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August 18, 2022

Gerry Sharpe
SmartLink
1997 Annapolis Exchange Parkway
Suite 200
Annapolis, MD 21401

SUBJECT: AT&T Site CT1024 Westport, CT – Noise Study

Dear Gerry,

I have conducted a study of the noise impacts from the proposed facility at 92 Greens Farm Rd. in Westport, CT. This study is submitted in connection with Section VII of the Application Narrative which directs the Applicants to determine the consistency of the proposed site with the Town's existing land use regulations, even though the Application is subject to the exclusive jurisdiction of the Connecticut Siting Council.

This study addresses both AT&T and Verizon equipment, as Verizon will co-locate.

Noise Level Limits

Section 32-16.6.3 of the Westport Zoning Regulations provides that all generators and equipment for a cell tower shall comply with all state and local noise and emissions regulations. Westport does not appear to have a local ordinance that provides any noise level limits.

The Connecticut Department of Energy and Environmental Protection (DEEP) Regulations (Regulations of Connecticut State Agencies "R.C.S.A.") provide noise level standards in 22a-69-3.5 Noise Zone Standards. It should be noted that R.C.S.A. Section 22a-69-1.8(f) specifically exempts emergency generators from the standards.[1] Nevertheless, this noise analysis takes into consideration the operation of the emergency generator to demonstrate compliance with the standards.

These standards are based on the Noise Zone Class of the emitter and receptor properties. This project and surrounding parcels meet the definition of a Class A Noise Zone. The noise level standards at the property boundary are therefore 55 dBA during the day and 45 dBA at night. Daytime is defined as 7 am to 10 pm. Pursuant to 22a-69-1.5, deviation from the standards set in the DEEP Regulations do not necessarily constitute a nuisance. Moreover, under 22a-69-3.6, where the existing background noise levels already exceed the noise standards in the DEEP Regulations, a source shall be compliant with the DEEP Regulations if it does not exceed the background noise level by 5 dBA and does not exceed 80 dBA at any time. Accordingly, to determine whether a proposed noise level constitutes a nuisance, it is necessary to measure the

[1] R.C.S.A. §22a-69-1.8(f) Exemptions. (f) Noise created as a result of, or relating to, an emergency.

existing ambient noise to ascertain whether the proposed noise level would have any impact on the surrounding area.

Existing Sound Levels

To determine the existing levels in the vicinity of the site, monitoring equipment was installed on the site to collect data for several days. The attached figure 1 depicts the monitor location and Figure 2 presents a plot of hourly equivalent A-weighted sound level (LAeq-1hr). The lowest level reached, between 1 and 2 am on Sunday, was 66 dBA.
Sound levels in this area are dominated by noise from traffic on Interstate 95, which runs adjacent to the site to the south. Existing levels are already well above the DEEP standards for a Class A Noise Zone.

Noise Sources

The following noise sources will be located at the proposed site:

1. Marvair ECUA12 air conditioner (AT&T)
2. Schrofftech AF00135 direct air cooling unit (AT&T)
3. (2) Commscope CMC74-36E Equipment Cabinets (Verizon)
4. Commscope CMC74-36B Battery Cabinet (Verizon)
5. Generac SDC20 backup generator (AT&T)
6. Generac SG035 backup generator (Verizon)

This study was based on sound data provided by each manufacturer.

The air conditioner and direct air cooling unit are integrated into the AT&T walk-in enclosure (WIC). The direct air cooling unit mounted in the entry door (east side) and the air conditioner in the opposite wall (west side). Note that these devices do not operate simultaneously. The air conditioner is engaged when the outside air temperature is too high for direct cooling.

The Verizon equipment is assumed to operate and generate noise continuously. This is likely conservative, but the only data provided depicts the worst-case condition and this has been used in the study.

The generators will be operated for 20-30 minutes during daytime hours twice each month for maintenance but will otherwise only operate during a power emergency.

Modeling

A computer model was constructed in SoundPLAN, an industry-standard software application for modeling of sound propagation in the environment. Calculations were based on ISO 9613-2 Attenuation of Sound During Propagation Outdoors. To model the worst-case unfoliated condition, no trees or other foliage were included in the model. The model conservatively assumes that all receivers are downwind of the source.

