in	0.0 in	Fair
11:51 AM	53 °F	36 °F	52 %	NE	10 mph	0 mph	30.33 in	0.0 in	Fair
12:51 PM	53 °F	35 °F	50 %	NE	9 mph	0 mph	30.33 in	0.0 in	Fair
1:51 PM	54 °F	33 °F	45 %	NE	9 mph	0 mph	30.31 in	0.0 in	Fair
2:51 PM	57 °F	32 °F	39 %	NE	10 mph	0 mph	30.28 in	0.0 in	Fair
3:51 PM	56 °F	32 °F	40 %	NE	7 mph	0 mph	30.28 in	0.0 in	Fair
4:51 PM	57 °F	34 °F	42 %	NE	8 mph	0 mph	30.26 in	0.0 in	Fair
5:51 PM	57 °F	35 °F	44 %	ESE	9 mph	0 mph	30.26 in	0.0 in	Fair
6:51 PM	53 °F	34 °F	48 %	SE	8 mph	0 mph	30.27 in	0.0 in	Fair
7:51 PM	50 °F	34 °F	54 %	S	8 mph	0 mph	30.27 in	0.0 in	Fair
8:51 PM	50 °F	36 °F	59 %	S	8 mph	0 mph	30.29 in	0.0 in	Fair
9:51 PM	50 °F	36 °F	59 %	SSE	12 mph	0 mph	30.28 in	0.0 in	Fair
10:51 PM	49 °F	37 °F	64 %	S	9 mph	0 mph	30.28 in	0.0 in	Fair
11:51 PM	49 °F	39 °F	69 %	S	8 mph	21 mph	30.28 in	0.0 in	Fair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