

**LOWER FREDERICK TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA
ORDINANCE NO. 2026-02**

AN ORDINANCE OF THE LOWER FREDERICK TOWNSHIP BOARD OF SUPERVISORS AMENDING LOWER FREDERICK TOWNSHIP ZONING ORDINANCE (CHAPTER 170) BY ADDING NEW DEFINITIONS; CREATING NEW USES FOR DATA CENTERS AND BATTERY FACILITIES AND SETTING FORTH THE REGULATIONS FOR SUCH NEW USES; BY AMENDING LI-LIMITED INDUSTRIAL ZONING DISTRICT REGULATIONS TO PROVIDE FOR SAID USES AND GENERAL PERFORMANCE STANDARD FOR ALL INDUSTRIAL USES.

WHEREAS, Pennsylvania has experienced a surge in data center construction; and

WHEREAS, data centers, unlike traditional commercial or industrial uses, are utility-intensive, space-consuming facilities which require specific preparations and advanced planning with respect to resource availability to ensure that there is no adverse impact to the public health, safety, and welfare; and

WHEREAS, this surge in data center construction has created needs for large battery storage facilities; and

WHEREAS, land use controls are necessary to ensure that data centers and battery storage facilities do not create an adverse impact to adjacent land uses; and

WHEREAS, the Lower Frederick Township Board of Supervisors has determined that reasonable regulations of data center and battery storage systems uses would support and protect the general health, safety, and welfare of Lower Frederick Township and its citizens.

NOW, THEREFORE, it is hereby **ORDAINED** and **ENACTED** by the Board of Supervisors of Lower Frederick Township, Montgomery County, Pennsylvania, as follows:

ARTICLE I ZONING DEFINITIONS

The following new definitions hereby added to Section 170-8, Definitions, of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township in the appropriate alphabetical location and shall read as follows:

Battery

A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy

electrochemically. For the purposes of this Chapter, batteries utilized in consumer products and/or vehicles are excluded from these requirements.

Battery Energy Storage System (BESS)

A system consisting of batteries, battery chargers, controls, power conditioning systems, and/or associated electrical equipment, assembled together, capable of storing electrical energy in order to supply such energy at a future time.

Battery Management System (BMS)

An electronic regulatory system that manages a BESS by monitoring individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access. A BMS protects batteries from operating outside their safe operating parameters. When potentially hazardous temperatures or other dangerous conditions are detected, the BMS is capable of shutting down the BESS, disconnecting electrical power to the BESS, or/and placing it in a safe condition to prevent the BESS from operating outside safe parameters. The BMS shall generate an alarm and trouble signal for off normal conditions.

Cell

The basic electrochemical unit, characterized by an anode and a cathode, used to receive, store, and deliver electrical energy.

ARTICLE II USE REGULATIONS

A new Section 170-38.6, Data Center, is hereby added to Article III of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township and shall read as follows:

§170-38.6 Data Center

A facility primarily used for the centralized storage, management, processing, and/or transmission of digital data and information, primarily to and from offsite locations, and housing of the equipment necessary for these activities. The facility is occupied primarily by computers and/or telecommunications and related equipment, including supporting equipment. This Use shall also include cryptocurrency mining, blockchain transaction processing, and server farms, but not call centers or manufacturing. Additionally, this Use does not cover facilities containing computers or telecommunications related equipment that is secondary and customarily incidental to an otherwise permitted activity on the property, such as servers associated with an office building. A data center can be a principal use or an accessory use.

- A. A principal use data center shall comply with the following provisions:

(1) Principal use data centers are only permitted by conditional use in the LI-Limited Industrial Zoning District, subject to compliance with the requirements of this Section; this Chapter; all other applicable provisions of the Lower Frederick Code of Ordinances; and all federal, state, and local laws, statutes, ordinances, codes, rules, and regulations.

(2) Dimensional Requirements (in replacement of the LI dimensional regulations)

Minimum site area:	10 acres
Minimum lot width at setback:	250 feet
Maximum impervious surface coverage:	50%
Maximum building coverage:	25%
Minimum setbacks from property lines - site:	200 feet
Minimum setbacks from street lines - site:	100 feet
Minimum setbacks from internal streets:	50 feet
Minimum parking area setback from site boundary:	100 feet
Minimum setbacks from internal streets:	50 feet
Minimum building spacing:	100 feet
Maximum height:	40 feet

(3) All building facades facing public rights-of-way or existing residential uses shall be designed so as to provide the appearance of an office building or similar professional space as opposed to a structure for the storing or logistics of computer and technological equipment. Elevations/renderings of all principal building facades visible from off-site shall be submitted with any zoning or conditional use application.

(4) Access.

(a) The site containing a data center must have direct access to an arterial or a collector street.

(b) The site containing a data center must have two (2) direct public accesses to public streets.

(5) Parking.

(a) The applicant shall provide one (1) parking space per 8,000 square feet of floor area designed and intended to be accessible regularly by employees, or one (1) parking space for every one (1) employee, based upon the maximum number of employees on site during the largest shift, whichever is less.

- (b) In addition, the applicant shall provide two (2) parking spaces for visitors/guests.
 - (c) All parking and idling areas for trucks shall be placed so that a principal data center building screens such areas from any neighboring residential uses or shall be set back a minimum of 400 feet from any existing residential uses.
 - (d) A minimum of one (1) off-street loading space/dock shall be provided for each principal building.
- (6) Buffering and Screening
 - (a) A buffer yard is required in accordance with § 170-15.
 - (b) In addition to the required buffer yard, an eight (8) foot high berm is required where the data center is adjacent to or across a street from a residential zoning district or residential use.
 - (c) A minimum spacing of 500 feet shall be maintained between any data center principal building (or accessory building/structure containing mechanical or electrical equipment not normally found in a dwelling or office) and the curtilage of an existing residence or institutional residence, school, daycare, hospital, community center, or similar institutional use.
- (7) Sound Impacts.
 - (a) Sound shall be measured 1.5 meters above the ground at all property lines per ANSI S1.13-2020 (American National Standard – Measurement of Sound Pressure Levels in Air). Any study or measurement of sound shall use full spectrum modeling to address low frequency sound.
 - (b) An applicant for a data center shall provide a preliminary sound assessment with its conditional use application for a data center establishing how it will comply with the performance and noise standards set forth in this Chapter and the Township Code. The preliminary sound assessment will be performed by a professional acoustic engineer. Amongst other things, this preliminary sound assessment shall:
 - Include a narrative describing anticipated operational impacts to sound levels;
 - Set forth the sound levels at representative external property boundaries at different times of day;

