



Bill No. 25-05
Concerning: Design and Specific Use Regulations
for Critical Digital Infrastructure Facilities and
Electric Substations
Introduced March 4, 2025
Revised: _____ Draft No. _____
Enacted: _____
Effective: _____
Expires: June 2, 2025
Frederick County Code, Chapter 1-19
Section(s) 6.100, 8.402, 8.403

COUNTY COUNCIL FOR FREDERICK COUNTY, MARYLAND

By: Council Member Renee Knapp and President Brad Young

AN ACT to: Update Design Requirements for Critical Digital Infrastructure Facilities and update Specific Use Regulations for Critical Digital Infrastructure Facilities and Critical Digital Infrastructure Electric Substations.

Date Council Approved: _____ Date Transmitted to Executive: _____

Executive: _____ Date Received: _____

Approved: _____ Date: _____

Vetoed: _____ Date: _____

Date returned to Council by County Executive with no action: _____

By amending:

Frederick County Code, 1-19 Section(s) 6.100, 8.402, 8.403

Other: _____

Boldface

Underlining

[Single boldface brackets]

* * *

Heading or defined term.

Added to existing law.

Deleted from existing law.

Existing law unaffected by bill.

1
2 Bill No. 25-05

3 The County Council of Frederick County, Maryland, finds it necessary and appropriate to
4 amend the Frederick County Code §§ 1-19-6.100, 1-19-8.402, and 1-19-8.403 to update Design
5 Requirements for Critical Digital Infrastructure Facilities and update Specific Use Regulations
6 for Critical Digital Infrastructure Facilities and Critical Digital Infrastructure Electric
7 Substations.

8
9 NOW, THEREFORE, BE IT ENACTED BY THE COUNTY COUNCIL OF
10 FREDERICK COUNTY, MARYLAND, that the Frederick County Code be, and it is hereby,
11 amended as shown on the attached Exhibit 1.

12 AND BE IT FURTHER ENACTED BY THE COUNTY COUNCIL OF FREDERICK
13 COUNTY that the following transitional provisions shall apply:

- 14 1. Critical Digital Infrastructure Facilities that have received site plan approval or
15 conditional site plan approval from the Planning Commission as of the effective
16 date of this bill are exempt from the changes in this bill.
- 17 2. Critical Digital Infrastructure Electrical Substations that have received site plan
18 approval or conditional site plan approval from the Planning Commission as of the
19 effective date of this bill are exempt from the changes in this bill.

20
21
22
23
24 _____
25 Brad W. Young, President
26 County Council of Frederick County,
27 Maryland

§ 1-19-6.100. DESIGN REQUIREMENTS FOR SPECIFIC DISTRICTS.

| <i>Use Classification</i> | <i>Minimum Lot Area</i> | <i>Minimum Lot Area per Unit</i> | <i>Lot Width</i> | <i>Front Yard</i> | <i>Side Yard</i> | <i>Rear Yard</i> | <i>Height</i> |
|--|-------------------------|----------------------------------|---------------------|--|--|--|--------------------|
| Limited Industrial District LI | | | | | | | |
| <i>Use Classification</i> | <i>Minimum Lot Area</i> | <i>Minimum Lot Area per Unit</i> | <i>Lot Width</i> | <i>Front Yard</i> | <i>Side Yard</i> | <i>Rear Yard</i> | <i>Height</i> |
| Limited Industrial District LI | | | | | | | |
| Natural resources | 5 acres | - | 300 | 40 | 50 | 50 | 30' |
| Industrial | 20,000 | - | 100 | 25 | * | 20 | 60' |
| Automobile services | 20,000 | - | 100 | 25 | * | 20 | 60' |
| Wholesaling/processing | 20,000 | - | 100 | 25 | ** | 20 | 60' |
| Open space uses | No minimum | - | - | - | - | - | - |
| Governmental and public utility | 20,000 | - | 200 | 40 | 40 | 40 | 30' |
| Nongovernmental utility, nongovernmental electric substation | 20,000 | - | 200 | 50 | 50 | 50 | 30' |
| Self-storage units | 20,000 | - | 100 | 25 | 10 **** | 25 ***** | 60' ***** |
| Solar facility, commercial | 20,000 sq. ft. | | 200 | 50 | 50 | 50 | 30' |
| Critical digital infrastructure facility | 80,000 | | [200] <u>300</u> | [50 ²] <u>100⁴</u> | [50 ²] <u>100⁴</u> | [50 ²] <u>100⁴</u> | [60] <u>75'</u> |
| Critical digital infrastructure electric substation | 20,000 | | [200] <u>300</u> | [50] <u>100</u> | [50] <u>100</u> | [50] <u>100</u> | 30 |

