Barton & Loguidice

November 1, 2024

Ms. Danielle Broza
Mr. Adam H.J. Broza
Someplace Upstate
20 Mount Rose Road
Marlborough, New York 12542

RE: Professional Consulting Services – Sound Study. 20 Mount Rose Road, Marlborough, New York 12542

File: 703.4882

Dear Ms. / Mr. Broza:

Barton & Loguidice, D.P.C. (B&L) is pleased to provide the attached Sound Study for the Someplace Upstate development project in the Town of Marlborough, NY.

In addition, we have reviewed the potential traffic volumes expected due to the operation of the venue. To review the worst case scenario, an event that includes a more rigid start time would encourage more attendees to arrive in a closer window of time such as a wedding event. Picnics, or other events with a more flexible schedule, would provide a wider distribution of arrival times with the traffic more spread out over time. Also taken into consideration is that events are not going to occur during typical peak traffic periods such as a morning commute or afternoon commuting time period. US Route 9W is the access point for those attending events at the site and has ample capacity for an additional 90 vehicles added to an on and off-peak traffic period.

The ITE Trip Generation, 11th Edition was reviewed to determine if there is an appropriate Land Use Code (LUC) for wedding and event center type venues. Currently no LUC exists but there are common industry accepted assumptions that can be used to determine a site's trip generation. The following are assumptions for determining the trip generation for the site:

- 10% of the site trips will be vendors and workers that arrive prior to the bulk of trips for the wedding party or event,
- 20% of guests will arrive to the site by bus service,
- 70% of guests will arrive within one hour during the peak hour,
- Typically wedding guests arrive with approximately 2.0 to 2.5 people per vehicle (the analysis assumes a conservative estimate of 2.0 people per vehicle),
- 100% entering and 0% exiting during the peak hour, and
- This scenario assumes that the event center is at 100% capacity for an event.

The venue's capacity is anticipated to be 250 people in total. The results of the above assumptions are summarized below and translate to an assumed number of vehicle trips during the peak hour:

- 25 people will be vendors and workers,
- 45 people will be guests that arrive to the site by bus service,

- 180 people will be guests that arrive by car, and
- Worst case scenario – 90 vehicles will arrive entering the property during the evening peak hour.

The magnitude of the new vehicle trips generated at the site is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one intersection approach for needing off-site intersection analysis. No further traffic analysis is required for the site.

The existing parking facility is 0.5 acres in area and is currently a turf and soil surface adequate to accommodate the 90 vehicles that may enter the site. Retaining this permeable parking surface will continue to help with the infiltration of stormwater and not increase the runoff that an asphalt surface would create. Additionally, the softer ground surface provides additional sound attenuation when compared to a hard, more reflective surface such as concrete, asphalt, and water bodies.

B&L prepared turning templates for a full size (45' wheelbase, 50+ passenger) tour bus and has provided turning templates showing this worst case. These are included in Appendix B. While turning onto James Street and Mount Rose Road, the bus will utilize the space available at the intersections while turning as shown on the turning templates. This is typical of most local roads that are designed to accommodate passenger vehicles, medium sized two-axle delivery trucks, and the occasional larger vehicle. When initiating turns to and from Route 9W, the bus and other vehicles such as oil delivery trucks, delivery trucks, and other single unit (SU) trucks, will not encroach into the opposite lanes of Route 9W.

During the event when sound measurements were conducted, low level "string type" lighting no higher than 48" off the ground was observed. It was apparent that this lighting was safety related and helped provide clear sight paths to those walking at the site. The lighting did not project more than 4 to 5 feet from the source at a low intensity. As we understand there will be no flood lighting or elevated lighting systems as part of this project/application.

If you have any questions, or wish to discuss, please contact me at 518 218-1801 or by email at tbaird@bartonandloguidice.com.

Sincerely,

BARTON & LOGUIDICE, D.P.C.

Thomas C. Baird, P.E.
Sr. Associate

Sound Study

Introduction

The purpose of this report is to present the results of a sound testing procedure conducted by Barton & Loguidice, D.P.C. on October 12, 2024 at the Someplace Upstate site bordered by Mount Rose Road, Front Street and James Street in the Town of Marlborough, NY 12542.