- Include an octave band analysis;
 - Account for any proposed electrical substations, on-site power generation facilities, and other ASUs that may generate noise;
 - Recommend the sound reducing materials and systems needed to meet the sound/noise limits of this Chapter and the Township Code; and
 - Demonstrate that the proposed data center, ASUs, and other associated uses/activities on the site will not violate the noise and/or performance standards of this Chapter and the Township Code.
- (c) In addition, the applicant shall post financial security with the Township guaranteeing that the sound levels predicted by the preliminary sound assessment will be met. This security shall be in the form of an evergreen letter of credit, bond, cash escrow, or similar guarantee satisfactory to the Township and shall be in an amount equal to ten percent (10%) of the total estimated cost of the project (but not exceed one million dollars (\$1,000,000)), which cost estimate must be approved by the Township. This financial security shall be maintained for the life of the data center.
- (d) An as-built sound assessment shall be conducted six (6) months after the data center is fully operational to show the data center is performing, from a sound standpoint, as predicted by the preliminary sound assessment and as testified to/asserted by the applicant and its representatives during the conditional use hearing and land development approval process. The Township shall have this assessment generated on its behalf by a professional acoustic engineer selected by the Township, at the expense of the applicant.
- (e) If the as-built sound assessment shows the data center is not performing as predicted, the applicant shall undertake all of the necessary physical improvements to the site and the structures located thereon and/or changes in the operation of the site to bring the data center into compliance with the preliminary sound assessment and the assertions made by the applicant and its representatives during the conditional use hearing and land development approval process. Such necessary improvement/changes shall be determined by the professional acoustic engineer who prepared the as-built sound assessment.
- (f) If the applicant fails to undertake the necessary physical improvements/operational changes mandated by subsection (e) above, the Township, after providing the applicant with written notice to cure this failure within thirty (30) days, may use funds in the

financial security to undertake the physical improvements determined necessary to address these sound issues and/or may order the shut down of any portion of the data center which is not performing as predicted until such under-performance is addressed.

- (g) If at any time during the operation of the data center, the Township has evidence that the data center is no longer performing in conformance with the preliminary sound assessment, the Township may undertake a new sound assessment and demand corrective action when necessary, in accordance with subsections (d), (e), and (f) listed above.
 - (h) Notwithstanding the foregoing provisions of this Section, all sound produced by: (i) required periodic testing of data center equipment, and (ii) emergency use of ASU during a power outage is exempt from this Section. In case of a power outage, the data center operator must re-establish compliance with the noise provisions listed herein within three (3) hours of the restoration of power.
- (8) Thermal Impacts. An applicant for a data center shall provide a thermal impact plan with its conditional use application for a data center which shall include the following. This plan shall be prepared and certified by a professional engineer.
- (a) Identification of primary sources of waste heat (equipment, ASUs, buildings, etc.) and whether the dissipation of such waste heat is air and/or water based).
 - (b) Evaluation of potential off-site thermal impacts (including plume/heat discharge and localized heat islands) under representative seasonal conditions.
 - (c) Identification and evaluation of feasible opportunities for waste heat reuse, and when applicable, explanation of why such reuse is not feasible.
 - (d) Identification and description of design/operational measures employed to mitigate and minimize heat impacts (e.g., vegetative or green roofs, equipment siting, shielding, landscaping, cool roofs/paving, site design modifications, etc.), where applicable.
 - (e) Identification and evaluation of possible alternative mitigation/minimization measures not being employed onsite.
- (9) Energy and Sustainability.

- (a) Projects shall be designed and constructed to meet the current USGBC LEED BD+C: Data Centers rating system, or equivalent design standard, as approved by the Township Engineer.
- (b) An applicant for a data center shall provide an Energy Usage Plan (EUP) with its conditional use application for a data center. The EUP shall provide or identify, at a minimum :
 - [1] Annual electricity demand.
 - [2] Energy supply sources that will be utilized.
 - [3] Energy storage capacity (if applicable).
 - [4] Proposed sources of back-up power.
 - [5] Documentation of efforts to maximize use of renewable and/or clean energy for all electrical and cooling needs, including those which:
 - [a] Reduce the need for new electric generation by incorporating the best available energy efficiency into the design of data center servers, cooling units, and the building structure.
 - [b] Cover unused roof and exterior wall space with solar arrays to offset a portion of the demand on the electric grid and reduce onsite emissions.
 - [c] Explore battery storage as a backup energy source for 50-100% of total onsite back-up energy.
 - [d] Support off-site renewable energy generation through a power purchase agreement or other arrangement.
 - [e] Monitor and report energy efficiency and emissions data to the Township on an annual basis.
 - [6] If interconnecting to the energy grid, documentation of the energy utility interconnection approval process, including proof of the following:
 - [a] An application for the project has been filed with the electric utility provider, and the required fee has been paid.

