

September 8, 2021

Revised April 1, 2022

Proposed Text Amendment to the Town of Wallingford Zoning Regulations to add Data Centers as an allowed use by Special Permit in the Industrial Expansion (IX) and Watershed Interchange (WI) Districts:

Add definitions to Section 2.2 – Specific Terms

Data Center - A principal use involving a building/premises primarily occupied by computers, computer servers and/or telecommunications equipment along with any related use, including supporting equipment, where electronic information is processed, transferred and/or stored **and where generators are may be utilized for emergency power.**

Sound and Vibration Impact Analysis – a study performed by a ~~professional engineer~~ **Institute of Noise Control Engineering Board certified engineer** that identifies existing sources of sound and vibration, ~~predicts~~ **analyzes** future noise (non-tonal and tonal that may produce beating, temporal variation and amplitude modulating sounds) and vibration levels, determines jurisdictional limits for noise and vibration, ~~proposes development of~~ noise and vibration control concepts, recommends testing intervals for noise compliance and concludes with an overall assessment of the mitigation strategies **and concepts to be implemented in facility design.**

Existing Background Sound Level – the existing measured 90th percentile A-weighted sound level (LAF90 1-hr) during the quietest system operating hour prior to operation of the proposed facility.

Add proposed new section 4.9.C.5 to Industrial Expansion (IX) District with the following language:

5. Data Centers with accessory electrical substations:

a. If a Special Permit is granted, the Commission may impose conditions of approval and any other requirements including but not limited to conditions relating to noise, vibration, and emissions as deemed appropriate. Conditions of approval may include a periodic certification by an Institute of Noise Control Engineering Board Certified engineer that the facility is in compliance with noise limitations.

~~a.~~ b. Initial submission of **any application shall include** a Sound and Vibration Impact Analysis containing detailed information concerning all activity, equipment and machinery associated with the use, sound and vibration levels resulting from such activity, equipment or machinery as well as all measures, including but not limited to those of a structural and/or nonstructural- related nature, necessary to mitigate noise and vibration and to ensure that the noise to be emitted from the proposed development does not **substantially** raise the **existing background sound level established baseline environmental noise level**, equal to (LAF90,1-hr), with insect sound removed, **in accordance with the latest version of ANSI/ASA S12.100**, by more than 5dBA, emit objectionable ~~harmful~~ sounds (including high and low frequency audible tonal sound, infrasound, beating, and amplitude modulated sound) or create vibration levels to a degree ~~that is perceptible to would adversely affect~~ the neighboring properties. **Nothing herein shall authorize a sound level in excess of the limits**

established by state law or town ordinance. The more restrictive sound level controls set by law shall be the governing sound level required.

(1) In all cases in which the Commission determines that a peer review of the applicant's noise and vibration impact analysis is warranted, the applicant shall be required to pay the Town for the cost of the Sound and Vibration Impact analysis ~~study~~ peer review. This payment shall be made to the Town prior to the third-party firm peer reviewer beginning their work.

(2) The Sound and Vibration Impact Analysis shall include ~~establishing~~ measuring the existing background sound levels during the anticipated operating hours ~~an environmental baseline using ambient noise of the existing conditions~~, computing potential noise impacts and ~~developing~~ noise mitigation controls including but not limited to acoustic louvers, acoustic mufflers, low-speed fans, enclosures, barriers, ~~silencers~~ and containers for HVAC equipment and emergency generators, if required. Seasonal scenarios and hours of the proposed use shall also be considered during the analysis.

~~b. c.~~ **Visual Screening of Mechanical Equipment.** In order to minimize visibility from adjacent roads and adjacent properties, ground level and roof top mechanical equipment shall be screened. This screening may be provided by a principal building. Mechanical equipment not screened ~~from view~~ by a principal building shall be screened by a visually solid fence, screen wall or panel, parapet wall, or other visually solid screen that shall be constructed of materials compatible with those used in the exterior construction of the principal building. Notwithstanding the requirements of this section, mechanical equipment located in a manner found to have no adverse impact on adjacent roads and adjacent properties, as determined by the Commission, shall not be required to be screened.

(1) Notwithstanding the requirements of §6.24, there shall be no limit to the amount of roof area occupied by HVAC equipment

~~e. d.~~ All generators must comply with Connecticut Department of Energy and Environmental Protection emissions standards. Any All testing must be performed during the time of day with the loudest ambient noise levels.

~~d. e.~~ Any application must be accompanied by documentation outlining all aspects of generator usage and type that details when the generators will be run, how they will be used and for what purpose(s) they are being proposed will be used for.

~~e.~~ Generators shall be placed as far as possible from all neighboring residential property(ies).

~~f. In addition to the requirements of Section 5.1C,~~ Where any side, front, or rear yard abuts ~~ting~~ a residential property or property located within a Residential Zoning District ~~non-industrial zoning district is not developed with commercial or industrial uses,~~ the minimum side, front and rear yard setback shall be dictated by the Sound and Vibration Impact Analysis and shall in no case be less than 500 feet.

~~g.~~ Any application under this section must be 500 feet or further from the property line of any residential property.

