

STAFF RECOMMENDED LANGUAGE REVISED

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CHAPTER 49: ZONING

49-103.3 Definitions

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.

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

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1 and construction as the term "special use" as used in
2 Illinois law and provisions of this code enacted prior
3 to the effective date of this amendatory ordinance of
4 2020.

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

9 ~~(3)~~ (4) Development Agreement. At the Zoning
10 Administrator's sole discretion, a conditional use is
11 conditioned on the owner entering into an agreement with
12 the City concerning the required regulations and
13 performance standards, their applicability to the facility,
14 and other germane matters. City staff is authorized to
15 prepare, negotiate, and have the City execute such
16 agreements, the terms of which cannot be inconsistent with
17 the Zoning Ordinance.

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

20 (c) *Specific Regulations.*

21 ***

22 (25) Data center facility (3305) as shown in Table One:
23 Use Categories and PDD Planned Development Districts

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1 within Office, Research, and Light Industrial, and
2 industrial areas under the following conditions:

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

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

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

17 iii. A Water Consumption and Quality Modeling
18 Report completed by a third-party engineer and
19 submitted demonstrating compliance with
20 Illinois Environmental Protection Agency
21 requirements, the applicable standards to the
22 underlying zoning district, and to this
23 Section (25). The study should include the
24 following: proposed water source

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1 identification, including but not limited to
2 Municipal potable water supply, surface water
3 withdrawals, reclaimed or recycled water, and
4 any supplement or emergency water sources;
5 estimated average daily water demand (gallons
6 per day); estimated peak daily water demand;
7 estimated annual water consumption; seasonal
8 variability in water use; and projected Water
9 Use Effectiveness as defined in this Section
10 (25). This study must also describe water
11 efficiency strategies, including but not
12 limited to, cooling system type (e.g., closed-
13 loop, hybrid, air-cooled, liquid cooling);
14 water reuse and recycling systems; stormwater
15 capture and reuse, where feasible; and leak
16 detection, monitoring, and automated controls.
17 When closed-loop or hybrid cooling systems are
18 proposed, the Study shall specify the source
19 of make-up water; blowdown volumes and
20 frequency; chemical additives used in cooling
21 water; temperature and quality
22 characteristics of any discharged water; and
23 the method and location of discharge (e.g.,
24 sanitary sewer, on-site treatment, reuse, or

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1 permitted surface discharge). The Study shall
2 evaluate potential impacts to water quality,
3 including risks of chemical contamination from
4 cooling system additives, biocides, corrosion
5 inhibitors, and other treatment chemicals;
6 risk of accidental releases or leaks; spill
7 prevention and response measures; and on-site
8 storage and handling practices for water
9 treatment chemicals. The Study shall include
10 a Water Quality Protection Plan outlining
11 secondary containment for chemical storage;
12 monitoring protocols for discharge quality;
13 and emergency response procedures for releases
14 or system failures. The study shall
15 specifically address measures to prevent
16 thermal pollution; measures to prevent
17 discharge of contaminants that may degrade
18 receiving waters; and whether any wastewater
19 pretreatment or cooling is required prior to
20 discharge.

21 ~~i.~~iv. Energy Consumption Modeling Report
22 completed by a third-party engineer and
23 submitted demonstrating compliance with the

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1 applicable standards to the underlying zoning
2 district.

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

5 i. Evaporative chillers utilizing potable water
6 are prohibited.

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

19 iii. Any ground-mounted chillers cannot be
20 located within one thousand (1,000') feet of
21 any residential, hospital or educational use,
22 measured from the nearest part of the
23 equipment yard to the property line of the
24 residential, hospital or educational use. The

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

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

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

12 i. Roof-mounted generators are prohibited.

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

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

22 iv. Generators cannot be located within one
23 thousand (1,000') feet of any residential,
24 hospital or educational use, measured from the

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1 nearest part of the equipment yard to the
2 property line of the residential, hospital or
3 educational use. The authorization of a
4 conditional use for this purpose will not be
5 affected by subsequent establishment of a
6 residential, hospital or educational use
7 within the restricted area established herein.

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

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

13 i. Noise Standards.

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

20 i. Daytime hours 59 dB (A) weighted 7am-
21 7pm; and

22 ii. Nighttime hours 49 dB (A) weighted
23 7pm-7am.

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1 ii. Vibrations Standards. Data center facilities
2 must have continuous vibration monitoring at
3 spacing of no less than 500 feet along all
4 property lines within 1,000 feet of
5 residential, hospital or educational uses.

6 iii. Energy Usage Standards.

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

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

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

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

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1 iii. Illinois-specific data center
2 energy code requirements adopted by
3 rule, which may include more
4 detailed criteria such as
5 Mechanical Load Component (MLC) and
6 Electrical Load Component (ELC)
7 measures.

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

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

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

22 i. Roof-mounted mechanical equipment must be
23 fully enclosed on all sides by a sound-
24 attenuating screen or parapet equal in height

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1 to, or taller than, the tallest roof-mounted
2 chiller or associated mechanical equipment,
3 and must be designed to blend with the
4 architectural style, materials, and color of
5 the building.

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

16 f. On-Site Renewable Energy and Resilience Requirement.

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

20 1. On-Site Clean Energy: On-site renewable
21 energy generation with a nameplate
22 capacity sufficient to supply not less
23 than twenty-five percent (25%) of the
24 facility's peak electrical demand, as

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1 demonstrated in the approved electrical
2 load study; or

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

17 ii. Feasibility Alternative Compliance. Where the
18 applicant demonstrates, through a third-party
19 feasibility analysis approved by the City,
20 that on-site installation is infeasible due to
21 site constraints, safety limitations, or grid
22 interconnection restrictions, the applicant
23 shall comply through one or more of the

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1 following off-site measures, subject to
2 approval by the City:

3 1. Procurement of new renewable energy
4 generation located within the regional
5 grid serving the municipality, under
6 long-term contract, in an amount equal to
7 the on-site requirement;

8 2. Investment in distributed energy
9 resources or community-scale battery
10 storage projects located within the
11 municipality or its utility service area.

12 (26) Pre-2026 Data Center Facility which were allowed to
13 be built as warehouses (3300) under the then-existing
14 Zoning Ordinance, before April 1, 2026, is deemed legal
15 conforming uses and allowed to continue to operate as
16 warehouses until and unless the Data Center Facility
17 undergoes wholesale re-development of the property, a
18 building, or a facility on the property. For purposes of
19 this section, "wholesale re-development" means that a
20 total of 50% or more of the footprint square footage of
21 a single building structure is demolished and rebuilt as
22 part of a planned improvement to the property, whether
23 the demolition and rebuilding is done at once or over
24 time. Wholesale re-development does not include

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1 rebuilding after natural disasters or fire even if 100%
 2 of the building structure is demolished. Any wholesale
 3 re-development of a Pre-2026 Data Center Facility must
 4 comply with all post-2026 Data Center Facility Standards.

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
													C	C	C	Section 49-104-3(c)(25)