- [b] A transmission security agreement has been received by the applicant and signed by all necessary parties.
 - [c] The date proposed by the electric utility provider for the energization of the data center.
- [7] The EUP will be prepared and certified by a professional engineer and shall be subject to review and comment by the Township. At its discretion, the Township may require the submitted EUP be supplemented or amended prior to any zoning approval.
- (c) A proposed Data Center whose EUP shows power demand of over 50 megawatts and that proposes to connect to the power grid shall be required to procure a minimum of 10% of its power from renewable generation sources (solar, wind, hydroelectric, geothermal, and waste heat) located within the PJM region. This requirement shall be met by the actual procurement of power to be used onsite through a power purchase agreement or similar mechanism as opposed to purchasing renewable energy credits (RECs).
- (d) The applicant shall integrate renewable energy systems, waste heat recovery, and water reuse systems into the project where feasible, as determined by the Township Engineer.
- (e) To the maximum extent technically feasible, as determined by the Township Engineer, the following surface areas relating to data centers shall be utilized for the generation of solar energy:
 - [1] Roof surfaces. 100% of the available unshaded roof area of all buildings with a roof area of 2,500 square feet or larger shall be equipped with a rooftop-mounted solar photovoltaic system in accordance with § 170-38.2.
 - [2] Parking and loading areas. All off-street parking spaces shall be sheltered by carports or canopy structures which must be fully covered by solar photovoltaic systems in accordance with § 170-38.2. Such carports/canopies shall maintain a minimum vertical clearance of at least fourteen (14) feet for emergency vehicle access where necessary.
 - [3] Vertical integration (solar walls). Building facades that face an eastern direction (from 45° up to 135°), southern direction (from 135° up to 225°), or western direction (from 225° up to and including 315°) shall incorporate building-integrated

photovoltaics ("BIPVs") in accordance with § 170-38.2. BIPVs may include solar siding, solar glass, or architectural solar louvers. BIPVs must cover no less than forty percent (40%) of such wall surface area.

(10) Conditional Use Standards for Data Centers

- (a) Data centers shall be permitted by conditional use when approved in compliance with the procedures, standards, and criteria contained herein.
- (b) Master Plan. The applicant for a data center shall submit a master plan, as described herein, covering all of the lots making up the site for the proposed data center. Once the Master Plan is submitted, lots may only be added or removed from the Master Plan by approval of the Township.
- (c) The Master Plan shall contain/illustrate the following:
 - [1] The location of all proposed uses, principal buildings, ASUs, utilities, energy generation stations, fuel supply, substations, cooling and heating equipment, water supply, storage and management systems, wastewater treatment systems, waste disposal systems, buffers, screening, landscaping, stormwater facilities, and all other infrastructure of any kind construct/installed upon and improvements to the site related in any way to the proposed data center.
 - [2] The location of all existing and proposed public and private roadways, trails, sidewalks, site access, emergency access, access roads, parking areas, and any other transportation facilities and improvements.
 - [3] All natural resources, including, but not limited to, conservation areas, floodplains, water bodies, wetlands, riparian areas, hydric soils, steep slopes, woodlands, and farmland; and any and all proposed changes/alterations thereto.
 - [4] Compliance with all dimensional requirements, including, but not limited to setbacks, building coverage, impervious surfaces, and building height.
 - [5] A boundary and topographic survey plan signed and sealed by a Pennsylvania-licensed surveyor.

- [6] A map of residences within 1,000 feet of the site of the proposed data center.
- [7] Proposed traffic information. Traffic information shall include the number of employees expected per shift, and the frequency and volume of any anticipated truck traffic after construction is completed. The trip generation for these items shall be provided using the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual.
- [8] Estimated economic impact. A good faith estimate of the costs incurred to the Township related to infrastructure, emergency preparedness, administrative activities, police, and fire protection shall be provided and itemized. Additionally, a good faith estimate of the revenues generated by the data center shall be provided as well. The revenue estimate shall include revenues generated from real estate sales, real estate taxes, and income taxes collected by the Township, School District, and County.
- [9] The proposed plan may be amended to comply with federal, state, and local laws, statutes, ordinances, codes, rules, and regulations throughout the land development process, including revisions to the foregoing.

B. Data centers may be designed, located, and employed as an accessory use to principal commercial or industrial land uses and shall be permitted by right in any zoning district its associated principal use is a permitted use. An accessory data center shall be located in the principal building/structure or an accessory building/structure. Accessory data centers shall comply with the following:

- (1) Accessory data centers include microdata centers and modular data centers and shall solely serve to handle the onsite digital data needs of the principal use it is accessory to. Any data center, regardless of size or location, that hosts/stores data for customer/users of the data center's owner/operation or any other third party shall be considered a principal use and required to meet all of the regulations imposed upon a principal use data center.
- (2) An accessory data center shall not exceed 5,000 square feet in floor area or 20% of the floor area of its principal use, whichever is smaller.
- (3) Dimensional Requirements. An accessory data center located within the same building as the principal use shall comply with all the dimensional requirements applicable to such principal use. An accessory data center located in an accessory building or structure shall meet all of the

dimensional requirements applicable to a principal data center (§ 170-38.6.A).

- (4) **Buffering and Screening.** An accessory data center located within the same building as the principal use shall comply with all the buffering and screening requirements applicable to such principal use. An accessory data center located in an accessory building or structure shall meet all of the buffering and screening requirements applicable to a principal data center (§ 170-38.6.A).

- (5) **Sound Impacts.**

- (a) Sound shall be measured 1.5 meters above the ground at all property lines per ANSI S1.13-2020 (American National Standard – Measurement of Sound Pressure Levels in Air). Any study or measurement of sound shall use full spectrum modeling to address low frequency sound.

- (b) An applicant for a data center shall provide a preliminary sound assessment with its conditional use application for a data center establishing how it will comply with the performance and noise standards set forth in this Chapter and the Township Code. The preliminary sound assessment will be performed by a professional acoustic engineer. Amongst other things, this preliminary sound assessment shall:

- Include a narrative describing anticipated operational impacts to sound levels;
- Set forth the sound levels at representative external property boundaries at different times of day;
- Include an octave band analysis;
- Account for any proposed electrical substations, on-site power generation facilities, and other ASUs that may generate noise;
- Recommend the sound reducing materials and systems needed to meet the sound/noise limits of this Chapter and the Township Code; and
- Demonstrate that the proposed data center, ASUs, and other associated uses/activities on the site will not violate the noise and/or performance standards of this Chapter and the Township Code.

- (c) An as-built sound assessment shall be conducted six (6) months after the data center is fully operational to show the data center is performing, from a sound standpoint, as predicted by the preliminary

sound assessment. The Township shall have this assessment generated on its behalf by a professional acoustic engineer selected by the Township, at the expense of the applicant.