6

| <i>Use Classification</i> | <i>Minimum Lot Area</i> | <i>Minimum Lot Area per Unit</i> | <i>Lot Width</i> | <i>Front Yard</i> | <i>Side Yard</i> | <i>Rear Yard</i> | <i>Height</i> |
|---------------------------------------|-------------------------|----------------------------------|------------------|-------------------|------------------|------------------|---------------|
| General Industrial District GI | | | | | | | |
| <i>Use Classification</i> | <i>Minimum Lot Area</i> | <i>Minimum Lot Area per Unit</i> | <i>Lot Width</i> | <i>Front Yard</i> | <i>Side Yard</i> | <i>Rear Yard</i> | <i>Height</i> |

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| <i>General Industrial District GI</i> | | | | | | | |
|--|------------|---|---------------------|--|--|--|--------------------|
| All permitted uses | 1 acre | - | 150 | 25 | 15 | 40 | 60' |
| Open space uses | No minimum | - | - | - | - | - | - |
| Governmental and public utility | 1 acre | - | 200 | 40 | 40 | 40 | 30' |
| Nongovernmental utility, nongovernmental electric substation | 1 acre | - | 200 | 50 | 50 | 50 | 30' |
| Self-storage units | 20,000 | - | 100 | 25 | 10 **** | 25 ***** | 60' ***** |
| Solar facility, commercial | 1 acre | | 200 | 50 | 50 | 50 | 30' |
| Critical digital infrastructure facility | 80,000 | | [200] <u>300</u> | [50 ²] <u>100⁴</u> | [50 ²] <u>100⁴</u> | [50 ²] <u>100⁴</u> | [60] <u>75'</u> |
| Critical digital infrastructure electric substation | 20,000 | | [200] <u>300</u> | [50] <u>100</u> | [50] <u>100</u> | [50] <u>100</u> | 30 |

1 * Equal to the height of structure.

2 ** Minimum 10' green area no parking within area

3 *** For development within the Village Center Zoning District see also §§ 1-19-7.500(B)(2)
4 and (3)

5 **** Or as determined under §§ 1-19-7.500(B)(3), whichever is greater

6 ***** Except as provided in § 1-19-8.450(B)(2) and § 1-19-8.450(D)(1).

7 1 Any proposed addition would have to meet setbacks required for new structures. Parking
8 requirements of §§ 1-19-6.200 through 1-19-6.240.

9 2 As shown or equal to height of structure, whichever is greater.

10 3 Development within the VC zoning district may not exceed the density as specified within
11 §§ 1-19-7.500(B)(1).

12 4 Or twice the height of the structure, whichever is greater.

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§ 1-19-8.402. CRITICAL DIGITAL INFRASTRUCTURE FACILITIES [IN THE LI AND GI DISTRICTS.]

The following provisions apply to critical digital infrastructure [facility in the LI and GI Districts] facilities.

(A) Purpose and intent.

(1) The Critical Digital Infrastructure use is established to provide a location for facilities consisting of one or more buildings 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. The siting of these facilities is dependent upon several factors, including proximity to sufficient electrical power and data conveyance infrastructure.

(B) Size and location.

