# CHAPTER 49: ZONING

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49-103.3 Definitions

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3305 Data Center Facility: This 3300 Use Category is comprised of facilities, whether a single building, or a series of buildings rehabilitated or constructed, which house working servers that primarily provide the storage, management, distribution, and processing of digital data. These facilities include essential infrastructure like networked computers, data storage systems, environmental controls, and security systems. These uses include but are not limited to electronic storage data center facilities and cryptocurrency center facilities.

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49-104.3 Conditional Uses And Structures

(a) In General.

(1) In the exercise of its home rule authority and the powers conferred by the Illinois Municipal Code and this ordinance, the city council may, from time-to-time permit by specific ordinance the following conditional uses of land or structures in accordance with the procedures set forth in chapter 34 of this code.

(2) The term “conditional use” as used throughout this ordinance shall be construed as having the same meaning

and construction as the term “special use” as used in Illinois law and provisions of this code enacted prior to the effective date of this amendatory ordinance of 2020.

(3) Whenever the city council has previously approved a special use upon any real property or as part of any planned development, such special use shall be regarded as a conditional use for the purposes of this code.

~~(3)~~(4) Development Agreement. A conditional use for a data center facility is conditioned on the owner entering into an agreement with the City concerning the above required regulations and performance standards, their applicability to the facility, and other germane matters. City staff is authorized to prepare, negotiate, and have the City execute such agreements, the terms of which cannot be inconsistent with the Zoning Ordinance.

(b) *Conditional Uses*. The Conditional Uses as identified in Table One: Use Categories shall apply.

(c) *Specific Regulations*.

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(25) Data center facility (3305) as shown in Table One: Use Categories and PDD Planned Development Districts within general industrial areas under the following conditions:

a. Applicants must submit, in addition to the application materials otherwise required by the Zoning Administrator, the following reports and studies as part of a conditional use request for a data center facility:

i. A baseline pre-development sound study with minimum and maximum dB (A) levels measured for a continuous weeklong period be submitted with the first petitions filed for the development.

ii. A Noise Modeling Study completed by a third-party acoustical engineer and submitted demonstrating compliance with the applicable standards to the underlying zoning district and this Section (25).

iii. A Water Consumption and Quality Modeling Report completed by a third-party engineer and submitted demonstrating compliance with Illinois Environmental Protection Agency requirements, the applicable standards to the underlying zoning district, and to this Section (25). The study should include the following: proposed water source identification, including but not limited to Municipal potable water supply, surface water

withdrawals, reclaimed or recycled water, and any supplement or emergency water sources; estimated average daily water demand (gallons per day); estimated peak daily water demand; estimated annual water consumption; seasonal variability in water use; and projected Water Use Effectiveness as defined in this Section (25). This study must also describe water efficiency strategies, including but not limited to, cooling system type (e.g., closed-loop, hybrid, air-cooled, liquid cooling); water reuse and recycling systems; stormwater capture and reuse, where feasible; and leak detection, monitoring, and automated controls. When closed-loop or hybrid cooling systems are proposed, the Study shall specify the source of make-up water; blowdown volumes and frequency; chemical additives used in cooling water; temperature and quality characteristics of any discharged water; and the method and location of discharge (e.g., sanitary sewer, on-site treatment, reuse, or permitted surface discharge). The Study shall evaluate potential impacts to water quality,

including risks of chemical contamination from cooling system additives, biocides, corrosion inhibitors, and other treatment chemicals; risk of accidental releases or leaks; spill prevention and response measures; and on-site storage and handling practices for water treatment chemicals. The Study shall include a Water Quality Protection Plan outlining secondary containment for chemical storage; monitoring protocols for discharge quality; and emergency response procedures for releases or system failures. The study shall specifically address measures to prevent thermal pollution; measures to prevent discharge of contaminants that may degrade receiving waters; and whether any wastewater pretreatment or cooling is required prior to discharge.

~~i.~~iv. Energy Consumption Modeling Report completed by a third-party engineer and submitted demonstrating compliance with the applicable standards to the underlying zoning district.

b. Chillers must be designed to meet the following requirements:

i. Evaporative chillers utilizing potable water are prohibited.

ii. Roof-mounted chillers cannot be located within one thousand five hundred (1,500') feet of any residential, hospital or educational use, measured from the nearest part of the sound attenuation screen or parapet of the building to the property line of the residential, hospital or educational use. The authorization of a conditional use for this purpose will not be affected by subsequent establishment of a residential, hospital or educational use within the restricted area established herein.