- (d) If the as-built sound assessment shows the data center is not performing as predicted, the applicant shall undertake all of the necessary physical improvements to the site and the structures located thereon and/or changes in the operation of the site to bring the data center into compliance with the preliminary sound assessment. Such necessary improvement/changes shall be determined by the professional acoustic engineer who prepared the as-built sound assessment. If the applicant fails to undertake the necessary physical improvements/operational changes mandated by this subsection, the Township, after providing the applicant with written notice to cure this failure within thirty (30) days, may order the shut down of any portion of the data center which is not performing as predicted until such under-performance is addressed.
 - (e) If at any time during the operation of the data center, the Township has evidence that the data center is no longer performing in conformance with the preliminary sound assessment, the Township may undertake a new sound assessment and demand corrective action when necessary, in accordance with subsection (d) listed above.
 - (f) Notwithstanding the foregoing provisions of this Section, all sound produced by: (i) required periodic testing of data center equipment, and (ii) emergency use of ASU during a power outage is exempt from this Section. In case of a power outage, the data center operator must re-establish compliance with the noise provisions listed herein within three (3) hours of the restoration of power.
- (6) **Energy and Sustainability.** The applicant shall integrate renewable energy systems, waste heat recovery, and water reuse systems into the project where feasible, as determined by the Township Engineer.

ARTICLE III USE REGULATIONS

A new Section 170-38.7, Battery Facility, is hereby added to Article III of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township and shall read as follows:

§170-38.7 Battery Facility

- A. A facility primarily used to house a Battery Energy Storage System (BESS) which provides secondary containment to battery cells. This Facility may also be

equipped with cooling, ventilation, fire suppression, and/or a Battery Management System (BMS).

(1) There are two types of Battery Facilities - Tier 1 and Tier 2.

(a) Tier 1 Battery Facilities have an aggregate energy capacity less than or equal to Eighty (80) kWh and, if in a room or enclosed area, consist of only one (1) BESS. Where a Tier 1 Battery Facility provides power to a one- or two-family residential dwelling and is located on the same lot as the residential building, such Tier 1 Facility shall not have an aggregate energy capacity that exceeds:

[1] Forty (40) kWh when located within the residential structure, including, but not limited to, utility closets, storage/utility spaces, and basements.

[2] Eighty (80) kWh when located in attached/detached garages, detached accessory structures, upon exterior walls or roofs, or anywhere else on the exterior of the residence.

(b) Tier 2 Battery Facilities have an aggregate energy capacity greater than Eighty (80) kWh or are comprised of more than one (1) BESS in a room or enclosed area.

(2) All battery facilities must comply with all the regulations generally applicable to such facilities set forth in this Chapter; all other applicable provisions of the Township Code; and all applicable federal, state, and local laws, statutes, ordinances, codes, rules, and regulations, especially safety regulations and requirements, including applicable building codes, applicable industry standards, and NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems", as amended.

(3) Tier 1 Battery Facilities are considered accessory uses and are permitted in all zoning districts. These facilities must be located on the same lot as the principal use they are accessory to and can only supply energy to this principal use and cannot sell power back to the grid. In addition to complying with the standards imposed on its principal use, a Tier 1 Battery Facility must comply with the following dimensional standards:

Minimum setback from property lines: 20 feet

Minimum setback from neighboring structures: 50 feet

(4) Tier 2 Battery Facilities are only permitted by conditional use in the LI Limited Industrial Zoning District, subject to compliance with the requirements of this Chapter; all other applicable provisions of the Township

Code; and all applicable federal, state, and local laws, statutes, ordinances, codes, rules, and regulations.

(5) Dimensional Requirements for Tier 2 Battery Facilities (in replacement of the LI dimensional regulations)

Minimum site area:	5 acres
Minimum lot width at setback:	250 feet
Maximum impervious surface coverage:	50%
Maximum building coverage:	25%
Minimum setback from property lines - site:	200 feet
Minimum setback from street lines - site:	100 feet
Minimum setback from internal streets:	50 feet
Minimum setback from neighboring structures:	500 feet
Minimum parking area setback from site boundary:	100 feet
Minimum building spacing:	100 feet
Maximum height:	35 feet

(6) Parking for Tier 2 Battery Facilities.

- (a) The applicant shall provide one (1) parking space per 8,000 square feet of floor area designed and intended to be accessible regularly by employees, or one (1) parking space for every one (1) employee, based upon the maximum number of employees on site during the largest shift, whichever is more.
- (b) In addition, the applicant shall provide two (2) parking spaces for visitors/guests.
- (c) All parking and idling areas for trucks shall be placed so that a principal building screens such areas from any residential uses or shall be set back a minimum of 400 feet from any existing residential uses.
- (d) A minimum of one (1) off-street loading space/dock shall be provided for each principal building.

(7) A buffer yard is required for a Tier 2 Battery Facility in accordance with Section 153-60(c)

(8) In conjunction with the Conditional Use Application, the applicant for a Tier 2 Battery Facility must provide the Township with all of the following:

- (a) An operations agreement setting forth the operations parameters, the name and contact information of the operator, the applicant's

inspection protocol, emergency procedures, and general safety documentation.

- (b) A site plan that includes all proposed structures and the location of all equipment, as well as all setbacks, the location of property lines, signage, fences, buffering and screening, drainage facilities, easements, floodplains, bodies of water, proposed access routes, and road rights of way. The site plan must be drawn to scale and must indicate how the Battery facility will be connected to the power grid.
 - (c) A copy of the applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Battery Facility.
 - (d) Proof of compliance with all applicable DEP regulations.
- (9) Special Safety Provisions.
- (a) Any battery facility containing a BESS that uses lithium or lithium-ion batteries shall be required to install an automatic fire suppression system designed to suppress lithium and lithium-ion fires. The design and installation of the aforementioned fire suppression system shall comply with the Township's Building and Fire Codes and shall be done to reasonable satisfaction of the Township.
 - (b) If a Tier 2 Battery Facility requires specialized fire suppression tools, equipment, vehicles, or training which the fire companies covering the Township do not possess, the Facility, at its sole cost, shall acquire such tools, equipment, and/or vehicles and train the members of the local covering fire companies on the use and deployment of such specialized tools, equipment, and vehicles, as well as, generalized training on fighting battery facility fires. The Facility may donate such tools, equipment, and vehicles to the local covering fire companies or store them onsite in safe locations accessible to and useable by the covering fire companies. The Facility shall provide the necessary training on an annual basis or as recommended by the appropriate authorities.
 - (c) A battery facility is required to continuously comply with subsections (a) and (b) above in light of changing technology, changes in operations, installation of new equipment or structures, or other factors.