Noise (Sound) Fundamentals

Noise can be generally defined as unwanted sound in and around our environment. When speaking of noise in relation to sound, any activity may be referred to as *noisy*. Aircraft, a conversation, a child crying, or traffic can also be considered noise if the receptor (person) does not want to hear the sound. Sound waves contain energy in the form of pressure and are measured along a scale in units called decibels. On this scale, the normal range of human hearing extends from about 0 dB to about 140 dB and it is this range that is used in acoustical (or noise) studies related to human hearing.

Human Response to Sound

Experimentation has determined that the frequency response of the human ear results in a perceived doubling of loudness with every 10 dB increase; whereas a 5 dB increase is a noticeable change, and a 3 dB increase is barely noticeable to most people. Sound levels above 85 dB are considered harmful, while 120 dB is unsafe and 150 dB causes physical damage to the human body. Windows break at approximately 163 dB. Jet airplanes create sound levels at approximately 133 dB at 100 feet, or 100 dB at approximately 500 feet. Eardrums rupture at 190 to 198 dB and sound levels of approximately 200 dB can cause death to humans and are generated near bomb explosions. Even louder are nuclear bombs, earthquakes, tornadoes, hurricanes and volcanoes, all capable of exceeding 240 dB.

Based on the NYSDEC Program Policy "Assessing and Mitigating Noise Impacts", increases in sound pressure under 5 dBA are considered unnoticed to tolerable to human perception.

Another property of sound is the time varying pattern of the intensity of the sound. Since sound levels (and pressures) fluctuate, the equivalent sound level, L_{eq}, was developed to quantify the time varying pattern of sound by providing a single sound pressure level that represents hundreds and many times 1000's of samples taken over a specified period of time. From this sampling data, a single value of sound for the period measured is developed. This is useful in establishing ambient (background) sound levels (L_{90}) and to develop the equivalent sound pressure exposure over a period of time (L_{eq}). For example: a one (1) second exposure to an 80 dB sound will not likely result in hearing damage, but exposure to 80 dB over a continuous 8 hour period may result in permanent hearing damage. In studying variable level environmental sound in accordance with the NYSDEC Noise Policy, the equivalent exposure time that may constitute a noise impact is 1-hour and is represented by the one-hour equivalent sound level or $L_{eq(1)}$. This is typically the measure as to which sound levels are evaluated when seeking the level from all sources in the sound environment acting as one.

Multiple Sound Sources

The total sound pressure created by multiple sound sources does not create a mathematical additive effect. For instance, two proximal sound sources that are 65 dBA each do not have a combined sound level of 130 dBA. In this case the combined sound level is 68 dBA. A mathematical formula used in these studies to calculate the additive effect is:

Where L_T = combined sound level and $L_{1,2,.....n}$ = sound level in decibels the formula is:

$$L_T = 10*\log_{10}(10\text{^}(L_1/10) + 10\text{^}(L_2/10) + 10\text{^}(L_3/10) + \ldots\ldots\ldots 10\text{^}(L_n/10))$$

The following NYSDEC table provides a simplification of the mathematical equation by reducing the formula to a convenient method of adding decibels. These are to be used as a rule of thumb and will give a reasonable summation of multiple sound sources.

Table 1
Approximate Addition of Sound Levels

Difference Between Two Sound Levels	Add to the Higher of the Two Sound Levels
1 dB or less	3 dB
2 to 3 dB	2 dB
4 to 9 dB	1 dB
10 dB or more	0 dB

NYSDEC Program Policy "Assessing and Mitigating Noise Impacts".