There are several possible noise scenarios. Each was modeled and the results included in the attached Figures 3-6:

- Figure 3: AT&T Ventilator + Verizon equipment (typical nighttime condition)
- Figure 4: AT&T Secondary AC + Verizon Equipment (hot day condition)
- Figure 5: Both Generators + AT&T Ventilator & Verizon Equipment (typical generator test condition)
- Figure 6: Both Generators + AT&T Secondary AC & Verizon Equipment (hot day generator test condition)

While it is more likely that the generators will be operated for maintenance at different times, it was conservatively assumed that they would operate simultaneously (Figs. 5 & 6).

The worst-case daytime scenario is Figure 6. In this scenario, the property-line noise level at the edge of Greens Farm Rd. is 55 dBA. This meets the 55-dBA DEEP daytime standard, and more importantly, this is 11 dBA below the lowest existing level measured. Therefore, the proposed site will not increase the existing property-line sound level. The proposed site is consistent with the DEEP Regulations.

The worst-case non-emergency nighttime scenario is Figure 4. The property-line noise level at the edge of Greens Farm Rd. is 50 dBA. Although this exceeds the DEEP standard of 45 dBA, it is 16 dBA below the lowest existing overnight level measured. Therefore, it will not increase the existing property-line sound level and is unlikely to be audible. Accordingly, the proposed site is compliant under 22a-69-3.6, and is consistent with the DEEP Regulations.

Conclusion

The existing noise levels resulting from traffic on Interstate 95 far exceed the property-line noise level standards provided by DEEP. Although the proposed secondary air conditioning equipment is expected to exceed the nighttime DEEP standards, it is well below the existing nighttime levels measured at the site. Therefore, it will not increase the existing property-line sound level and is unlikely to be audible. Accordingly, the proposed site is compliant under 22a-69-3.6, and is consistent with the DEEP Regulations. Further, no combination of proposed equipment has any potential for adverse noise impact.