- (d) All battery facilities are prohibited in or on watercourses, floodplains, floodplain soils, wetlands, lakes & ponds, riparian buffers, wetland margins, and lake & pond shorelines.
- (e) All battery facilities shall be configured so that the cells are placed in a BESS with a BMS. The BESS shall provide a secondary layer of physical containment to the cells and be equipped with cooling, ventilation, and fire suppression systems. Each individual cell shall have 24/7 automated fire detection and extinguishing technology built in. The BMS shall monitor individual battery module voltages and temperatures, container temperature, and humidity, off-gassing of combustible gases, fire, ground fault and DC surge, and door access. The BMS shall be able to quickly, automatically, and independently shut down the cell, BESS, and/or Facility before thermal runaway takes place.
- (f) All battery facilities shall erect light-reflective signage at the entrances to the site, as well as all exterior entrances to the Facility. Said signage shall include the following information: the type of technology associated with the Facility; any special hazards associated with the Facility and/or the equipment contained therein; the type of suppression system installed in the area of the BESS; 24-hour emergency contact information, including reach-back phone number. Additionally, disconnect and other emergency shutoff information shall be clearly displayed on this signage.
- (g) Access to all batteries and electrical switchgear shall be from the exterior for normal operation and maintenance. Access to the container interior of a BESS shall not be permitted while the system is in operation except for safety personnel and first responders.
- (h) Tier 2 Battery Facilities must be enclosed by perimeter security fencing with a self-locking gate or other Township-approved barrier with a minimum height of at least six (6) feet unless housed in a locked building. The use of barbed wire or razor wire that runs along the top of chain linked fences is permitted. Existing perimeter fencing or Township-approved barriers can be used if they meet the above requirements.
- (i) Areas within thirty (30) feet of a building or structure containing a BESS for a Tier 2 Battery Facility shall be cleared of combustible vegetation and other combustible growth. Cultivated ground cover, such as green grass, ivy, succulents, or similar plants used as ground covers are allowed, provided that they do not form a means of readily transmitting fire.

ARTICLE IV

INDUSTRIAL REGULATIONS

Section 170-81 of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township is amended by changing existing subsection F and adding a new subsection G, which new subsections shall read as follows: ,

- F. Data Centers and Tier 2 Battery Facilities, in accordance with §§ 170-38.6 and 170-38.7, respectively.
- G. Uses of similar nature to the above permitted uses listed in §§ 170-80 and 170-81.

ARTICLE V

INDUSTRIAL REGULATIONS

Subsection 170-83.G of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township and shall read as follows:

- G. All industrial uses shall be designed and operated in a manner that minimizes noise, vibration, fumes, odors, light spillover, heat emissions, and other environmental impacts; and ensures reliable utility service without adverse impacts to surrounding uses. All such uses shall comply with the performance standards of § 170-33 of this chapter.

ARTICLE VI

INDUSTRIAL REGULATIONS

The following subsections are hereby added to Section 170-83 of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township and shall read as follows:

- K. Accessory Structures and Uses (ASU). The following activities, equipment, and structures are allowed in conjunction with the uses listed in §170-80.A, B, C, D, & E or §170-81.A, B, C, & D. All such ASU must be located on the same site as the principal use/development they serve/support/are ancillary to.
 - (1) Limited accessory office space for administrative functions directly related to facility operations, but shall not include accommodations primarily used for office work or retail sales.
 - (2) Logistical, storage, and security buildings or structures.
 - (3) Redundant/backup sources of electrical power, such as generators, solely used to provide temporary power when the main source of power is interrupted.
 - (4) Electrical substations; utility lines; domestic and non-contact cooling water and wastewater treatment facilities; water holding facilities; pump stations;

water towers; air conditioning or cooling towers; and similar utility systems necessary for the operation of the principal use.

- (5) Fire detection, alarm, control, and suppression equipment.
- (6) Environmental controls, such as emission controls, noise pollution controls, environmental impact monitoring, etc.

L. Access.

- (1) All industrial sites shall have direct access to an arterial or a collector street.
- (2) All industrial sites shall provide two (2) adequate means of ingress and egress to the site suitable for emergency access.
- (3) Any gated access route shall be fitted with a "knox-box" type of device to facilitate the opening of any gate during an emergency by emergency responders.

M. Environmental Impacts. The design, development, and operation of all industrial uses and development shall comply with § 170-33, Performance standards, and § 170-41.1, Natural resource protection standards, of the Lower Frederick Code of Ordinances.

N. Utilities and Infrastructure.

(1) Utility Review

- (a) The applicant shall provide to the Township a written assessment of the potential electrical, water, and/or sewer consumption of the proposed industrial use/development which ensures that there is sufficient capacity available to serve such use/development as well as the projected service needs for future growth. This assessment shall be undertaken by a certified professional in the field of engineering and utility design.
- (b) If the above-mentioned assessment identified a detrimental impact or threshold where utility capacity is not sufficient, the applicant shall provide, at its own expense, all the system improvements needed to mitigate any limits or system constraints to accommodate the proposed use/development. Such needed system improvements shall conform to all specifications, procedures, and timelines required for the public utility and the Lower Frederick Code of Ordinances. If the needed system improvements are determined by both the Township Engineer and the respective public utility

providers to be infeasible, then on-site utility methods may be considered, if developed in compliance with the Township Code.

- (c) To the extent practical, all utility lines, including, but not limited to, electronic, fiber optic, cable, and telephone lines, shall be placed underground. On-site power lines of 34.5 kV and below shall be buried. This requirement shall not apply if the utility company requires above-ground lines, or the placement of underground lines is not feasible or poses a danger.