(1) Critical Digital Infrastructure use may be established only where:

(a) The tract of land where the Critical Digital Infrastructure use is proposed has a zoning designation of Limited Industrial (LI) or General Industrial (GI);

(b) The tract of land where the Critical Digital Infrastructure use is proposed is within a Community Growth Area, as designated on the Comprehensive Plan Land Use map;

(c) The tract of land where the Critical Digital Infrastructure use is proposed is located within 2 miles of existing 69 KV or greater high-voltage electrical transmission lines.

(d) The tract of land where the Critical Digital Infrastructure use is proposed may not abut land that is zoned residential or is designated residential on the Comprehensive Plan Land Use map.

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1 (2) The tract of land proposed to be utilized for a Critical Digital Infrastructure use may
2 not be located within a Priority Preservation Area (PPA), a Rural Legacy Area (RLA),
3 or a Treasured Landscape Management Area.

5 (3) The tract of land proposed to be utilized for a Critical Digital Infrastructure use may
6 not have a designation of No Planned Service (NPS) in the Water and Sewerage Plan.

8 (4) Additional size and location criteria- Applicants must demonstrate the following:

10 (a) The applicant must demonstrate that the visual impact of the project on the
11 viewshed, surrounding properties, public roadways, including roadways with
12 rustic, scenic, or historic designation, and historic sites will be avoided or
13 minimized to the maximum extent practicable.

15 (b) The applicant must demonstrate that schools, college and universities, daycare
16 centers, health care facilities, houses of worship, residences, and other non-
17 industrial uses in the vicinity have been identified and negative impacts to these
18 uses will be avoided or minimized to the maximum extent practicable.

20 (c) The applicant must demonstrate that fragile ecosystems and watersheds in the
21 vicinity have been identified, and negative impacts will be avoided or minimized
22 to the maximum extent practicable.

24 (d) The applicant must demonstrate that negative impacts to local, state, and federal
25 recreational amenities and private parks, as defined in §1-19.11.100, will be
26 avoided or minimized to the maximum extent practicable.

28 (e) The applicant must demonstrate that the siting of the proposed use(s) will not
29 disproportionately negatively impact overburdened communities or underserved

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communities as those terms are defined in Md. Code Ann., Environmental
Article, § 1-701.

~~(A)~~ C Bulk regulations.

(1) The Planning Commission may approve a reduction to, but not elimination of, the required yard setbacks in § 1-19-6.100 between adjoining critical digital infrastructure facilities [in the LI and GI Districts] during the site plan review process, if the Planning Commission finds that reducing the setbacks:

(a) Increases the size and usability of open space areas;

(b) Increases the landscape buffer areas along other adjacent property lines with different land uses;

(c) Provides additional buffer areas for environmentally sensitive areas or resources; or

(d) Facilitates compliance with the design criteria listed under § 1-19-8.402(B).

(2) Notwithstanding any reduction approved by the Planning Commission, the distance between structures must comply with applicable building code requirements.

~~(B)~~ D Design requirements.

(1) Buildings must be predominantly designed and constructed to include finishes and materials of consistent quality and design on all sides. All building facades that are in public view must avoid the use of undifferentiated facades and long, plain wall sections by including a combination of the following design elements: change in building height, building step-backs or recesses, windows, doors, changes in building material, patterns, textures, colors, or use of accent materials. Architectural renderings or plans must be submitted as part of the site development plan application for approval by staff and the Planning Commission to assure that the appearance, type of building materials, or other aspects of the building are consistent with the purposes and intent of the critical digital infrastructure design requirements.

(2) Visual impacts of the critical digital infrastructure on designated preservation areas, such as rural legacy areas, agricultural preservation areas, critical farms, Monocacy scenic river, designated heritage areas, historic sites, and sites eligible for historic designation, must be avoided or minimized to the maximum extent practicable. A viewshed analysis must be submitted as part of the site development plan application for approval by staff and the Planning Commission to assure that visual impacts are avoided or minimized to the maximum extent practicable through such means as building placement, building materials, landscaping, and screening.

