

ARTICLE III. - NOISE^[3]

Footnotes:

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State Law reference— *Motor vehicle noise, F.S. §§ 316.293, 403.415.*

Sec. 38-67. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. All terminology used in this article, not specifically defined, shall be in conformance with applicable publications of the American National Standards Institute (ANSI) or its successor body.

Agricultural means the land uses where agricultural activities are legally permitted.

A-weighted sound level means the sound pressure level in decibels as measured on a sound level meter using the A-weighted network. The level so read is designated dBA.

Commercial means the land uses where retail sales and services, professional, tourist and other commercial activities are legally permitted.

Construction means any site preparation, assembly, erection, substantial repair, alteration or similar action, but excluding demolition, for or on public or private rights-of-way, structures, utilities or similar property.

Daylight hours means one-half hour before sunrise and one-half hour after sunset.

Decibel (dB) means a unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micronewtons per square meter.

Emergency work means any work performed for the purpose of preventing or alleviating physical trauma or property damage threatened or caused by an existing or imminent peril.

Environmental control officer means the director of the city environmental control division.

Noise means any sound that annoys or disturbs humans or causes or tends to cause an adverse psychological or physiological effect on humans. The term is used synonymously with the term "sound."

Noise disturbance and sound disturbance means any sound in quantities that are or may be potentially harmful or injurious to human health or welfare, animal or plant life or property, or unnecessarily interfere with the enjoyment of life or property, including outdoor recreation, of a reasonable person with normal sensitivities.

Pure tone means any sound that can be distinctly heard as a single pitch or a set of single pitches. For the purposes of measurement, a pure tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by five decibels for center frequencies of 500 Hz and above, and by eight decibels for center frequencies between 160 and 400 Hz, and by 15 decibels for center frequencies less than or equal to 125 Hz.

Real property line means an imaginary line along the surface, and its vertical plane extension, which separates the real property owned, rented or leased by one person from that owned, rented or leased by another person, excluding intrabuilding real property divisions.

RMS (root mean square) means the square root of the mean of a set of squared values.

Sound means an oscillation in pressure, stress, particle displacement, particle velocity or other physical parameter, in a medium with internal forces. The description of sound may include any characteristic of such sound, including duration, intensity and frequency. The term is used synonymously with the term "noise."

Sound level means the weighted sound pressure level obtained by the use of a metering characteristic and weighting A, B or C as specified in American National Standards Institute specifications for sound level meters, ANSI S1.4-1971, or in successor publications. If the weighting employed is not indicated, the A-weighting shall apply.

Sound level meter means an instrument that includes a microphone, amplifier, RMS detector, integrator or time averager, output meter and weighting networks used to measure sound pressure levels. The output meter reads sound pressure level when properly calibrated, and the instrument is of type 2 or better, as specified in the American National Standards Institute publication S1.4-1971, or its successor publications.

Sound pressure means the instantaneous difference between the actual pressure and the average or barometric pressure at a given point in space, as produced by the presence of sound energy.

Sound pressure level means 20 times the logarithm to the base 10 at the ratio of the RMS sound pressure to the reference pressure of 20 micropascals ($20 \times 10^{-6} \text{N/m}^2$). The sound pressure level is denoted L_p or SPL and is expressed in decibels.

Special variance and *variance* mean an authorization, issued by the city manager or his duly authorized representative, to exceed the sound level limit for a specified period of time.

(Ord. No. 96-15, § I(50-491), 3-4-1996)

Cross reference— Definitions generally, § 1-2.

Sec. 38-68. - Penalty; confiscation of noise-creating equipment; responsibility for violations.

- (a) Violations of this article are punishable as provided in section 1-15. Any person who continues to violate the provisions of this article after having been previously cited may be subject to further citations, including further citations issued on the day upon which the original citation was issued.
- (b) Upon conviction of being in violation of this article three times for the same offense within a 12-month period, when such sound is created by the same sound emitter, the noise-creating equipment may be confiscated by the court following such latest conviction until such time as the offender can satisfy the court that he is prepared to and in fact will operate the equipment within the limits of this article. Further violation shall result in the permanent confiscation by the court upon such conviction.
- (c) The owner of property, a tenant, a lessee, a manager, an overseer, an agent, corporation or any other person entitled to lawfully possess or who claims unlawful possession of such property at a particular time involved shall each be responsible for compliance with this article, and each may be punished for violation of this article. It shall not be lawful defense to assert that some other person caused such sound, but each lawful possessor or claimant of the premises shall be responsible for operating or maintaining such premises in compliance with this article and shall be punishable, whether or not the person actually causing such sound is also punished.

