



**MEETING OF SEPTEMBER 5, 2023**

**TO:** Mayor Jordan and City Council

**THRU:**

**FROM:**

**DATE:**

**SUBJECT:** .

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**RECOMMENDATION:**

Councilmember Moore is sponsoring an ordinance to address external noise attenuation of data centers and to prevent noise disturbances in the City of Fayetteville. The ordinance contains an emergency clause and would go into effect immediately.

**BACKGROUND:**

**DISCUSSION:**

**BUDGET/STAFF IMPACT:**

**ATTACHMENTS:** Agenda Request - Data Centers and Digital Asset Mining Facilities - Councilmember Moore, AR Municipal League Crypto Mining and Data Center Guidance, Exhibit A - Data Center Regulations

**AGENDA REQUEST FORM**

**FOR: Council Meeting of September 5, 2023**

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**FROM: Council Member Sarah Moore**

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**ORDINANCE OR RESOLUTION TITLE AND SUBJECT:**

**AN ORDINANCE TO AMEND §151.01 DEFINITIONS; § 161.31 DISTRICT I-2, GENERAL INDUSTRIAL; AND § 162.01 ESTABLISHMENT/LISTING; AND TO ENACT § 164.27 DATA CENTERS IN THE UNIFIED DEVELOPMENT CODE TO ADDRESS EXTERNAL NOISE ATTENUATION OF DATA CENTERS AND TO PREVENT NOISE DISTURBANCES IN THE CITY OF FAYETTEVILLE, AND TO DECLARE AN EMERGENCY**

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**APPROVED FOR AGENDA:**

Approved by email

8/9/2023

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**City Council Member  
Sarah Moore**

*Blake Pennington*

8/9/2023

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**Senior Assistant City Attorney**

**Blake Pennington**

Approved as to form

**ORDINANCE NO.** \_\_\_\_\_

**AN ORDINANCE TO AMEND §151.01 DEFINITIONS; § 161.31 DISTRICT I-2, GENERAL INDUSTRIAL; AND § 162.01 ESTABLISHMENT/LISTING; AND TO ENACT § 164.27 DATA CENTERS IN THE UNIFIED DEVELOPMENT CODE TO ADDRESS EXTERNAL NOISE ATTENUATION OF DATA CENTERS AND TO PREVENT NOISE DISTURBANCES IN THE CITY OF FAYETTEVILLE, AND TO DECLARE AN EMERGENCY**

**WHEREAS**, the equipment associated with the cooling systems and generators required to operate data centers generate broadband noise and low-frequency hums that result in noise disturbance. Noise disturbance is the cause of degradation and may produce negative impacts on public health, property, and the environment; and

**WHEREAS**, noise attenuation should be an integral part of the design and construction of data centers in order to prevent noise pollution and noise disturbance; and

**WHEREAS**, the City of Fayetteville finds that the public interest is served by the prevention of unreasonable noise emanating externally from the Data Centers and the provisions of this Ordinance are enacted for the purpose of preserving and protecting the public health, safety, welfare and property of the residents of Fayetteville.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:**

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby amends § 151.01 **Definitions** of the Unified Development Code by enacting the following definition:

*“Data Center: A facility constructed and operated that is engaged in storage, management, processing, and transmission of digital data, including facilities used for cryptocurrency mining, which houses networked computer systems along with supporting equipment such as batteries, back-up power generators, HVAC and cooling systems. A data center does not include a dwelling unit used for home digital asset mining as defined by Ark. Code Ann. § 14-1-501, et seq.”*

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby amends §162.01 **Establishment/Listing** in Chapter 162 **Use Units** of the Unified Development Code by enacting a new section (VV) as follows:

(VV) *Unit 47. Data Centers*

- (1) Description. Unit 47 consists of uses related to facilities engaged in storage, management, processing, and transmission of digital data, including facilities used for cryptocurrency mining.
- (2) Included Uses.

Data Centers
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Section 3: That the City Council of the City of Fayetteville, Arkansas hereby amends § 161.31 – **District I-2, General Industrial** of the Unified Development Code by adding Unit 47 to subsection (B)(1) *Permitted Uses*.

Section 4: That the City Council of the City of Fayetteville, Arkansas hereby enacts § 164.26 **Data Centers** in Chapter 164 **Supplemental Zoning Regulations and Specialized Development Regulations** of the Unified Development Code as shown in Exhibit A attached hereto.

Section 5: That the City Council of the City of Fayetteville, Arkansas hereby determines that if any provision of this Ordinance is found to be invalid by the decision of any court of competent jurisdiction, such invalidity shall not affect the remaining sections, phrases, and provisions of this Ordinance which remain valid and enforceable.

Section 6: **Emergency Clause.** That the City Council of the City of Fayetteville, Arkansas hereby determines that this ordinance should become effective without delay to address the potential harmful effects of noise disturbances emanating from data centers, which is necessary for the public peace as well as the health and safety of Fayetteville residents. Therefore, the City Council hereby declares an emergency exists such that this ordinance shall become effective immediately upon its passage and approval.

# EXHIBIT A

## Section 164.26 Data Centers

(A) *Purpose and Applicability.* All Data Centers constructed within the City of Fayetteville shall be designed and built to incorporate sufficient external noise attenuation measures in order to minimize the impact of noise disturbance on residents.