~~h. g.~~ In addition to the requirements of Section 6.14 and Section 4.9.F.4, Where any side, front or rear yard abuts ~~ting~~ a residential property or property located within a Residential

Zoning District ~~non-industrial zoning district is not developed with commercial or industrial uses~~ the required yards shall include a 100-foot wide natural open space buffer, or landscaped buffer if natural vegetation does not exist, with an earthen berm at least 6 feet in height with a grade no steeper than 3:1.

(1) The top of the berm must be horizontal (level), with the width equal to at least three (3'-0") feet. The landscaping must be comprised of grass or meadow mix; with no trees or shrubs that could potentially affect the long-term integrity of the berm. Evergreen or native trees must also be planted every 10 linear feet along the outside edge of the berm to provide extra screening for residential properties.

(2) All substations shall be properly screened with evergreen trees not to exceed 10 feet in height. All substations shall also be surrounded by fencing; all fencing shall be designed to withstand ice/wind loading. All substations must be located a minimum of **750** feet from a residential property or residential zoning district.

h. A cooling plan shall be submitted with all applications under this section specifically detailing the cooling method, location of proposed cooling equipment and proposed noise mitigations. Should water be a cooling method, estimated usage, waste water disposal, and sourcing shall be included with the application.

Add proposed new section 4.10.C.2 to Watershed Interchange (WI) District with the following language:

2. Data Centers with accessory electrical substations:

a. If a Special Permit is granted, the Commission may impose conditions of approval and any other requirements including but not limited to conditions relating to noise, vibration, and emissions as deemed appropriate. Conditions of approval may include a periodic certification by an Institute of Noise Control Engineering Board Certified engineer that the facility is in compliance with noise limitations.

a. b. Initial submission of any application shall include a Sound and Vibration Impact Analysis containing detailed information concerning all activity, equipment and machinery associated with the use, sound and vibration levels resulting from such activity, equipment or machinery as well as all measures, including but not limited to those of a structural and/or nonstructural- related nature, necessary to mitigate noise and vibration and to ensure that the noise to be emitted from the proposed development does not ~~substantially~~ raise the ~~existing background sound level established baseline environmental noise level~~, equal to (LAF_{90,1-hr}), with insect sound removed, **in accordance with the latest version of ANSI/ASA S12.100, by more than 5dBA, emit objectionable ~~harmful~~-sounds (including high and low frequency audible tonal sound, infrasound, beating, and amplitude modulated sound) or create vibration levels to a degree ~~that is perceptible to would adversely affect~~ the neighboring properties. **Nothing herein shall authorize a sound level in excess of the limits established by state law or town ordinance. The more restrictive sound level controls set by law shall be the governing sound level required.****

(1) In all cases in which the Commission determines that a peer review of the applicant's noise and vibration impact analysis is warranted, the applicant shall be required to pay the Town for the cost of the Sound and Vibration Impact analysis ~~study~~ **peer review**. This

payment shall be made to the Town prior to the third-party firm peer reviewer beginning their work.

(2) The Sound and Vibration Impact Analysis shall include ~~establishing measuring the existing background sound levels during the anticipated operating hours an environmental baseline using ambient noise of the existing conditions,~~ computing potential noise impacts and ~~developing~~ noise mitigation controls including but not limited to acoustic louvres, acoustic mufflers, low-speed fans, enclosures, barriers, ~~silencers~~ and containers for HVAC equipment and emergency generators, if required. Seasonal scenarios and hours of the proposed use shall also be considered during the analysis.

~~b. c.~~ **Visual Screening of Mechanical Equipment.** In order to minimize visibility from adjacent roads and adjacent properties, ground level and roof top mechanical equipment shall be screened. This screening may be provided by a principal building. Mechanical equipment not screened ~~from view~~ by a principal building shall be screened by a visually solid fence, screen wall or panel, parapet wall, or other visually solid screen that shall be constructed of materials compatible with those used in the exterior construction of the principal building. Notwithstanding the requirements of this section, mechanical equipment located in a manner found to have no adverse impact on adjacent roads and adjacent properties, as determined by the Commission, shall not be required to be screened.

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(1) The top of the berm must be horizontal (level), with the width equal to at least three (3'-0") feet. The landscaping must be comprised of grass or meadow mix; with no trees or shrubs that could potentially affect the long-term integrity of the berm. Evergreen or native trees must also be planted every 10 linear feet along the outside edge of the berm to provide extra screening for residential properties.

(2) All substations shall be properly screened with evergreen trees not to exceed 10 feet in height. All substations shall also be surrounded by fencing; all fencing shall be designed to withstand ice/wind loading. All substations must be located a minimum of 750 feet from a residential property or residential zoning district.

h. A cooling plan shall be submitted with all applications under this section specifically detailing the cooling method, location of proposed cooling equipment and proposed noise mitigations. Should water be a cooling method, estimated usage, waste water disposal, and sourcing shall be included with the application.

Add parking requirement for Data Centers under 6.11.C as follows:

Data centers

1 parking space for each employee at peak shift