(Ord. No. 96-15, § I(50-492), 3-4-1996)

Sec. 38-69. - Additional remedies.

The operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this article that endangers the comfort, repose, health and peace of residents in the city is declared to be a public nuisance; and the city is authorized to pursue any and all remedies. Nothing in this article shall be

construed to limit any private right of action.

(Ord. No. 96-15, § I(50-493), 3-4-1996)

Sec. 38-70. - Enforcement standards.

Standards for enforcement of this article shall be in accordance with those set forth in addendum A following this article. Amendments to the enforcement standards may be made by the city manager, based upon best professional information available to him, which are necessitated by changes in sound measuring equipment or changes in prevailing academic, technical or operational criteria. Such amendments shall become effective upon filing them in writing with the secretary of state.

(Ord. No. 96-15, § I(50-495), 3-4-1996)

Sec. 38-71. - Sound limitations established; applicability.

- (a) *Classification of use occupancy.* For the purposes of defining the use occupancy under this article, all premises containing habitually occupied sleeping quarters shall be considered residential use. All premises containing transient commercial sleeping quarters shall be considered tourist use. All premises containing business where sales, professional or other commercial use is legally permitted, including hospitals, shall be considered commercial use. All premises where manufacturing is legally permitted shall be considered manufacturing use. In cases of multiple use, the more restrictive use category shall prevail. Nursing homes, schools, libraries and church uses shall be considered residential uses. Any area not otherwise classified shall conform to commercial standards.
- (b) *Measurement of sound.* Standards, instrumentation, personnel, measurement procedures and reporting procedures to be used in the measurement of sound as provided for in this article shall be those as specified in section 38-70.
- (c) *Maximum permissible sound levels by use occupancy.* No person shall operate or cause to be operated any source of sound from any occupancy in such a manner as to create a sound level which exceeds the limits set forth for the use occupancy category in table I, more than ten percent of any measurement period, which shall not be less than ten minutes when measured at or beyond the property boundary of the land use from which the sound emanates.

TABLE I

Use Occupancy Category	Time	Sound Level Limit (dBA)
Residential	7:00 a.m. to 10:00 p.m. After 10:00 p.m. to 6:59 a.m.	60 <u>55</u>

Commercial or tourist	7:00 a.m. to 10:00 p.m. After 10:00 p.m. to 6:59 a.m.	65 60
Manufacturing	At all times	<u>75</u>
Agricultural	At all times	<u>75</u>

- (d) *Exceptions.* The following uses and activities shall be exempt from noise level regulations except as listed in table I:
- (1) Air conditioners are exempt from provisions of table I when this equipment is functioning in accord with the manufacturer's standard mufflers and noise-reducing equipment in use and in proper operating condition according to standards promulgated by the American Refrigeration Institute. The same exception shall apply to lawn mowers and agricultural equipment during daylight hours.
 - (2) Nonamplified crowd noises resulting from activities such as those planned by student government, community groups or racing/sport events are exempt.
 - (3) Construction operations for which building permits have been issued or construction operations not requiring permits due to ownership of the project by an agency of government, providing all equipment is operated in accord with the manufacturer's specifications and with all standard equipment, manufacturer's mufflers and noise-reducing equipment in use and in proper operating condition. Such construction shall not begin prior to 7:00 a.m. and shall cease by 7:00 p.m. unless a special permit has been granted by the city.
 - (4) Noises of safety signals, warning devices, pressure relief valves, and bells and chimes of churches are exempt, except as otherwise provided by this Code.
 - (5) Noises resulting from any authorized emergency vehicle when responding to an emergency call or acting in time of emergency are exempt.
 - (6) Noises resulting from emergency work are exempt.
 - (7) Any other noise resulting from activities of a temporary duration permitted by law and for which a license or permit has been granted by the city in accordance with subsection (e) of this section is exempt.
 - (8) Noises made by persons having obtained a permit to use the streets are exempt.
 - (9) All noises coming from the normal operations of railroad trains are exempt.
 - (10) All noises coming from the normal operations of aircraft (not including scale model aircraft) are exempt.
 - (11)

Those motor vehicles controlled by F.S. § 316.293 are exempt, but not those motor vehicles exempted from coverage.