(B) *Definitions.* For the purpose of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

1. Ambient Noise: The all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excusing the alleged offensive noise, at the locations and approximate time at which comparison with the alleged offensive noise is to be made.
2. Data Center shall have the same meaning as set forth in § 151.01 **Definitions** of the Unified Development Code.
3. Decibel (dB) shall have the same meaning as set forth in § 96.01 **Definitions** of Chapter 96 **Noise Control**.
4. Mechanical Equipment: The networked computer systems along with supporting equipment such as batteries, backup generators, and cooling systems housed on the Data Center's property.
5. Noise Attenuation: The reduction of noise levels through the use of sound-absorbing material, architectural design techniques, and/or any other suitable means.
6. Noise Disturbance shall have the same meaning as set forth in § 96.01 **Definitions** of Chapter 96 **Noise Control**.
7. Person: An individual, association, partnership, or corporation, including any officer, employee, department, or agency.
8. Sound: An oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.
9. Sound Level: shall have the same meaning as set forth in § 96.01 **Definitions** of Chapter 96 **Noise Control**.
10. Sound Level Meter: shall have the same meaning as set forth in § 96.01 **Definitions** of Chapter 96 **Noise Control**.

(C) *Noise Attenuation Requirements.* Before a Data Center has commenced construction or operating within this jurisdiction, the property owner and operator proposing to build a Data Center shall comply with the following:

- (1) Notice Requirements. The property owner and operator must notify all residents within a half-mile radius of the parcel, including any affiliated homeowners' association operating

within the half-mile radius, that the property owner and operator intends to build and operate a Data Center on the property. The notice required in this section must be mailed to all property owners, residents, and homeowners' association addresses contained within a half-mile radius extending from the boundary of the site where the proposed Data Center will be built. Proof of notification shall be filed with the Planning Division within 30 days of providing notice. The property owner and operator must notify the Mayor that the property owner and operator intend to build and operate a Data Center. The notice must include the location for the proposed data center. This public notification shall occur at the same time as any other notification required by Chapter 157. If no public hearing is required, then this notification shall occur no less than thirty days prior to the submission of the applicant's development or business license application, whichever occurs first.

(2) Noise Study Requirements. The property owner of the lands upon which the Data Center is to be located shall conduct a sound study performed by a third-party acoustic engineer to document baseline sound levels in the area of the proposed Data Center, including noise levels measured at the boundary of the site in eight locations (north, south, east, west, northeast, northwest, southeast, southwest.) The report of the study must include sound mitigation recommendations based on the results of the sound study. The property owner must provide a copy of the report of the study to the Planning Division within 30 days of completion of the report.

(3) Noise Attenuation Plan Requirements

(a) The property owner must consult with a third-party architectural or design firm to develop a building plan that includes necessary noise attenuation measures in order to prevent the external sound level emanating from the Data Center from exceeding the sound level limitations contained in Chapter 96 **Noise Control** which would be considered a noise disturbance. The building plan is not required to adopt any or all of the noise attenuation recommendations so long as the plan includes noise attenuation measures that the City deems adequate to be in compliance with this section. Noise attenuation measures may include but not limited to:

(i) Soundproofing walls, screens, panels, fences, or enclosures

(ii) Buffer yards

(iii) Other noise attenuation measures recommended by the third-party acoustic engineer or the City

(b) Mechanical equipment must be shown on any proposed plan and must be fully screened on all sides. Mechanical equipment not screened by a facade of the building must be screened by a visually solid fence, screen wall or panel, or parapet wall and constructed with a design, materials, details, and treatment compatible with those used on the nearest facade of the building.

- (c) The property owner must provide a copy of the building plan to the City within 30 days of completion of the plan prior to construction.
  - (d) Any additions, changes, or expansions of the Data Center must comply with the noise attenuation requirements of this section and must be designed and submitted to the City within 30 days of completion of the report.
- (4) Post Completion Noise Study Requirements
- (a) Upon the Data Center's completion, the Data Center operator must conduct a post-construction noise study performed by a third-party acoustic engineer to document noise levels emanating from the Data Center when mechanical equipment is running at full capacity, including all HVAC units and generators necessary for peak operation. Noise levels are to be measured at the boundary of the site in the original eight locations used during the baseline study. The Data Center operator must provide a copy of the report to the City within 10 days of completion of the study.
  - (b) The Data Center shall not begin operations until the completion of the post-construction noise study and submission to the City as required above. In order for the Data Center to be in compliance, the noise study results must show that its operation is in compliance with this section and will not adversely impact residential neighbors. If the results show that the Data Center is not in compliance with this section or will adversely impact residential neighbors, the Data Center will be unable to commence operation until the required noise attenuation measures and noise limitations are met.
  - (c) Furthermore, the Data Center operator must conduct annual noise studies under the baseline and post-construction studies specifications in accordance with subsections (a) and (b) above. The Data Center operator must provide the results to the City within 10 days after the anniversary date of the first sound study report.

(D) *Procedure for Measurement.* All tests shall be conducted according to the procedures set forth in Chapter 96 **Noise Control**.

(E) *Noise Limitations.* It shall be unlawful for any Data Center to make, or continue to cause or permit to be made or continued, noise levels constituting a noise disturbance. For the purposes of this section, the external noise level emanating from Data Centers shall be deemed disturbing to a person, reasonably calculated to disturb the peace and unreasonably offensive and injurious to the public, or their property, if the sound level does not comply with the limits set forth in Chapter 96 **Noise Control**.

(F) *Violations and Penalties.* Violations of the noise limitations shall be subject to the enforcement and penalty provisions of Chapter 96 **Noise Control** as well as any remedies available to the City pursuant to the *Unified Development Code*, state or federal law. Violations