If the difference between the two sound levels is 0 dB, the table tells us to add 3 dB to the higher of the two sound levels to compensate for the additive effects of the sound. For several sources of sound, present at the same time, The difference first between the two lowest sound pressure levels is calculated and that result is added to the next highest source. Follow this process until all the sound levels are accounted for. As an example, if sound sources of 65 dBA, 67 dBA, 72 dBA and 74 dBA were to be added, the resultant sound level would be:

65 dBA + 67 dBA = **69** dBA ⇨ **69** dBA + 72 dBA = **74** dBA ⇨ **74** dBA + 74 dBA = **77 dBA**

or ↷ 65 + 67 + 72 + 74 = 77 dBA

Sound Level Reduction Over Distance

It is important to have an understanding of the way sound decreases with distance. The decrease in sound level from any single sound source normally follows the "inverse square law." That is, the sound pressure changes in inverse proportion to the square of the distance from the sound source. At distances greater than 50 feet from a sound source, every doubling of the distance produces a 6 dBA reduction in the sound for point sources such as air conditioners, compressors, a rock concert, or a rock crusher. Therefore, a sound level of 70 dBA at 50 feet would have a sound level of approximately 64 dBA at 100 feet. At 200 feet, sound from the same source would be have a level of approximately 58 dBA. When dealing with a "line source", such as moving traffic stream, the sound levels will decrease approximately 3 dBA over hard surfaces such as water, asphalt, or concrete and between 5 and 6 dBA per distance doubled over grass or other soft surfaces.

Example:

At 50 feet = 70 dBA (This is the Reference Distance)
At 100 feet = 64 dBA
At 200 feet = 58 dBA
At 400 feet = 52 dBA
At 800 feet = 46 dBA
At 1600 feet = 40 dBA

Table 2
Common Sound (Noise) Levels

Common Outdoor Sound Levels		Sound Level (dBA)		Common Indoor SoundLevels
	---	110	---	Rock Band
Jet Fly over at 1000 Ft.	---	100	---	Inside Subway Train (New York)
Gas Lawn Mower at 3 Ft.	---	90	---	Food Blender at 3 Ft.
Hvy Truck @ 50', (50 mph)				Garbage Disposal at 3 Ft.
Noisy Urban (Daytime)	---	80	---	Shouting at 3 Ft.
Gas Lawn mower at 100 Ft.	---	70	---	Vacuum Cleaner at 10 Ft.
Commercial Area Heavy Traffic Cat 300 Ft.	---	60	---	Normal Speech at 3 Ft. Large Business Office
Quiet Urban (Daytime)	---	50	---	Dishwasher Next Room
Quiet Urban (Nighttime)	---	40	---	Small Theatre (Background)
Quiet Suburban (Nighttime)				Library
	---	30	---	Bedroom at Night Concert Hall (Background)
Quiet Rural (Nighttime)	---	20	---	Broadcast and Recording Studio
	---	10	---	Threshold of Hearing
	---	0	---	

Noise Code(s), Policies

The Town of Marlborough Noise Code, Chapter 105. *Noise,* is included in Appendix A. Below are some highlights.

- A measuring instrument used to assess noise or sound levels by measuring sound pressure. To be eligible as proof of a violation, the decibel meter instrument must be maintained and calibrated on a regular basis, according to the manufacturers recommendations.
- Between the hours of 10:00 p.m. and 7:00 a.m. Sunday through Thursday and 11:00 p.m. and 7:00 a.m. Friday and Saturday, any sound that exceeds 55 decibels as measured at the property line of the property from which the sound emanates or is produced.
- Between the hours of 7:00 a.m. and 10:00 p.m. Sunday through Thursday and 7:00 a.m. and 11:00 p.m. on Friday and Saturday, any sound that exceeds 65 decibels as measured at the property line of the property from which it emanates or is produced is prohibited.