Sincerely,

Eric L. Reuter, FASA, INCE Bd. Cert.
Principal

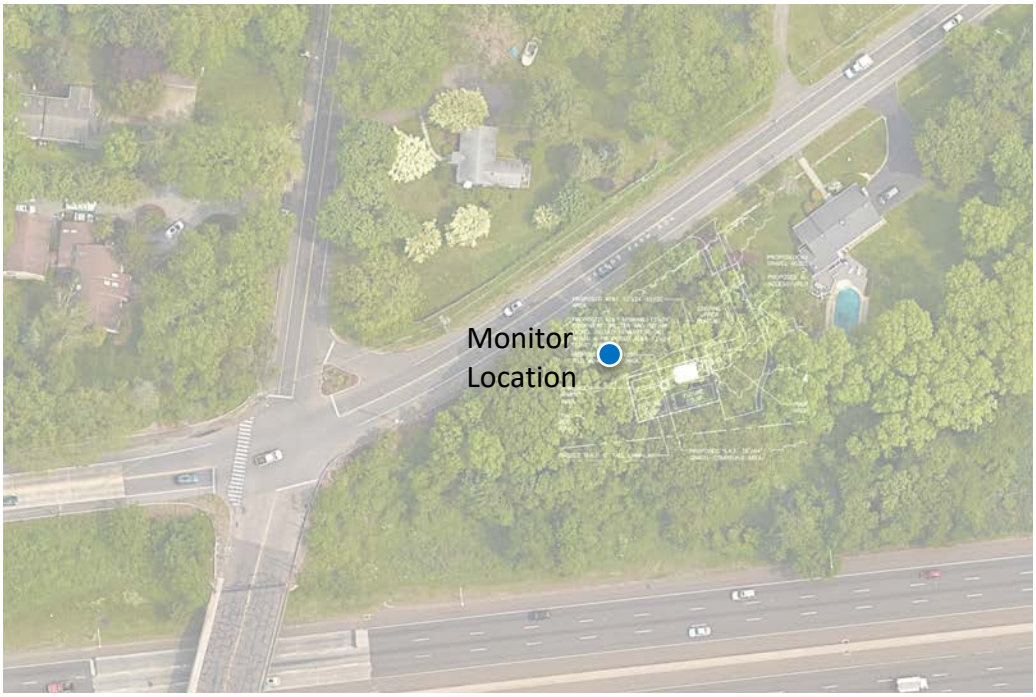

Figure 1 – Monitor Location

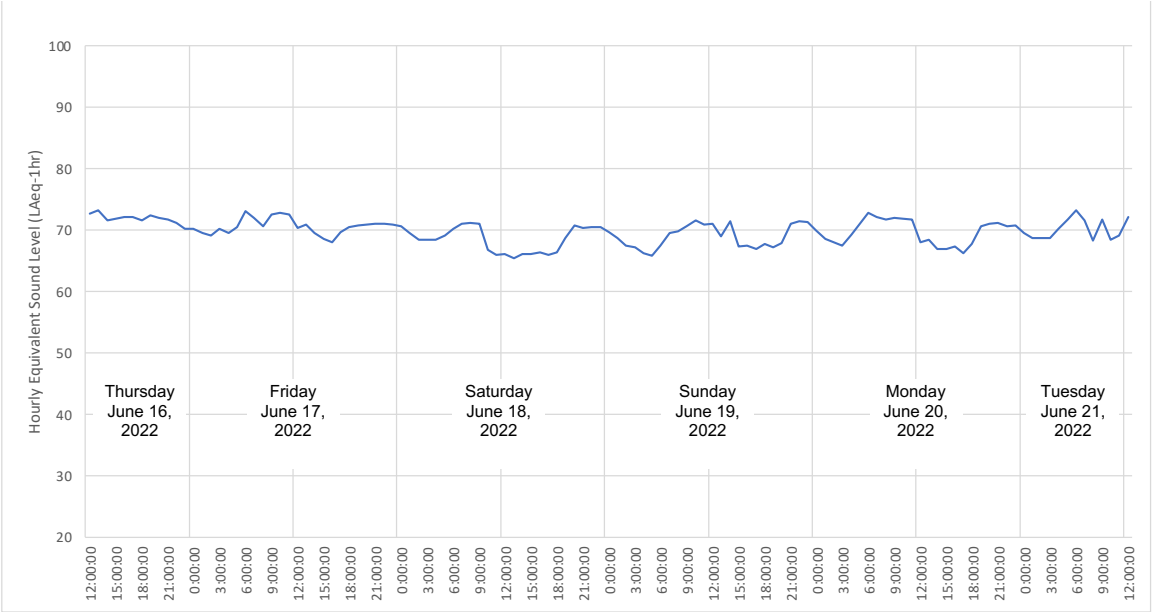

Figure 2 – Monitor Data

