AT&T Mobility • Proposed Base Station (Site No. CNU4220)
3589 Nevada Street • Pleasanton, California EXHIBIT B

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal telecommunications carrier, to evaluate its base station (Site No. CNU4220) proposed to be located at 3589 Nevada Street in Pleasanton, California, for compliance with appropriate guidelines limiting sound levels from the installation.

Executive Summary

AT&T proposes to install a new base station at 3589 Nevada Street in Pleasanton, to include an equipment shelter and a stand-by diesel generator. Noise levels from the equipment operations will be below the allowed municipal limits.

Prevailing Standard

The City of Pleasanton sets forth limits on sound levels in Section 4 "Noise Regulations" of Chapter 9 "Health and Safety" of its Municipal Code, including the following maximum outdoor noise levels by land use category, to be assessed at the nearest property line:

Originating Land Use	Maximum Level	Reference
Residential	60 dBA	§9.04.030
Commercial	70 dBA	§9.04.040
Industrial	75 dBA	§9.04.050

The emergency use of standby electricity generators is exempt from these limits (§9.04.072), as well as (§9.04.020) the "routine testing … as may be necessary to assure reliability in the event of emergencies."

Figure 1 attached describes the calculation methodology used to determine applicable noise levels for evaluation against the prevailing standard.

General Facility Requirements

Wireless telecommunications facilities ("cell sites") typically consist of two distinct parts: the electronic base transceiver stations ("BTS" or "cabinets") that are connected to traditional wired telephone lines, and the antennas that send wireless signals created by the BTS out to be received by individual subscriber units. The BTS are often located outdoors at ground level and are connected to the antennas by coaxial cables. The BTS typically require environmental units to cool the electronics inside. Such cooling is often integrated into the BTS, although external air conditioning may be installed, especially when the BTS are housed within a larger enclosure.

Most cell sites have back-up battery power available, to run the site for some number of hours in the event of a power outage. Many sites have back-up power generators installed, to run the site during an extended power outage.

Site & Facility Description

Based upon information provided by AT&T Mobility, including zoning drawings by Pacific Telecom Services LLC, dated October 3, 2013, that carrier proposes to install base station equipment within an equipment shelter to be placed in the parking lot on the west of the commercial property located at 3589 Nevada Street in Pleasanton, California. The equipment inside the shelter would be cooled by two air conditioners mounted on the front of the shelter, such as Bard Model WA4S1; they are typically installed as a pair for redundancy and alternate their operation, so that both do not operate simultaneously. A Generac Model SD050 standby diesel power generator is to be installed for emergency use, in the event of an extended commercial power outage. Such generators typically operate for a 15-minute test period once a week during normal business hours on a weekday, in order to ensure their readiness. The nearest property line is to the west, less than 2 feet from the back of the shelter.

Proposed to be located on the building at the site are directional panel antennas for the AT&T base station operation; this portion of the facility does not generate noise.

Study Results

Bard reports that the maximum sound level from the air conditioning units is 65.0 dBA, measured at 10 feet away. Accounting just for the distance involved, and ignoring the attenuating effects of the mounting locations on the face of the shelter opposite the nearest property line, the calculated noise level at that line is 59.9 dBA, which is well below the 70 dBA limit applicable for commercial zoning. Actual noise levels are expected to be even lower.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the AT&T Mobility base station proposed to be located at 3589 Nevada Street in Pleasanton, California, will comply with that city's standards limiting acoustic noise emission levels.

Authorship

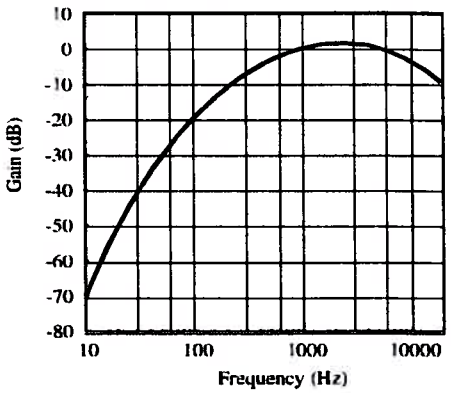
The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2015. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

William F. Hammett, P.E.
707/996-5200

October 22, 2013

Noise Level Calculation Methodology

Most municipalities and other agencies specify noise limits in units of dBA, which is intended to mimic the reduced receptivity of the human ear to Sound Pressure ("L_P") at particularly low or high frequencies. This frequency-sensitive filter shape, shown in the graph to the right as defined in the International Electrotechnical Commission Standard No. 179, the American National Standards Institute Standard No. 5.1, and various other standards, is also incorporated into most calibrated field test equipment for measuring noise levels.



30 dBA	library
40 dBA	rural background
50 dBA	office space
60 dBA	conversation
70 dBA	car radio
80 dBA	traffic corner
90 dBA	lawnmower

The dBA units of measure are referenced to a pressure of 20 µPa (micropascals), which is the threshold of normal hearing. Although noise levels vary greatly by location and noise source, representative levels are shown in the box to the left.

Manufacturers of many types of equipment, such as air conditioners, generators, and telecommunications devices, often test their products in various configurations to determine the acoustical emissions at certain distances. This data, normally expressed in dBA at a known reference distance, can be used to determine the corresponding sound pressure level at any particular distance, such as at a nearby building or property line. The sound pressure drops as the square of the increase in distance, according to the formula:

$$L_P = L_K + 20 \log(D_K/D_P),$$

where L_P is the sound pressure level at distance D_p and L_K is the known sound pressure level at distance D_K.

Individual sound pressure levels at a particular point from several different noise sources cannot be combined directly in units of dBA. Rather, the units need to be converted to scalar sound intensity units in order to be added together, then converted back to decibel units, according to the formula:

where L_T is the total sound pressure level and L_1, L_2, etc are individual sound pressure levels.

$$L_T = 10 \log \left(10^{L_1/10} + 10^{L_2/10} + \ldots\right),$$

Certain equipment installations may include the placement of barriers and/or absorptive materials to reduce transmission of noise beyond the site. Noise Reduction Coefficients ("NRC") are published for many different materials, expressed as unitless power factors, with 0 being perfect reflection and 1 being perfect absorption. Unpainted concrete block, for instance, can have an NRC as high as 0.35. However, a barrier's effectiveness depends on its specific configuration, as well as the materials used and their surface treatment.