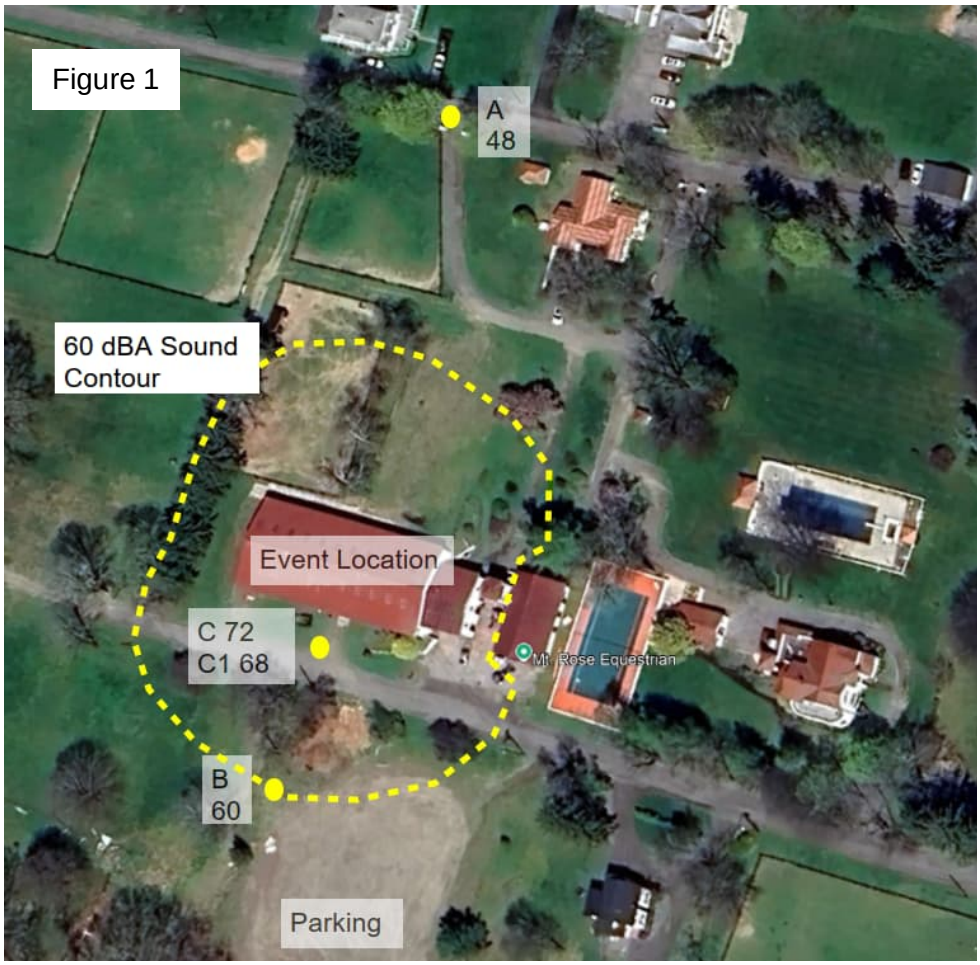
Since sounds levels are variable over even just fractions of seconds, typically a time-weighted average is utilized. In traffic studies, this is usually the 1-hour equivalent sound level discussed earlier, interior work situations such as a factory or an office, it is typically measured and expressed as an 8-hour level for an 8-hour day or 8 hour exposure. The Town Code

does not specify any time interval for the measurement of sounds. For engineering environmental studies in NY, the absence of a time interval defers to the NYSDEC Program Policy "Assessing and Mitigating Noise Impacts". The policy provides guidance that utilizes the 1-hour equivalent sound level

Measured Levels

Sound level measurements were performed at multiple locations on October 12, 2024 between the hours of 6:52 p.m. and 10:17 p.m. at the locations identified in Table 3 and shown on Figure 1. This day and time was selected due to favorable weather conditions and a wedding ceremony and reception was planned at the measurement site. The measurement durations varied utilizing a time period that provided enough data to represent an equivalent 1-hour sound level $L_{eq\ (1)}$, and L_{10}, and L_{90} levels. Additional shorter duration measurements were taken to provide representations of the sound environment and in all cases except one, the time period was sufficient to determine a Leq.

Field measurements were obtained using a Casella CEL-63X (ANSI Type II) sound level meter. The meter is a battery-powered instrument that was set up approximately four and one-half (4.5) feet above the ground, at a 45 degree angle, with a wind screen attached to the microphone. The measurement locations were obtained at or within the property line boundary of the subject property where appropriate and at two other locations discussed in the sections below. The weather was clear with the temperature between 61 and 52 degrees Fahrenheit with humidity between 34% and 51%. There was no discernable wind at the measurement locations. These meteorological conditions are within the sound meters parameters for accurate operation as recommended by the manufacturer. The meter was set to a 3dB exchange rate, fast response and the "A" weighting scale was utilized to best represent human response to sound.



