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9 August 2022

Michael V. Testa, AIA Principal Michael V. Testa, Architect, LLC 701 Tennent Road, Suite 201 Manalapan, NJ 07726

Re: Metuchen Inn

Outdoor Dining Sound Levels

Dear Mr. Testa:

The Metuchen Inn seeks approval for an outdoor dining patio. Figure 1 shows a plan your office provided me. It is my understanding the patio would be open until 10 PM and that background music is desired.

Outdoor dining is somewhat of an unusual sound source; there are actually several things happening, some of which are regulated, other that are not.

There is a State Noise Regulation, NJAC 7:29. It basically limits certain sources of sound from commercial operations to residential receivers ("at or within" the receiving property line, depending on where there is an "affected person"). Metuchen also has a State-approved noise ordinance which, for this use, is the same as the State regulation. Basically, the sound from regulated sources is limited to 65 dBA during the "day" (7 AM to 10 PM) and 50 dBA at "night" (10 PM to 7 AM). If the patio will only be open during "day" hours the sound level limit for regulated sources is 65 dBA.

I've mentioned "regulated sources" several times. Not everything that makes sound on a site is covered by the regulation (or ordinance). In addition, there are several specific exemptions.

The sound from the unamplified human voice is specifically exempted. "Patron vehicles" are exempt. Restaurant sounds the DEP does consider regulated (I specifically checked with them on this project) would be the music and dining activities such as plates, silverware and glasses "clinking" and the cleaning of tables.

I could not find a published source on sound from plates, etc.; this is not the first time I've looked for this. This time I went to two restaurants with outdoor dining and made my own measurements, or tried to. On Friday night, 29 July 2022 the restaurant in Woodbridge (Il Castello) had only two tables where people were dining. The loudest sound was from a decorative water fountain on one wall. I did not make any sound level measurements.

The restaurant in Marlboro (Osteria Cucina Rustica) has an outdoor patio with seating for 80 people, and it was full. I made multiple sound measurements, seeking to minimize the sounds from motor vehicles passing by.

I heard people talking and an occasional piece of instrumental music but I did not hear – and was not able to measure - sounds from plates, glasses, etc. It simply was not present in any quantity I could detect.

It is my experience that these sounds are minimal. Certainly someone could drop a fork or plate, but that is not a common, ongoing occurrence.

Music in "good" restaurants is usually not played very loud. At the one restaurant above I could faintly here it from time to time. If this was a sports bar or outdoor beer garden I would anticipate problems unless the sound system is controlled.

With the proper placement, size and number of speakers around the space, and the inclusion of a "programmable limiter" in the sound system the sound levels at the patio, and therefore out to the surrounding properties can certainly be controlled. The use of the limiter, and contractually requiring any band to play through the "house" sound system, controls the maximum sound. The limiter prevents the sound from exceeding a set level. The setting is password-protected so neither the band (if there is one) nor restaurant staff can't turn the volume up beyond the set maximum. We have used the approach at "beach bars," restaurants and country clubs around the state with 100% success.

Planters around the patio and trees in them are not a sound barrier. The "solid vinyl" fence along the property line is not, to my knowledge, "noise rated," but data I have for this type of fence does show some screening; 5 dBA is a safe estimate.

Yours truly,

Nørman R. Dotti, PE, PP, INCE

Principal

NRD/me

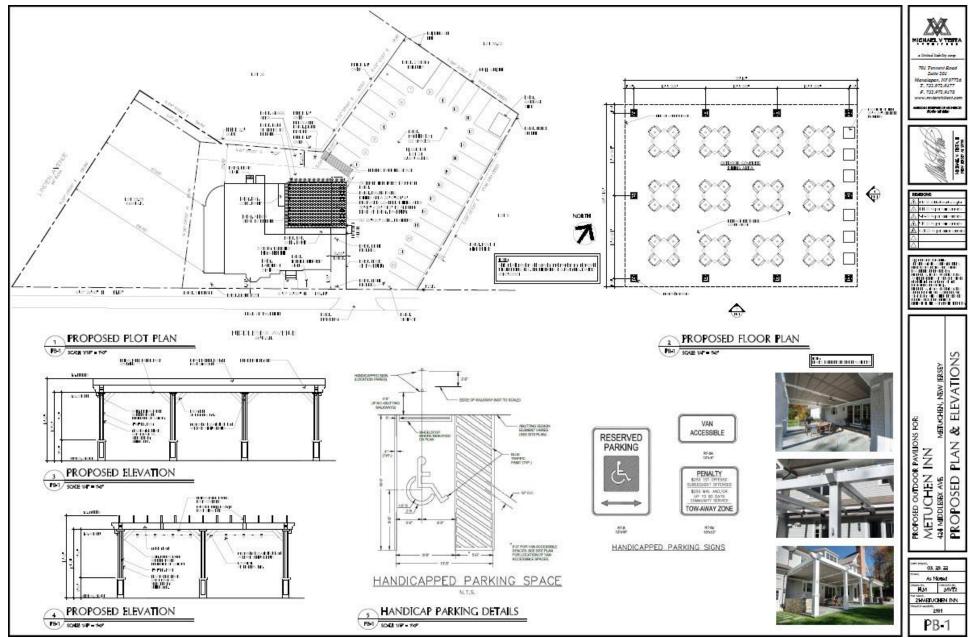


Figure 1 – Outdoor Dining Plan