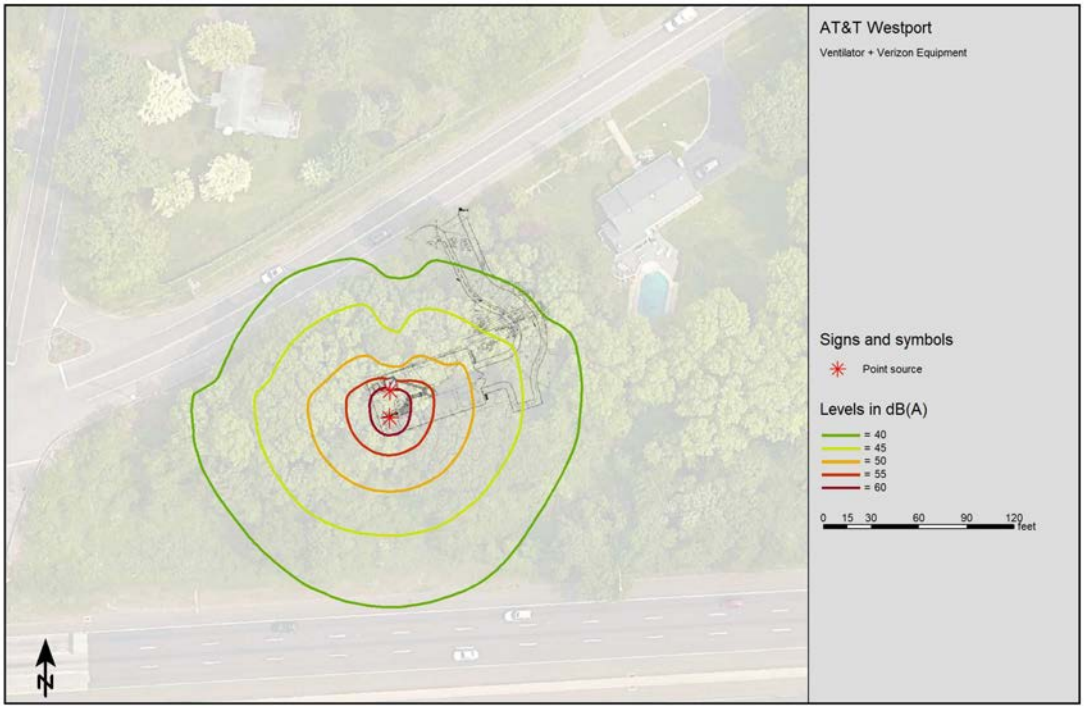

Figure 3 – AT&T Primary Ventilator + Verizon Equipment

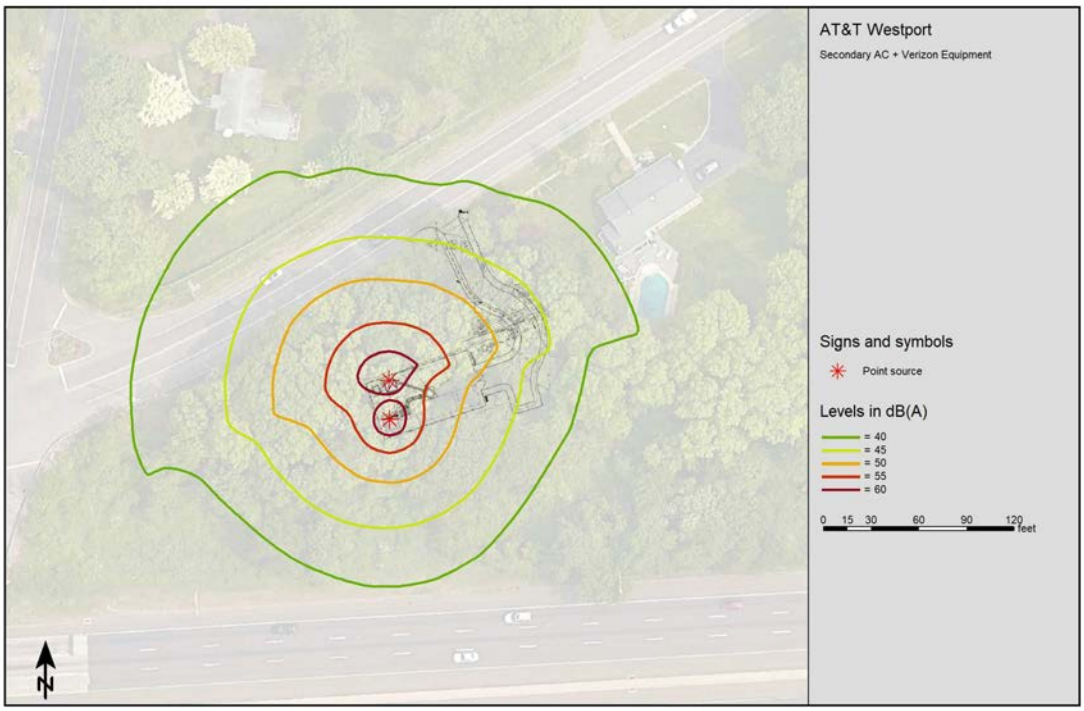

Figure 4 – AT&T Secondary AC + Verizon Equipment