The wedding reception began at approximately 6:30 PM and measurements of the ceremony were commenced once music was turned up in volume and the DJ was fully interacting with the guests. Doors were open on both sides of the building to collect the data.

Table 3 below includes the sound measurement data.

Table 3
Measured Sound Levels

Measurement Site	Primary Source(s) of Sound	Time	Date	Lmax (dBA)	Leq (dBA)
Property Line A	Wedding Reception Doors Open Car Alarm from neighbor on James Street	6:52 p.m. to 7:24 p.m. (32 min.)	10/12/24	62.5 (Alarm)	47.6
Property Line A	Wedding Reception Doors Open Car horn from subject property	7:51 p.m. to 8:29 p.m. (38 min.)	10/12/24	66.0 (Car horn)	45.4
B	Wedding Reception Doors open Guests in parking lot, door slamming	8:50 p.m. to 9:21 p.m. (31 min.)	10/12/24	68.6	59.8
Property Line C	Wedding Reception 25' from Open Door	9:23 p.m. to 9:44 p.m. (21 min.)	10/12/24	83.7	70.8
Mt. Rose Road C	Wedding Reception 25' from Open Door	9:48 p.m. to 10:12 p.m. (29 min.)	10/12/24	86.3	72.2
Mt. Rose Road C - 1	Wedding Reception **25' from Partially Closed Door**	9:45 p.m. to 9:47 p.m. (2 min.)	10/12/24	-	68.3

Discussion of Measurement Results

Measurement Location A – 300' from the primary sound source

In accordance with the Town Noise Code, Location A is the closest property line to the north of the sound source being measured. Sound levels were recorded between 6:52 and 8:29 p.m. during the wedding reception with music playing and DJ interaction with the crowd. This location is 300' from the building where the reception was taking place. The 1 Hour equivalent sound level was recorded as 48 dBA which is less than the 65 dB criteria. A peak of 66 dBA was noted due to a car horn. Sound levels

Measurement Location B - 125' from the primary sound source

Sound levels were recorded between 8:50 and 9:21 p.m. during the wedding reception. Instantaneous levels were in the low 50 to low 60 dBA range with an equivalent 1 hour sound level of 60 dBA. The parking lot area is under ownership of the applicant. Peak levels exceeded 65 dBA (69 dBA) due to car doors and the movement of a motor vehicle within 30 feet of the sound meter. The measurement, taken directly across from the open door of the venue with consistent music and DJ interaction, showed that at the distance of 125', the 1 hour equivalent sound levels produced is 5 dBA below the Town criteria of 65 dB.

Measurement Location C, C1 – 25' from the building on the edge of Mt. Rose Road

Sound levels were measure just 25' from the open door commenced and were recorded between 9:48 and 10:12 p.m. during the wedding reception. Music, DJ announcements, and sound from the wedding guests were occurring simultaneously with music dominating the soundscape. Instantaneous levels were in the mid 70's (dBA) range. The equivalent sound level was recorded as 72 dBA which is 7 dBA above the Town Criteria. This is not surprising considering how close the measurements were to the open doors. To help understand the sound levels if the door was closed, a short measurement of 2 minutes was performed. The measurement was conducted this way to compare the sound levels while the same song was playing at a consistent level with both with the door open and partially closed. The bottom of the door does not contact the ground or a typical door threshold, and therefore, is not an entirely effective barrier to sound pressure. Providing a weather tight seal on the door would reduce sound levels in the 8 to 10 dBA range when closed. The partial closing of the door resulted in an expected 4 dBA reduction to 68 dBA.