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1 ([2] 3) Building entrances must be designed and oriented in terms of their relationship to the
2 human scale and must reflect this relationship through the inclusion of human-scaled
3 architectural elements.

4 ([3] 4) Refuse and recycling dumpsters, service doors, and mechanical equipment must face
5 away from roadways, pedestrian routes, and public areas.

6 ([4] 5) In order to minimize visibility from adjacent roads and adjacent properties, ground
7 level and roof top mechanical equipment, power generators, water cooling and storage facilities,
8 utility substations, and other associated utility infrastructure to support sustained operations of
9 the infrastructure must be screened. This screening may be provided by a principal building.
10 Mechanical equipment not screened by a principal building must be screened by a visually
11 opaque fence, screen wall or panel, parapet wall, or other visually opaque screen that must be
12 constructed of materials compatible with those used in the exterior architectural finishes of the
13 principal building.

14 ([5] 6) Staff shall refer site plans to the Architectural Review Committee, if the committee
15 exists in good standing, for review prior to the site plan being scheduled for Planning
16 Commission. The recommendations of the Architectural Review Committee may be considered
17 by the Planning Commission.

18 ([6] 7) In addition to meeting the requirements of § 1-19.6.400, the following landscaping,
19 screening, and buffering requirements must be met.

20 (a) Front yard(s) abutting a roadway must include a landscaped buffer.

21 (b) Except where adjoining a critical digital infrastructure use, side and rear yards must
22 include a landscaped buffer.

23 (c) A landscaped buffer must include a four-season visual screen resulting in multi-
24 layered, staggered rows of overstory and understory trees and shrubs that are a mix of evergreen
25 and deciduous vegetation, with an emphasis on species that are native to Frederick County.

26 (d) The minimum height of overstory trees within a landscape screen or buffer at planting
27 must be a minimum of 6 feet with a minimum caliper of 2 inches. The minimum height of
28 understory trees and shrubs at the time of planting must be 3 gallon or larger. Trees and shrubs
29 larger than the minimum sizes listed above will be required where the minimum planting sizes
30 will not provide adequate screening or buffering within 2 years. Vegetation used to establish a
31 visual screen shall not be trimmed so as to stunt upward and outward growth or to otherwise
32 limit the effectiveness of the visual screen.

33 (e) A berm, wall, or fence may be used in combination with vegetation to satisfy the
34 screening requirement where deemed appropriate by County Staff and the Planning Commission.
35 Walls and fences must be made of quality materials and enhance rather than detract from the
36 beautification of the site. Walls and fences that are in public view must avoid long,
37 undifferentiated facades and long, plain sections by including a combination of the following
38 design elements: variations in height, step-backs or recesses, changes in material, patterns,
39 textures, colors, or use of accent materials.

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1 (f) If security fencing is proposed, vegetative screening must be placed between the fence
2 and the public view. Fencing must be made of high quality materials. Chain-link and similar
3 woven metal or plastic fencing shall not be used.

4 (g) If forest or hedgerows exist where screening or buffering is required, it must be
5 preserved to the maximum extent practicable and supplemented with new plantings where
6 necessary to provide the desired screening or buffering.

7 (h) All landscaping, screening, and buffering must be maintained in living condition.

8 (i) Applicant must submit a landscape, buffering, and screening plan as part of the site
9 plan application addressing the requirements and timing of plantings. Screening and buffering
10 must be installed as early in the development process as possible. Occupancy shall not be granted
11 if screening and buffering requirements are not installed in accordance with the approved site
12 plan.

13 (j) The Planning Commission may approve a modification to the landscaping, buffering,
14 and screening standards where an alternate landscaping, buffering, and screening plan is
15 provided that meets the purpose and intent of these design requirements.

16 ([7] 8) Parking, loading, and signage must be provided in accordance with § 1-19-
17 6.200 through § 1-19-6.340.