(2) Water:

- (a) No industrial use/development shall use private groundwater wells or direct withdrawals from surface watercourses as its primary source of water for cooling purposes if a public water source is available.
- (b) If the proposed industrial use/development will be served by a public water supply, the applicant shall submit documentation from the public authority/private utility certifying that the authority/utility can and will supply the water needed.
- (c) The applicant shall submit an analysis of raw water needs (groundwater or surface water) from either private or public sources, indicating quantity of water required.
- (d) If the use/development is to rely upon nonpublic sources of water, the applicant shall provide a water feasibility study. The purpose of the study is to determine if there is an adequate supply of water for the proposed use and to estimate the impact of the use on existing wells, groundwater, and surface waters in the vicinity. No industrial use/development shall be approved unless the water feasibility study demonstrates that the anticipated water supply yield is adequate for the project and that the proposed water withdrawals and discharges will not endanger or adversely affect the quantity or quality of groundwater supplies or surface waters in the vicinity. The water feasibility study shall include the following information, at a minimum:
 - The projected water demands of the industrial use/development;
 - The source of water to be used;
 - A description of how water will be used, including the amount or proportion of water to be used for each purpose (e.g., cooling, humidity control, fire suppression, and domestic usage);

- Based on the geologic formation(s) underlying the site, historical data, and weather patterns, the long-term safe yield of the water source;
 - A description of the amount or portion of water withdrawn that will be recycled or discharged, by what means, and to what areas;
 - A geologic map of the area with a radius of at least one (1) mile from the site;
 - The location of all existing and proposed wells within 1,000 feet of the property boundary, with a notation of the capacity of all high-yield wells;
 - The location of all surface waters, including perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries, within 1,000 feet of the property boundary;
 - The location of all known point sources of pollution within 1,000 feet of the site;
 - A determination of the effects of the proposed water supply system on the quantity and quality of water in nearby wells, surface waters, and the groundwater table;
 - A drought response plan to demonstrate compliance with state, water supplier, and local drought declaration requirements; and
 - A statement of the qualifications and the signature(s) of the person(s) preparing the study.
- (e) The applicant shall provide proof of review and approval from the Delaware River Basin Commission (DRBC) for projects that have water withdrawals of ten thousand (10,000) gallons per day (gpd) or more, over a thirty (30) day average, from any source or combination of sources within the Delaware River Basin.
- (f) Cooling systems utilizing water shall incorporate closed-loop or water-efficient technology, and any discharge shall meet DEP standards. An applicant may propose an alternative cooling system, if it demonstrates, to the satisfaction of the Township Engineer, that such alternative system will use less water and energy than closed-loop systems.
- (g) The applicant shall enter into a thirty (30) year Well Depletion Agreement with the Township and post a minimum of \$100,000.00 in financial security in conjunction with such Agreement, in accordance with the requirements of § 170-38.4 (except concerning the length of the Agreement and amount of security).

(3) Wastewater and Sewer.

- (a) The applicant shall demonstrate that adequate means of wastewater disposal, including domestic wastewater and wastewater used for cooling or industrial purposes, have been provided and approved by the Sewage Enforcement Officer and/or the DEP.
- (b) Any untreated wastewater generated by the industrial use/development is prohibited to be discharged to stormwater systems or surface waters.
- (c) If wastewater will be conveyed and/or treated by a public system, the applicant shall submit documentation from the accepting public authority/private utility that the authority/utility has the available capacity to provide the wastewater conveyance and treatment needed by the proposed use/development.
- (d) If the industrial use/development is to rely upon a private system of wastewater disposal, a wastewater feasibility study shall be required. The purpose of the study is to determine if there is an adequate capacity to dispose of wastewater and that the disposal technique does not pose adverse impacts on surrounding water bodies. A wastewater feasibility study shall include the following information at a minimum:
 - Calculations of the projected wastewater to be generated, including the sources of such wastewater;
 - A geologic map of the area with a radius of at least one (1) mile from the site;
 - The location of all existing and proposed wells within 1,000 feet of the property boundary, with a notation of the capacity of all high-yield wells;
 - The location of all surface waters, including perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries, within 1,000 feet of the property boundary;
 - The location of all known point sources of pollution within 1,000 feet of the site;
 - Identification of the process by which wastewater will be recycled or released into surrounding land and/or water bodies;

- A determination of the effects of the proposed disposal of wastewater on the quantity and quality of water in nearby wells, surface waters, and the groundwater table; and
- A statement of the qualifications and the signature(s) of the person(s) preparing the study.

(4) Power Supply and Broadband

- (a) All industrial uses/developments shall demonstrate adequate electrical and broadband capacity without adverse impact to the Township's or regional grid reliability.
- (b) If the applicant proposes to connect the industrial use/development to the electric grid, the applicant shall provide documentation from the applicable electric service provider certifying that the necessary capacity is available, and that electric service provider will serve the use. Known impacts on electric rates or availability for other uses directly attributable to the proposed use shall be noted.
- (c) Every industrial use/development shall be designed and operated so that the service lines, substation, etc., shall conform to the most acceptable safety requirements recognized by the Pennsylvania Bureau of Labor and Industry.
- (d) Emergency backup power systems must comply with all applicable state and federal regulations. Backup generator testing shall be limited to weekdays between 8:00 am. and 6:00 pm. and shall not exceed one (1) hour per week per unit. All diesel generators shall only be used for emergency backup power and must meet Tier 4 emission standards of the U.S. Environmental Protection Agency. Emergency backup power systems shall not be used for "peak shaving" purposes or for supplying power to the grid. Emergency energy generation systems shall be designed and located to limit noise and visual impacts as much as possible, as determined by the Township Engineer.
- (e) On-site electricity generation devices or systems shall be designed for "behind-the-meter" consumption separate from the power grid in order to reduce or offset the industrial use's consumption of electricity from the power grid. If designed and operated in this fashion, such devices or systems shall be considered ASUs.
- (f) Any energy generation system, including, but not limited to, fuel cell, solar, wind, and fossil fuel energy generating systems, designed or used to supply power to the grid, in addition to directly supplying power to an associated industrial use/development, shall not be

considered part of or an ASU to this industrial use/development. Such systems shall be considered a separate principal use and shall be approved according to the zoning regulations applicable to such use. Moreover, any excess power fed back into the power grid shall be done in accordance with the public electricity supplier's and Pennsylvania Public Utility Commission's ("PUC") regulations and guidelines.