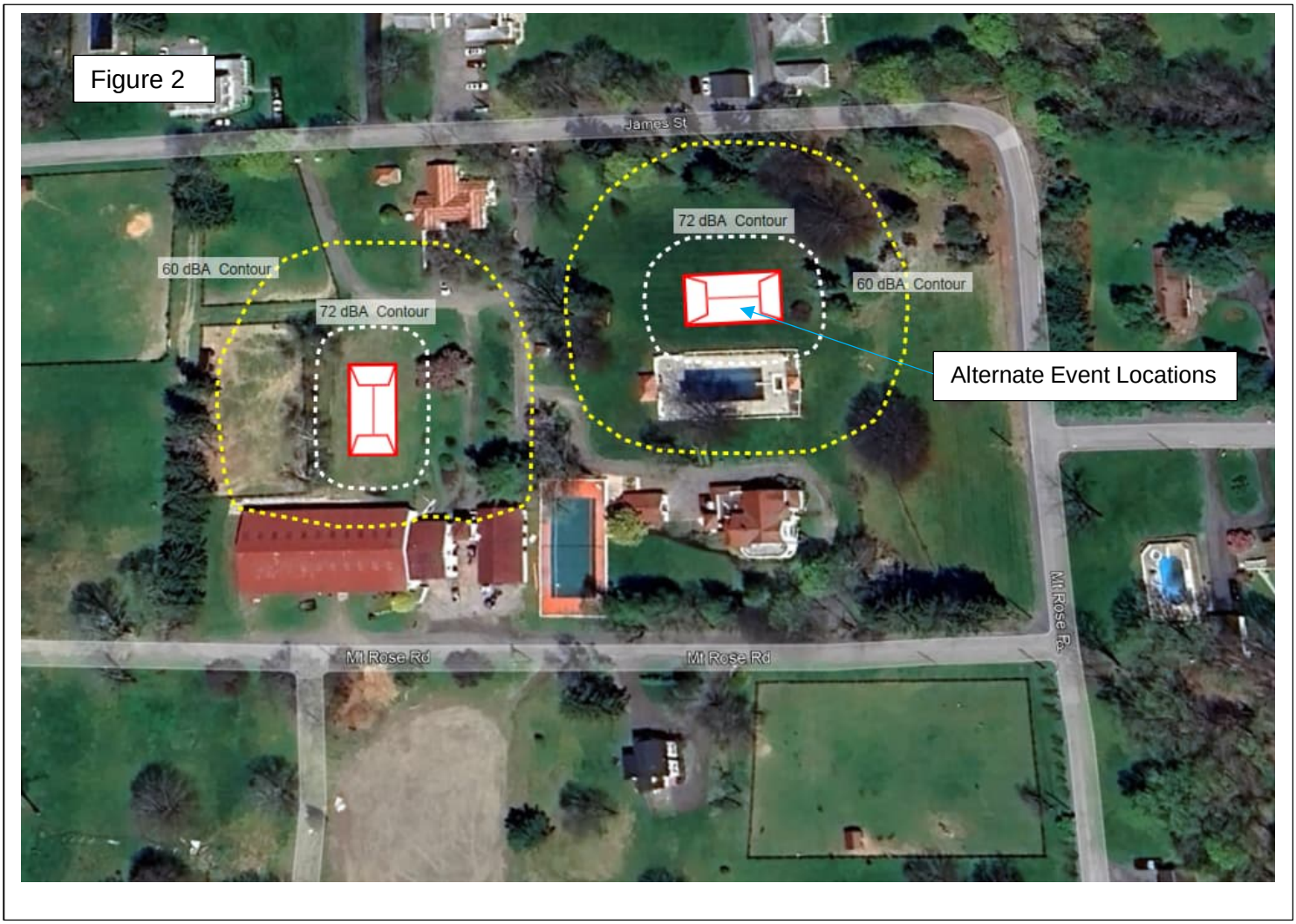
Alternate Event Locations

There is the potential to utilize additional space on the site (as shown on Figure 2) where gatherings with non-amplified music may, on some occasion, take place. Sound from these events will not be amplified and will lower than the event measured on October 12. Utilizing the measured levels from the wedding reception as a worst case, sound level contours were developed and plotted on Figure 2 with the locations where the alternate gatherings would take place. Note only one alternate location at a time). The two alternate locations would not be the cause of a noise impact as the 60 dBA contour is within the applicants property line.