18 ([8] 9) [Lighting must comply with § 1-19-6.500, but light poles must not exceed a height of
19 18 feet. The Planning Commission may require more restrictive lighting heights where deemed
20 appropriate by the Planning Commission.] In addition to meeting the requirements of § 1-19-
21 6.500, the following lighting requirements must be met:

22 (a) Pole mounted and building mounted lights must not exceed a height of 18 feet.

23 (b) Lighting shall include elements that reduce negative impacts to wildlife migration,
24 nocturnal habits, and circadian rhythms, such as the utilization of lights with amber or yellow
25 tints instead of blue or white light and the use of timers, motion detectors, and light-sensitive
26 switches to actively regulate the emission of light from light fixtures.

27 (c) The Planning Commission may require more restrictive lighting standards where
28 deemed appropriate by the Planning Commission.

29 ([9] 10) Bicycle rack requirements shall be in accordance with industrial parks in table § 1-
30 19-6.220 (H)(1).

31 ([10] 11) Critical digital infrastructure facilities must meet all criteria found in §§ 1-19-
32 7.600 and 1-19-7.610.

33 ([C] E) *Subdivision and street frontage.*

34 (1) Subdivision of lot(s) for critical digital infrastructure uses shall comply with Chapter 1-
35 16 of the County Code.

36 (2) Where two or more lots are proposed for critical digital infrastructure uses, the lot
37 frontage requirement of § 1-19-4.520 may be met by construction of a private street subject to
38 Planning Commission approval and the following:

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(a) The lot or parcel from which the new lot is being created has fee-simple frontage on a public street.

(b) The private street connects directly to a public road.

(c) The private street will not serve any uses that would be frequented by the general public.

(d) For the purposes of establishing bulk regulations (setbacks, lot width, etc.), the measurements along the portion of the lot(s) fronting a private street must be the same as established for public streets.

(e) The design of the private street must comply with Chapter 1-16 of the County Code.

(f) Private streets may not create long, dead-end street networks and must serve a limited number of lots and sites, as determined by the Planning Commission.

(g) Private streets must be maintained by a property owner association or similar organization.

(h) Easements, maintenance agreements, and covenants must be provided to the County for review with the submission of a final plat, and must be recorded by the applicant prior to lot recordation and the recording reference noted on the final plat.

[D] E *Performance standards.* These performance standards for critical digital infrastructure facilities are intended to mitigate potential detrimental effects on adjacent properties and the neighborhood. All applications for site plan approval must be accompanied by a registered engineer's certification that the use complies with all of the performance standards. If, after occupancy of the structures, continuous or frequent (even if intermittent) violations of the performance standards occur, and after notice is given, bona fide and immediate corrective work is not performed which successfully prevents the violation(s) from reoccurring, the Zoning Administrator may suspend or revoke the Zoning Certificate and the Certificate of Occupancy and require the operations and occupancy to immediately cease. The Zoning Certificate and Certificate of Occupancy will be reinstated after the property owner demonstrates to the Zoning Administrator's satisfaction, that operation of the facilities is able to conform to these requirements.

(1) *Noise.*

(a) Noise must be measured with a sound level meter.

(b) The maximum sound pressure levels permitted from any source, including but not limited to air handlers, generators, and other mechanical devices, measured within an adjacent property line, are set forth below:

| <i>Sound Measured To</i> | <i>Decibels Continuous Slow Meter Responses</i> |
|--------------------------|---|
| Industrial uses | 70 |
| Commercial uses | 64 |

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|---|----|
| Residential uses in any zoning district | 55 |
| Institutional uses | 55 |
| All other uses | 55 |

(c) All applications for site plan approval must include a sound study that is prepared by a qualified engineer with experience in environmental acoustics. The purpose of the detailed study is to assess the impact of all noise sources and determine the appropriate layout, design, and control measures. The study must include:

1. Details of assessment methodology.

2. List of all air handlers, generators, and other mechanical devices that are included in the sound evaluation, including manufactures specifications.

3. Predicted sound levels for three scenarios:

a. All mechanical and electrical equipment required for normal operation at 100% load.

b. Generator testing and maintenance.

c. Emergency scenario with all generators, mechanical equipment, and electrical equipment operating at 100%.