O. Emergency Management.

- (1) The applicant shall ensure the site and facility is designed and constructed to provide:
 - (a) Sufficient disconnect and shutdown capability, including a master kill switch where possible;
 - (b) Adequate water sources and fire suppression appliances for responders, as well as drainage for water runoff;
 - (c) System-appropriate sensors, interlocks, controls, and alarms;
 - (d) Emergency lighting and communication systems;
 - (e) Air ventilation and fire suppression systems;
 - (f) Adequate radio coverage for emergency responders within all on-site buildings and facilities;
 - (g) Adequate access/egress for the first responders; and
 - (h) Adequate facility signage concerning systems, chemistry, hazardous materials, emergency procedures and routes, and emergency contact information.
- (2) All applicants shall submit an Emergency Response Plan (ERP) to the Township and local emergency services outlining response procedures for fire, electrical, and hazardous material incidents. The ERP shall be prepared by a qualified professional; developed in collaboration with technical experts and first responders; utilize technology-appropriate best practices; and shall address and/or contain the following:
 - (a) System-specific emergency response plans, including detailed plans, schematics, and procedures for shutting down the facility as a whole and its component parts;

- (b) Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;
- (c) Description of what measures will be used to reduce the risk of fires re-igniting (i.e., implementing a "fire watch");
- (d) Identification of the water sources that will be available for the local fire department to protect the facility and adjacent properties;
- (e) Identification and description of a system for continuous monitoring of the facility and early detection sensors;
- (f) Detailed procedures for fire suppression; containment; ventilation; evacuation; and all other measures that will be implemented to prevent, detect, control, and suppress fires and explosions;
- (g) Procedures to be followed in response to system notifications, that when provided, could signify potentially dangerous conditions;
- (h) Location of accessible safety data sheets;
- (i) Procedures for dealing with equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove such damaged equipment from the facility;
- (j) An evaluation of the access roads and hydrant locations within the site to ensure suitable access for emergency equipment within the site;
- (k) Procedures and schedules for conducting drills, and for training local first responders, on the contents of the ERP, the type of system, potential hazards and risks, and system-specific emergency response plans; so as to ensure that all first responders receive adequate training specific to the use and the structures, equipment, materials, and operations located, employed, stored, and/or run on site;
- (l) Provisions for annual fire safety inspections demonstrating compliance with fire safety standards to be performed by a qualified professional on behalf of the industrial use;
- (m) Procedures for inspecting and testing of system-appropriate sensors, interlocks, controls, and alarms;

- (n) Any and all other practices as recommended by experts or local first responders; and
 - (o) Other procedures and information as determined necessary by the Township to provide for the safety of occupants, neighboring properties, and emergency responders; and to provide, to the greatest extent practicable, maximum protection of the health, safety, and welfare of the general public.
- (3) The ERP shall be reviewed and approved by the local fire department and emergency management services. Upon approval of the project by the Township, the approved ERP shall be given to the owner/operator of the facility/site, the local fire department covering the site, and the Township's fire code official. A permanent copy shall also be placed in an approved location on site to be accessible to facility personnel, fire code officials, and emergency responders.
- (4) Any industrial use/development proposing battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time, whether the energy is stored for use on-site or off-site, shall:
 - (a) Demonstrate compliance with National Fire Protection Association (NFPA) Standard 855, Installation of Stationary Energy Storage Systems, or similar standards;
 - (b) Comply with the applicable rules and regulation of this Chapter for such facilities;
 - (c) Include in the ERP a safety plan specific for such storage systems; and
 - (d) Must have fire suppression systems designed specifically for battery storage.
- (5) The industrial use/development shall annually recertify the ERP and allow for a site inspection by the Township and fire officials to identify any emergency response vulnerabilities and to identify compliance with the ERP.
- (6) No industrial use/development shall be approved unless the applicant demonstrates that it has designed and provided adequate emergency access, truck turning, fire suppression, fire hydrant availability on the site; and that the procedures for fire suppression, containment, ventilation, and evacuation are sufficiently protective of public health, safety, and welfare.

- (7) Each vehicular access point, including emergency access routes, to a site and/or lot housing an industrial use/development shall provide signage detailing the 24-hour emergency contact for the site and each industrial use/development located thereon, including name and 24-hour phone number, and include the following:
- Company Name (if applicable);
 - Owner's and/or representative's name;
 - Owner's and/or representative's street and email addresses;
 - Owner's and/or representative's 24 hour emergency contact phone number;
 - Name and address of the supplying power company/utility; and
 - 24 hour emergency contact phone number for the supplying power company/utility.
- (8) Security fencing must be installed around the entire site or if not, around all electrical and mechanical equipment not enclosed within a building. Such security fencing must be at least six (6) high, and appropriate warning signs must be posted at safe intervals on such fencing.

P. Decommissioning. The following decommissioning standards apply to all large industrial uses/developments (those containing a footprint of more than 100,000 square feet of buildings and structures - not including drives, parking lots, and walkways).

- (1) Prior to approval of a large industrial use/development, the applicant shall submit a Decommissioning Plan to the Township detailing procedures for the removal of all the structures, utilities, equipment, ASU, and impervious surfaces from the site and restore the site, if the industrial use/development is abandoned or ceases operation for twelve (12) consecutive months. Said Plan shall be subject to the Township's review and approval and shall contain/address the following, amongst other things:
- (a) A narrative description of the activities to be accomplished for removing the use from service and the physical removal of the associated structures, utilities, equipment, ASU, and impervious surfaces from the site, including who will perform that activity and at what point in time.
 - (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
 - (c) The anticipated life of the large industrial use/development.

