

MEMORANDUM

DATE: September 2, 2025

FROM: Gregory Tocci (gtocci.cavtocci.com)
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TO: Steven Cohen, Aradev
Jonathan Marrale, Aradev

SUBJECT: Response to Brooks Acoustics Corporation Letter dated August 25, 2025
re: Wake Robin Inn Sound

Introduction

The Wake Robin Inn is an existing hotel and event facility located at 104 & 106 Sharon Road. The application before the Town of Salisbury Planning and Zoning Commission is for its redevelopment and would include improvements to the property, renovation, expansion, and an acoustically designed indoor facility for future events. Historically, the property has hosted outdoor tented events with both amplified and live music, both during the day and into the late evening. The property is allowed, under current Salisbury Zoning Regulations, to host outdoor tented events; however, the proposed expansion is to include an indoor event space.

As requested, Cavanaugh Tocci prepared a report dated April 29, 2025 presenting an analysis of sound potentially produced by Wake Robin Inn activities and equipment under its proposed redevelopment plan. The report concluded that, as required by the Salisbury Planning and Zoning Commission Special Permit Use Section 803.2 Relation of Buildings to Environment, sound produced by the proposed Wake Robin Inn redevelopment will “...not create a nuisance to neighboring properties...”

Herbert Singleton, Cross-Spectrum Acoustics (CSA) has been retained by the Town of Salisbury to peer review the Cavanaugh Tocci April 29 report. The executive summary of the peer review report states that CSA agrees with the Cavanaugh Tocci conclusion that project activity and equipment sound will comply with the State of Connecticut Noise Control Regulation but questioned whether the design will create a noise nuisance as we have determined. After discussion with CSA, Cavanaugh Tocci submitted a response letter dated August 6, 2025 which addressed those questions. In a letter dated August 11, 2025, CSA concluded the following:

“We agree that the CTA Response noise assessment demonstrates the project would meet the Town nuisance requirement.”

On August 25, 2025, Brooks Acoustics Corporation (BAC) submitted a letter to the Town (BAC Letter). The following is a technical response to the salient comments in the BAC letter concerning the acoustic analysis of Wake Robin Inn sound completed by Cavanaugh Tocci.

Technical Response to BAC Letter Comments

“The Lack of a Technical Objective definition for Nuisance”

The BAC Letter states: *“The only acceptable acoustical design criterion for the facility is that it is not audible to the neighbors”*. This “inaudibility” requirement is a bedrock argument of the BAC letter.

Whether or not a sound is “audible” is subjective. Audibility varies from person to person, day to day, location to location. It would be inappropriate to use a subjective metric such as audibility as a criterion for objective and enforceable acoustical design. Further, the BAC letter offers no technical, objective definition of nuisance nor of audibility for that matter. To avoid subjectivity, Cavanaugh Tocci conducted sound monitoring at 8 locations for one week (~1,300 hours) at surrounding property lines to evaluate the background sound level and to set a conservative design goal for Wake Robin Inn sound appropriate for this quiet area. This design goal of 32 dBA is more stringent than the State of Connecticut Class A receiver nighttime limit of 40 dBA for sound with a prominent discrete tone.

It is our professional opinion that WRI event sound levels within the event space will not create a nuisance, as sound within the event building space will for the most part be below existing ambient sound levels. Our opinion is based on the following:

- Extensive sound monitoring we conducted during the winter when ambient levels were lower than when most events would occur
- Our characterizing sound sources using manufactures noise data, actual measurements conducted for sound producing activity, and having used music levels measured during events similar to those at WRI, and
- Use of ISO-9613-2 sound propagation loss methods of likely highest sound levels to occur at receptor locations.

Human Behavior

The BAC letter mentions concerns of Human Behavior during activities at WRI. Raised and loud voice sound levels are part of the event sound level data used in our modeling of sound, in particular from tented events, activity at the pool, and loud music and voice sound in the event room. The applicant has agreed to implement human behavior protocols and procedures to alleviate any neighbor concerns. Also note the Connecticut State Noise Regulation, TITLE 22a. sec. 22a-29-1.7 – Exclusions, states that the State’s *“Regulations shall not apply to: ... The unamplified sounding of human voice.”*

Music & Bass Sound Spectra

The BAC Letter claims, *“The source noise music spectrum was not disclosed.”*, and *“Bass noise was not addressed by Tocci.”*

The Cavanaugh Tocci April 29 report, Appendix B Table B-1, includes the music spectrum used in our model. It is expressed as transmitted sound power in dB re: 1 pW/sf and includes low-frequency

spectral content, particularly at 63 and 125 Hz, i.e., the low frequency “bass” sound referenced in the BAS letter.

“Event Space Reverberation”

Following the completion of the acoustical studies, the sound isolation design for the event building exterior envelope was further detailed. Cavanaugh Tocci collaborated with the Architect and window manufacturer to evaluate the assembly sound isolation. Detailed wall and window assemblies are provided Appendix B Figures B-1a and B-1b of the Cavanaugh Tocci April 29, 2025 report, which is available on the Town’s website.

Mr. Brooks noted that sound absorptive treatments were not shown in the building designs that he reviewed. The building envelope design will include interior sound absorption as would be needed for reasons other than music sound control as well. Cavanaugh Tocci has discussed room sound absorption with the Architect who will including it in all room designs.

“Failure to use the proper metrics”

As discussed in the August 6, 2025 Cavanaugh Tocci response to CSA comments, CSA recommended use of the 90th percentile sound level (LA_{90}) for establishing the design goal for music sound, instead of the average of the lowest measured energy average sound levels (LA_{eq}). Cavanaugh Tocci made the change in the analysis, and as expected, use of the LA_{90} led to the same 32-dBA design goal, to which CSA agreed. CSA and Cavanaugh Tocci are both in agreement that “the proposal would not create a nuisance to neighboring properties”

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Please let us know if further details are required. Thank you.

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