4. When multiple buildings are proposed on the site plan application, the study must include sound levels for each phase of building construction to ensure that the sound levels listed in the table in (F)(1)(b) above are met during all phases of buildout.

5. Summary of the results and recommended control measures.

(d) Within 6 months of the date of occupancy of any completed CDI building, and bi-annually thereafter, actual sound levels for scenarios a and b listed under (F)(1)(c)(3). above must be measured by a qualified engineer with experience in environmental acoustics and a final sound level report must be submitted to the County for review and approval. If actual sound levels exceed the maximum sound pressure levels listed in (F)(1)(b) above, corrective actions must be executed as soon as reasonably possible, but no later than 180 days from the date of the submission of the report.

[(c) e] The provisions of this section do not apply to:

1. Transportation vehicles not under the control of the use.

2. Occasionally used safety signals, warning devices, and emergency pressure relief valves.

3. Temporary construction activity between 7:00 a.m. and 7:00 p.m.

4. Emergency and o[O]ther exemptions identified in § 1-11-6(F).

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1 [(d) Air handlers, generators, and other mechanical devices must comply with subsection
2 (1)(b) above.]

3 (2) *Vibration.*

4 (a) No vibration may be produced which is transmitted through the ground and is
5 discernible without the aid of instruments at any point beyond the property line; nor may any
6 vibration produce a particle velocity of 2 inches per second measured at or beyond the property
7 line. This provision does not apply between adjoining critical digital infrastructure facilities uses.

8 (b) All applications for site plan approval must include a vibration impact study that is
9 prepared by a qualified individual with experience in vibration analysis.

10 (c) Within 6 months of the date of occupancy of any completed CDI building, and bi-
11 annually thereafter actual vibration levels must be measured by a qualified individual and a
12 vibration report must be submitted to the County for review and approval. If vibration levels
13 exceed the maximum listed in (F)(2)(a) above, corrective action must be taken as soon as
14 reasonably possible but no later than 180 days from the date of the submission of the report.

15
16 (3) *Generators.*

17 (a) Generators must meet or exceed Tier 4 or equivalent emission standards as defined
18 by the United States Environmental Protection Agency.

19 (b) Generator testing shall be limited to Monday thru Friday, 8am to 5pm. Only one
20 generator per building, or the minimum number necessary to meet operational standards, may be
21 tested at a time and for a period not to exceed 60 minutes, unless Federal or State law, rule or
22 regulation, or utility company restrictions prevent testing during such time.

23 (c) Generators must be installed at ground level.

24 (d) Stand-alone Fuel Storage Tanks

25 1. For the purposes of this section, fuel storage includes the storage of all
26 petroleum bases fuels, natural gas liquids, biofuels, and liquids derived from other hydrocarbon
27 sources.

28 2. The storage tank shall be placed above ground with a capacity not to exceed
29 20,000 gallons.

30 3. Only one storage tank is permitted per critical digital infrastructure building.

31 4. The storage tank shall be located a minimum of 100 feet from a well or as
32 provided in § 1-6-50 of the County Code (Wellhead Protection Ordinance), whichever is greater.

33 5. The storage tank shall be governed by the International Fuel Gas Code
34 concerning storage tanks, and the National Fire Protection Association 30 standards.

35 6. Storage tanks shall have 100% catchment basin, or double-walled containment,
36 and a spill protection overfill alarm.

37 7. Shall comply with § 1-6-50 of the County Code (Wellhead Protection
38 Ordinance).

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1 (c) The tract of land where the Critical Digital Infrastructure Electric Substation use is
2 proposed is located within 2 miles of existing 69KV or greater high-voltage electrical
3 transmission lines.

4 (2) The tract of land proposed to be utilized for a Critical Digital Infrastructure Electric
5 Substation use may not be located within a Priority Preservation Area (PPA), a Rural
6 Legacy Area (RLA), or a Treasured Landscape Management Area.