Conclusion

The data provided in this study demonstrates that the A-weighted sound levels generated by the Project at the closest property lines properties will not be the cause of sound impacts that exceed 65 dBA which is consistent with the NYSDEC Policy and the Town criteria of 65 dB. The exception is the area 25' from the event building at the edge of Mount Rose Road. Sound levels in this area were a consistent 72 dBA (1-hour Leq). Mitigation, such as a weather tight door on the south side of the building, in lieu of the open door, would reduce the 1 hour equivalent sound level to below 65 dBA complying with the Town Code. A factor to be considered is that the applicant owns the property on both sides of Mount Rose Road in this location. Referring to Figure 1, a 60 dBA sound contour has been provided around the site to assist in

estimating sound levels on the property. There are alternate outdoor sites that are identified on Figure 2 where event gatherings may take place. Utilizing the sound results from the worst case wedding reception, sound levels will be below the 65 dB criteria of the Town.



Appendix A

Town of Marlborough Chapter 105 - Noise

Chapter 105. Noise

[HISTORY: Adopted by the Town Board of the Town of Marlborough 7-12-2010 by L.L. No. 5-2010. Amendments noted where applicable.]

GENERAL REFERENCES
Alarm systems — See Ch. **53.**
Explosives and blasting — See Ch. **93.**
Juvenile curfew — See Ch. **100.**
Peddling and soliciting — See Ch. **111.**

§ 105-1. Legislative intent.

The Town Board of the Town of Marlborough declares its intent to regulate and control loud and disturbing noise. By enactment of this chapter, the Town Board intends to promote the health, safety, and welfare of the Town through such control.

§ 105-2. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

AMPLIFICATION
Any means by which a sound is magnified.

CODE ENFORCEMENT OFFICER
Any officer appointed by resolution of the Town Board, including but not limited to police, building inspector, or code enforcement officer.

DECIBEL METER INSTRUMENT
A measuring instrument used to assess noise or sound levels by measuring sound pressure. To be eligible as proof of a violation, the decibel meter instrument must be maintained and calibrated on a regular basis, according to manufacturer's recommendations.

NOISE
Any sound that exceeds decibel limit as described herein at the property line from which property the sound emanates or is produced.[1]

[1] *Editor's Note: The former definition of "plainly audible," which immediately followed, was repealed 7-23-2018 by L.L. No. 2-2018.*

§ 105-3. Prohibited noises.

[Amended 7-23-2018 by L.L. No. 2-2018]

A. Between the hours of 10:00 p.m. and 7:00 a.m. Sunday through Thursday and 11:00 p.m. and 7:00 a.m. Friday and Saturday, any sound that exceeds 55 decibels as measured at the property line of the property from which the sound emanates or is produced.

B. Between the hours of 7:00 a.m. and 10:00 p.m. Sunday through Thursday and 7:00 a.m. and 11:00 p.m. on Friday and Saturday, any sound that exceeds 65 decibels as measured at the property line of the property from which it emanates or is produced is prohibited.

§ 105-4. Exemptions.

[Amended 7-23-2018 by L.L. No. 2-2018]
Exemptions are as follows:

A. All sounds produced by any accepted agricultural activity/practice or as defined in the Right to Farm Law of the Town of Marlborough are exempt from this chapter.

B. Sounds connected with sporting or educational events of any public or private entity including schools are exempt. Use of loudspeaker, public address systems, or other amplified speaker systems for these uses are exempt from this chapter.

C. Sounds created by any government agency for a public purpose are exempt.

D. Emergency construction repair work at all times to preserve safety or prevent property damage is exempt.

E. Sounds created by public utilities in carrying out their franchises are exempt. Refuse removal by public or private companies are exempt.

F. Music or other sounds produced in connection with any military or civic parade, ceremony, or celebratory procession are exempt. A holiday festival which is transitory in nature is exempt.

G. Sounds created by lawnmowers, leaf blowers, snow blowers, chainsaws and other small engines between the hours of 7:00 a.m. and 9:00 p.m. Monday through Saturday and between the hours of 10:00 a.m. and 9:00 p.m. Sunday are exempt.

§ 105-5. Owner's liability.

The owners of the premises upon which prohibited acts occur shall be jointly and severally liable for all violations of this chapter.

§ 105-6. Enforcement; abatement of nuisances; injunctive relief.

Upon receipt of written or verbal complaint, the police or code enforcement officer shall investigate said complaint; upon determination of violation of this chapter, an appearance ticket shall be issued. Such order shall state the nature of violation and the provision of the chapter violated, shall state that immediate compliance is required and that failure to comply may result in proceeding to compel compliance or to assess penalty.