- (d) The estimated decommissioning costs and how said estimate was determined.
 - (e) Proposed type and amount of financial security.
 - (f) The method that the decommissioning cost will be kept current.
- (2) In addition, the applicant shall post financial security with the Township guaranteeing the implementation and completion of the Decommissioning Plan in the event that the large industrial use/development is discontinued. This security shall be in the form of an evergreen letter of credit, bond, cash escrow, or similar guarantee satisfactory to the Township and shall be in an amount equal to 110% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. This financial security shall be maintained for the life of the large industrial use/development.
- (3) Every ten (10) years, owner/operator of the large use/development shall retain an independent licensed engineer to re-estimate the total cost of decommissioning in accordance with this Section and attest that the value of the financial security instrument is appropriate. This estimate shall be filed with the Township for its review and approval, and shall be corrected and refiled, if not approved by the Township. The required amount of the financial security shall match the Township-approved, re-estimated cost of decommissioning. Within ninety (90) days of the Township's approval of the re-estimation, the owner/operator shall adjust the financial security to ensure that it matches the approved re-estimated decommissioning cost.
- (4) If a large industrial use/development is abandoned, ceases activity, or is otherwise nonoperational for twelve (12) consecutive months, the owner/operator of the use/development must notify the Township of such and must commence decommissioning of the site within twelve (12) months after the date of abandonment/cessation/ nonoperation. An extension of up to twelve (12) months may be granted by the Township if the owner/operator can demonstrate that it is actively marketing the site for a compatible replacement use. Decommissioning shall be completed within eighteen (18) months of commencement, unless extended by the Township.
- (5) Decommissioning involves and requires:
- Physical removal of the use/development and associated buildings, structures, utilities, equipment, ASU, and impervious surfaces;
 - Removal and disposal of all hazardous materials, including batteries, fuel, or refrigerants in compliance with state and federal law;

- Safe and proper disconnection and capping of any utilities; and
 - Restoration of the site by leveling the surface, covering it with top soil, and revegetation.
- (6) The requirements of this subsection also apply to a large industrial use/development that is never fully completed or operational, if construction has been halted for twelve (12) consecutive months.
- (7) If the owner and/or operator fails to comply with decommissioning upon any abandonment/nonoperation of the large industrial use/development, the Township may, at its discretion, utilize the financial security to remove the use and restore the site in accordance with the Decommissioning Plan.
- Q. **Waivers.** Small industrial uses/developments (those containing a footprint of less than 25,000 square feet of buildings and structures - not including drives, parking lots, and walkways) may request a waiver from the Board of Supervisors to some or all of the Development regulations set forth in this § 170-83. After a public presentation by the applicant supporting such a request, the Board may, at its sole discretion, grant the requested waiver or some portion thereby, and the Board may attach reasonable conditions and safeguards necessary to protect the public health, safety, and welfare. Such a decision by the Board is fully discretionary; shall be final; and is not appealable.

ARTICLE VII INDUSTRIAL USE REGULATIONS

The following new provisions are hereby added to Section 170-84 of Chapter 170, Zoning, of the Code of Ordinances of Lower Frederick Township and shall read as follows:

F. Building and Site Design.

- (1) All building facades facing public rights-of-way, residential zoning districts, or existing residential uses shall:
- (a) Incorporate architectural materials such as masonry, precast concrete, or metal panels designed to minimize visual massing; and
 - (b) Incorporate at least two (2) of the following design elements every 150 horizontal feet:
 - A change in building material, pattern, texture, or color;
 - A change in building height;
 - Building step-backs or recesses having a minimum depth of five (5) feet;

- Building projections, risalits, or avant-corps; and
 - Fenestrations.
- (2) All ASU located outside of a principal building shall be placed so that a principal building screens the ASU from public rights-of-way, residential zoning districts, or existing residential uses.
 - (3) All ASU located outside of a principal building shall be screened from view by walls, fencing, and/or evergreen landscaping.

G. Buffering and Screening

- (1) A buffer yard is required in accordance with § 170-15.
- (2) Any fencing installed for security or screening purposes shall be installed on the interior side of any buffer or berm.
- (3) All exterior mechanical equipment used to provide heating, cooling, ventilating, or other operational needs of the use shall be installed on the ground and screened from all neighboring properties by buildings, so long as such location is technologically feasible and functional.

ARTICLE VIII REPEALER

All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

ARTICLE IX SEVERABILITY

If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality, or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts of this Ordinance. It is hereby declared as the intent of the Board of Supervisors of Lower Frederick Township, that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section, or part thereof not been included therein.

ARTICLE X EFFECTIVE DATE

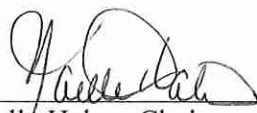
This Ordinance shall become effective upon enactment.

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[Signatures to Follow]

LOWER FREDERICK TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA
ORDINANCE NO. 2026-02
(Data Centers)

ENACTED AND ORDAINED this 21st day of July, 2026, by the
Board of Supervisors of Lower Frederick Township in lawful session duly assembled.

LOWER FREDERICK TOWNSHIP
BOARD OF SUPERVISORS



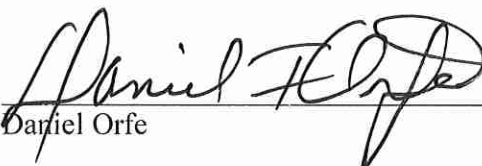
Noelle Halter, Chair



Marla Hexter, Vice Chair



Cristal Gerena

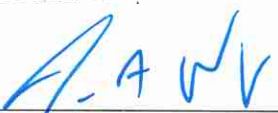


Daniel Orfe



Terry Sacks

ATTEST:

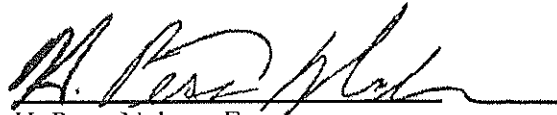


Jason A. Wager, Manager

ATTEST:

I do hereby certify that the foregoing is a true and correct copy of Lower Frederick Township Data Center and Battery Storage Facilities Ordinance which will be considered for adoption by the Lower Frederick Township Board of Supervisors on Tuesday, July 21, 2026.

By:

A handwritten signature in black ink, appearing to read 'H. Peter Nelson', written over a horizontal line.

H. Peter Nelson, Esquire
Lower Frederick Township Solicitor