iii. Any ground-mounted chillers cannot be located within one thousand (1,000') feet of any residential, hospital or educational use, measured from the nearest part of the equipment yard to the property line of the residential, hospital or educational use. The authorization of a conditional use for this purpose will not be affected by subsequent

establishment of a residential, hospital or educational use within the restricted area established herein.

iv. Upon data center decommissioning and use change, obsolete roof-mounted or ground-mounted chillers and associated equipment must be removed.

c. Generators must be designed to meet with the following requirements.

i. Roof-mounted generators are prohibited.

ii. All generators must, at a minimum, comply with the state standards set forth in the Municipal and Cooptative Electric Utility Transparent Planning Act (Public Act 104-0458), or as subsequently amended, including but not limited to Tier 4 emission standards in 415 ILCS 5/39(a).

iii. All generators must be equipped with vibration isolation systems.

iv. Generators cannot be located within one thousand (1,000’) feet of any residential, hospital or educational use, measured from the nearest part of the equipment yard to the property line of the residential, hospital or

educational use. The authorization of a conditional use for this purpose will not be affected by subsequent establishment of a residential, hospital or educational use within the restricted area established herein.

v. Upon data center decommissioning and use change, obsolete generators and associated equipment must be removed.

d. Data Center Facilities must be designed to meet the following performance standards:

i. Noise Standards.

1. Data center facilities must comply with all federal and state regulations related to noise thresholds. In additional noise levels must not exceed the following constant-minimum noise thresholds as measured at the facility property line:

i. Daytime hours 59 dB (A)weighted 7am-7pm; and

ii. Nightime hours 49 dB (A)weighted 7pm-7am.

ii. Vibrations Standards. Data center facilities must have continuous vibration monitoring at spacing of no less than 500 feet along all

property lines within 1,000 feet of residential, hospital or educational uses.

iii. Energy Usage Standards.

1. Data center facilities must be designed to maintain a Power Usage Effectiveness of no more than one and two-tenths (1.2). As used in this Chapter “Power Usage Effectiveness” or “PUE” is defined as the ratio of total building energy consumption divided by the total Information Technology equipment (servers, switches, storage devices, etc.).

2. Data centers must be designed to comply with the energy code requirements specified in whichever of the following is most stringent:

i. The latest adopted International Energy Conservation Code (IECC);

ii. The latest published ASHRAE Standard 90.4 (Sections 6 & 8); or

iii. Illinois-specific data center energy code requirements adopted by rule, which may include more

detailed criteria such as Mechanical Load Component (MLC) and Electrical Load Component (ELC) measures.

3. Modular nuclear reactors, small modular reactors or any other nuclear-based energy are prohibited.

iv. Water Usage Standards. Data center facilities must maintain a Water Usage Effectiveness of no more than two tenths (0.2). As used in this Chapter, "Water Usage Effectiveness" or "WUE" is defined as the ratio of total potable building water consumption (liters) to Information Technology equipment (kilowatt-hour).

e. Screening. Except as expressly modified below, data center facilities must be designed to comply with the following requirements:

i. Roof-mounted mechanical equipment must be fully enclosed on all sides by a sound-attenuating screen or parapet equal in height to, or taller than, the tallest roof-mounted chiller or associated mechanical equipment, and must be designed to blend with the

architectural style, materials, and color of the building.

ii. Ground Mounted Mechanical Equipment must be fully enclosed on all sides by a sound attenuating wall extension or other sound attenuating enclosure, subject to approval by the zoning administrator, equal in height to, or taller than, the tallest ground-mounted chiller and generator or associated mechanical equipment and must blend with the architectural style, materials, and color of the building.

f. On-Site Renewable Energy and Resilience Requirement.

i. All new or expanded data centers shall install and operate, at a minimum, one of the following:

1. On-Site Clean Energy: On-site renewable energy generation with a nameplate capacity sufficient to supply not less than twenty-five percent (25%) of the facility's peak electrical demand, as demonstrated in the approved electrical load study; or

2. On-Site Resilience Storage: On-site energy storage capable of supplying not less than fifty percent (50%) of the facility's peak electrical demand for a minimum duration of fifteen (15) minutes, for purposes including grid stabilization, brownout mitigation, and peak-load support. Energy storage systems shall be configured to prioritize discharge during utility-declared peak events and grid emergencies to reduce localized voltage sag, transformer overload, and outage risk in surrounding neighborhoods.

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Table One: Use Categories

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3305 Data Center Facility

| E | R-1 | R-2 | R-3 | R-4 | R-4A | R-5 | R-5A | B-1 | B-2 | B-3 | O | DC | ORI | M-1 | M-2 | Additional Regulations |
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