§ 105-7. Penalties for offenses.

[Amended 7-23-2018 by L.L. No. 2-2018]
Penalties are as follows:

A. A violation of this chapter is hereby declared to be an offense, with conviction of the first offense punishable by a fine of up to $1,000 or imprisonment not to exceed 15 days, or both. For the conviction of a second or subsequent offense that was committed within a period of five years from the prior offense, a violator shall be subject to a fine of up to $5,000 or imprisonment not to exceed 15 days, or both. Each day shall constitute a separate violation.

Appendix B

Turning Templates


Mount Rose Road
James Street
US Route 9W
BUS 45
BUS 45


Mount Rose Road
James Street
US Route 9W
BUS 45
AMBU 28W (W)
BUS 45
AMBU 28W (E)

James Street

Mount Rose Road

US Route 9W

BUS—45
AASHTO 2004 (10ft)

GLOSSARY

1. A-weighted decibel - dBA or dB(A) - A-weighted decibel (dBA or dB(A)) is an expression of the relative loudness of sounds as perceived by the human ear. A-weighting gives more value to frequencies in the middle of the human hearing range and less value to frequencies at the upper and lower limits of human hearing. A-weighting is typically the standard for determining impacts and noise pollution. A-weighting is the most common, but other weighting systems exist. The most common are A, C and Z.

2. Sound Power - The sound power or acoustic power is the sound energy constantly transferred per second from the sound source. A sound source has a given constant sound power that does not change if it is placed in a different environment. Sound power is a theoretical value that is not measurable. It is calculated and expressed in watts and as sound power level LW in decibels. A sound source produces sound power and this generates a sound pressure fluctuation in the air. Sound power is the distance independent cause of this, whereas sound pressure is the distance-dependent effect.

3. Sound Pressure - Sound pressure is measure of the difference between the pressure caused by a specific sound wave and the ambient pressure at the same location. To measure sound pressure as it affects hearing, a logarithmic scale is used. The resulting sound pressure levels are expressed as decibels (dB). Sound pressure may also be referred to as sound pressure level.

4. Octave Frequency Bands - Octave frequency bands divide the audio spectrum into 10 equal parts. The middle frequencies of these bands are defined as 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz and 16 kHz. Sound levels that have passed through an *octave band pass filter* are termed *octave band sound levels*.

5. Hertz (Hz) - hertz, unit of frequency. The number of hertz (abbreviated Hz) equals the number of cycles per second.

6. Automobiles (A) - All vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles), or transportation of cargo (light trucks). Generally the gross vehicle weight is less than 4,500 kilograms.

7. Noise Abatement Criteria - The noise levels established for various activities or land uses which represent the upper limit of acceptable traffic noise level conditions.

8. Design Year - The future year used to estimate the probable noise levels for the build out of the proposed facility, roadway, or other development.

9. Existing Noise Levels - The noise, made up of all the natural and man-made noises, considered to be usually present (unique noise events may be excluded) within a particular area's acoustical environment.

10. Heavy Trucks (HT) - All vehicles having three of more axles and designed for the transportation of cargo. Generally, the gross weight is greater than 12,000 kilograms.

11. L_{eq} - The equivalent steady state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period.

12. L_{eq} (1) - The one-hour value of L_{eq}.

13. Medium Trucks (MT) - All vehicles having two axles and six wheels designed for the transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kilograms but less than 12,000 kilograms.

14. Noise Level - The sound level obtained through use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used.

15. Noise Standards - The criteria utilized to determine potential impacts or processes and procedures to determine potential impacts due to noise. The standards can include town, village, city, county, state and federal regulations.

16. Operating Speed - The highest overall speed at which a driver can travel on a given highway under favorable weather conditions and under prevailing traffic conditions, without at any time exceeding the safe speed as determined by the design speed on a section-by-section basis.

17. Noise Impacts - Impacts which occur when noise levels exceed noise abatement criteria, when the predicted noise levels substantially exceed the existing noise levels, or as defined by the noise standard applied to the project or undertaking.