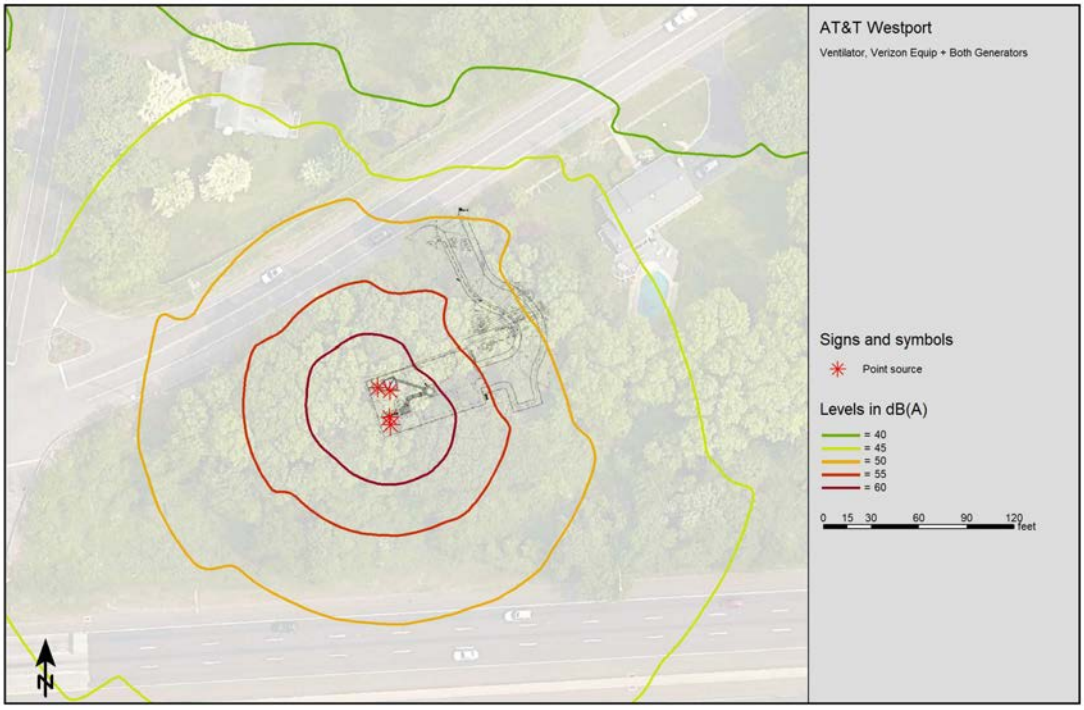

Figure 5 – Generator Test (both) + Ventilator & Verizon Equipment

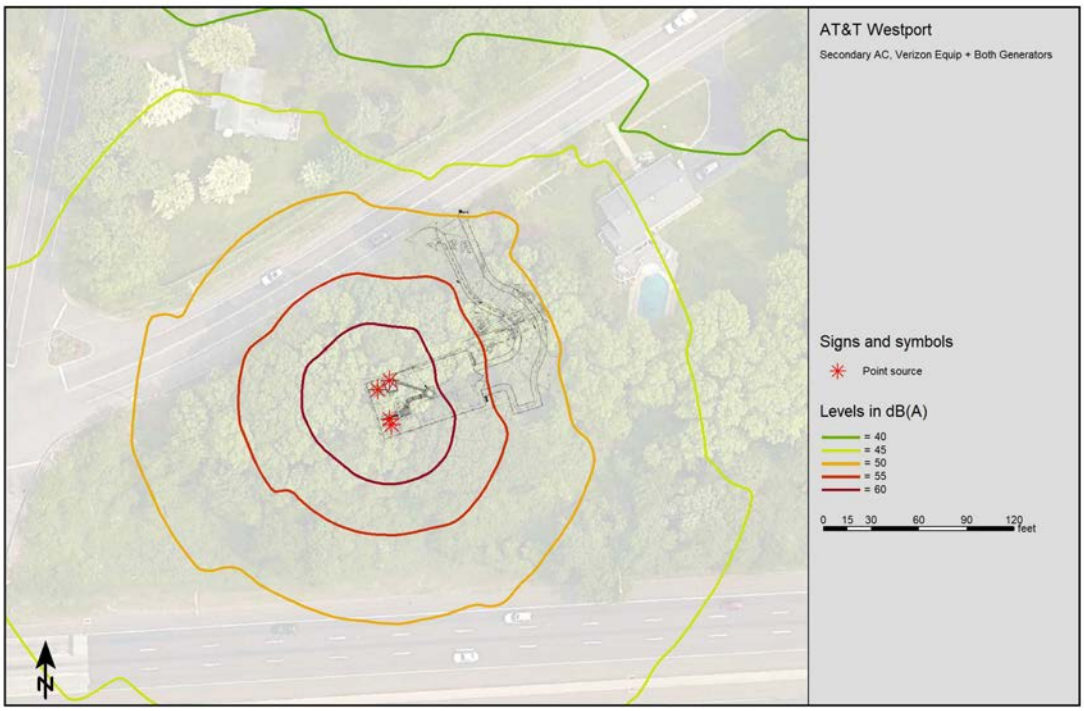

Figure 6 – Generator Test (both) + Secondary AC & Verizon Equipment