7 (3) The tract of land proposed to be utilized for a Critical Digital Infrastructure Electric
8 Substation use may not have a designation of No Planned Service (NPS) in the Water
9 and Sewerage Plan.

10
11 (4) Additional size and location criteria- Applicants must demonstrate the following:

12
13 (a) The applicant must demonstrate that the visual impact of the project on the
14 viewshed, surrounding properties, public roadways, including roadways with
15 Rustic, scenic, or historic designation, and historic sites will be avoided or
16 minimized to the maximum extent practicable.

17 (b) The applicant must demonstrate that schools, daycare centers, health care
18 facilities, houses of worship, residences, and other non-industrial uses in the
19 vicinity have been identified and negative impacts to these uses will be avoided or
20 minimized to the maximum extent practicable.

21 (c) The applicant must demonstrate that fragile ecosystems and watersheds in the
22 vicinity have been identified, and negative impacts will be avoided or minimized
23 to the maximum extent practicable.

24 (d) The applicant must demonstrate that negative impacts to local, state, and federal
25 recreational amenities and private parks, as defined in §1-19.11.100, will be
26 avoided or minimized to the maximum extent practicable.

27 (e) The applicant must demonstrate that the siting of the proposed use(s) will not
28 disproportionately negatively impact overburdened communities or underserved
29 communities as those terms are defined in Md. Code Ann., Environmental
30 Article, § 1-701.

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2 ([A] B) A critical digital infrastructure electric substation may only be constructed for the
3 purpose of providing power to critical digital infrastructure facilities, and when a critical digital
4 infrastructure facility has received site plan approval from the Planning Commission. An
5 application for a critical digital infrastructure electric substation may be processed concurrently
6 with an application for a critical digital infrastructure facility.

7 ([B] C) A critical digital infrastructure electric substation may be connected to another
8 electrical system within the region. Any expansion of a critical digital infrastructure electric
9 substation for the purpose of supporting other uses or users must follow the rules, regulations,
10 and procedures applicable to nongovernmental electric substation use.

11 ([C] D) An application for a critical digital infrastructure electric substation must include the
12 following:

13 (1) Information indicating the general conditions of use and existing improvements on
14 adjoining properties within a 1,000-foot radius surrounding the subject property.

15 (2) A description of the potential environmental and ecological (including water, air,
16 wildlife, and vegetation) effects of the proposed critical digital infrastructure electric substation
17 on properties in the vicinity of the proposed development.

18 (3) An assessment of the impact on nearby properties from electromagnetic fields to be
19 generated by the critical digital infrastructure electric substation.

20 (4) An assessment of safety and reliability, including provisions for emergency operations
21 and shutdowns.

22 (5) Information as to how the applicant proposes to address the visual impact of the critical
23 digital infrastructure electric substation on designated preservation areas, such as rural legacy
24 areas, agricultural preservation areas, critical farms, Monocacy scenic river, designated heritage
25 areas, historic sites and sites eligible for historic designation.

26 (6) A description of methods to be utilized to mitigate any waste disposal, air quality, visual
27 or noise impacts associated with the development or operation of the critical digital infrastructure
28 electric substation.

29 ([D] E) *Design requirements.*

30 (1) *Landscaping, screening, and buffering.*

31 (a) A landscaped buffer must include a four-season visual screen resulting in multi-
32 layered, staggered rows of overstory and understory trees and shrubs that are a mix of evergreen
33 and deciduous vegetation, with an emphasis on species that are native to Frederick County.

34 (b) The minimum height of overstory trees within a landscape screen or buffer at planting
35 must be a minimum of 6 feet with a minimum caliper of 2 inches. The minimum height of
36 understory trees and shrubs at the time of planting must be 3 gallon or larger. Trees and shrubs
37 larger than the minimum sizes listed above will be required where the minimum planting sizes
38 will not provide adequate screening or buffering within 2 years. Vegetation used to establish a
39 visual screen shall not be trimmed so as to stunt upward and outward growth or to otherwise
40 limit the effectiveness of the visual screen.

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(c) A berm, wall, or fence may be used in combination with vegetation to satisfy the screening requirement where deemed appropriate by County Staff and the Planning Commission. Walls and fences must be made of quality materials and enhance rather than detract from the beautification of the site. Walls and fences that are in public view must avoid long, undifferentiated facades and long, plain sections by including a combination of the following design elements: variations in height, step-backs or recesses, changes in material, patterns, textures, colors, or use of accent materials.

(d) If security fencing is proposed, vegetative screening must be placed between the fence and the public view. Fencing must be made of high quality materials. Chain-link and similar woven metal or plastic fencing shall not be used.

(e) If existing forest or hedgerows exist where screening or buffering is required, it must be preserved to the maximum extent practicable and supplemented with new plantings where necessary to provide the desired screening or buffering.

(f) All landscaping, screening, and buffering must be maintained in living condition.

(g) The Planning Commission may approve a modification to the landscaping, buffering, and screening standards where an alternate landscaping, buffering, and screening plan is provided that meets the purpose and intent of this section.

(h) Applicant must submit a landscape, buffering, and screening plan as part of the site plan application addressing the requirements and timing of plantings. Screening and buffering must be installed as early in the development process as possible. Occupancy shall not be granted if screening and buffering requirements are not installed in accordance with the approved site plan.

(2) Lighting, if provided, must comply with § 1-19-6.500, and light poles shall not exceed a height of 18 feet. The Planning Commission may reduce lighting height(s) where deemed appropriate by the Planning Commission.

(3) *Noise.*

(a) Noise will be measured with a sound level meter.

(b) The following table describes the maximum sound pressure level permitted from any source and measured at any adjacent property line.

| <i>Sound Measured To</i> | <i>Decibels Continuous Slow Meter Responses</i> |
|---|--|
| Industrial uses | 70 |
| Commercial uses | 64 |
| Residential uses in any zoning district | 55 |
| Institutional uses | 55 |
| All other uses | 55 |

Underlining indicates matter added to existing law.

[Single boldface brackets] indicates matter deleted from existing law.

*** - indicates existing law unaffected by bill.

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(c) All applications for site plan approval must include a sound study that is prepared by a qualified engineer with experience in environmental acoustics. The purpose of the detailed study is to assess the impact of all noise sources and determine the appropriate layout, design, and control measures. The study must include:

1. Details of assessment methodology.

2. List of all devices that are included in the sound evaluation, including manufacturers specifications.

3. Predicted sound levels.

4. Summary of the results and recommended control measures.

(d) Within 6 months of the beginning date of operation, actual sound levels must be measured, and bi-annually thereafter by a qualified engineer with experience in environmental acoustics and a sound level report must be submitted to the County for review and approval. If actual sound levels exceed the maximum sound pressure levels listed in (b) above, corrective actions must be executed as soon as reasonably possible, but no later than 180 from the submission of the report.

[(c)e] The following sources of noise are exempt:

1. Transportation vehicles not under the control of the use.
2. Occasionally used safety signals, warning devices, and emergency pressure relief valves.
3. Temporary construction activity between 7:00 a.m. and 7:00 p.m.

(4) *Vibration*. No vibration may be produced which is transmitted through the ground and is discernible without the aid of instruments at any point beyond the property line; nor may any vibration produce a particle velocity of 2 inches per second measured at any point beyond the property line. All applications for site plan approval must include a vibration impact study that is prepared by a qualified individual with experience in vibration analysis. This provision does not apply between adjoining critical digital infrastructure uses.

(5) *Height*. The Planning Commission may approve an increase in the maximum height established in § 1-19-6.100, if it finds the increased height would not have an adverse impact on properties in the vicinity of the proposed critical digital infrastructure electric substation. For each 3-foot increase in the height above the maximum height established in § 1-19-6.100, the required front, side, and rear yards set back measurements must be increased by one additional foot.

(Bill. No. 22-05, 3-15-2022)

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