(12) Motor vehicles defined in F.S. § 316.293(6)(a) and (b) are exempt.

(e) *Special permits.* Applications for a permit for relief from the maximum allowable noise level limits designated in this article may be made in writing to the city manager or his duly authorized representative. Any permit granted by the city manager under this subsection must be made in writing and shall contain all conditions upon which the permit shall be effective. The city manager or his duly authorized representative may grant the relief as applied for under the following conditions:

(1) The city manager may prescribe any reasonable conditions or requirements as he deems necessary to minimize adverse effects upon the community or the surrounding neighborhood, including use of mufflers, screens or other sound-attenuating devices.

(2) Permits may be granted for the purpose of entertainment under the following conditions:

- a. The function must be open to the public (admission may be charged).
- b. The function must take place on public property.
- c. The permit will be given only for four hours in one 24-hour day.
- d. The function must be staged between the hours of 9:00 a.m. and 12:00 midnight.

(3) Special permits for nonentertainment special purposes may be issued under the following conditions:

- a. 1. If the special purpose relates to the operation of a trade or business, that the special purpose not be in the ordinary course of that trade or business;
2. If the special purpose does not relate to the operation of a trade or business, that the special purpose not be an ordinary event in the affairs of the applicant; and
- b. If the special purpose be a recurring purpose, that it not recur more often than four times each calendar year;
- c. 1. That the special purpose be absolutely necessary to the operation of the applicant's trade or business; or
2. If the special purpose does not relate to the operation of the trade or business, that the special purpose be compatible with the ordinary activities of the neighborhood in which the special purpose is to occur;
- d. Except in emergency situations, as determined by the city manager, the special permit may be issued only for four hours between 7:00 a.m. and 11:00 p.m. on weekdays; and
- e. Special permits may be issued for no longer than 15 consecutive days, renewable by further application to the city manager.

(4) No permit may be issued to permit the use of any loudspeaker or sound-amplifying device on the exterior of any building that at any time exceeds the sound level limits in table I of this section, except those used for emergency warnings.

(Ord. No. 96-15, § I(50-496), 3-4-1996; Ord. No. 12-00, § 1, 8-7-2000; Ord. No. 16-01, § 1, 6-4-2001)

Sec. 38-72. - Exceeding sound limitations.

It shall be unlawful, except as expressly permitted in this article, to make, cause or allow the making of any noise or sound that exceeds the limits set forth in this article.

(Ord. No. 96-15, § I(50-497), 3-4-1996)

Sec. 38-73. - Loud, disturbing or unnecessary noises.

- (a) Some sounds may be such that they are not measurable or may not exceed the limits set out in this article, but they may be excessive, unnatural, prolonged, unusual and are a detriment to the public health, comfort, convenience, safety, welfare or prosperity of the residents of the city.
- (b) With the exception of those exemptions provided by state law, noises prohibited by this article are unlawful notwithstanding the fact that no violation of section 38-71 is involved, and notwithstanding the fact that the activity complained about is exempted in section 38-71(d).
- (c) Thus, the following acts, among others, are declared to be loud, disturbing and unnecessary noises in violation of this article; but this enumeration shall not be deemed to be exclusive:
 - (1) The sounding of any horn or signaling device on any automobile or other vehicle, except as a danger warning;
 - (2) Construction. Operating or permitting the operation of any tools or equipment used in construction, drilling, or demolition work between the hours of 7:00 p.m. and 7:00 a.m., in such a manner as to cause a noise disturbance to any resident or guest across a residential or tourist property boundary, except for emergency work by public service utilities, by government agencies, or by special permit approved by the city;
 - (3) The sounding of any signaling device for any unnecessary or unreasonable period of time;
 - (4) The unreasonable use of any signaling device;
 - (5) The using, operating or permitting to be played, used or operated of any radio, television, tape or record player, amplifier, musical instrument or other machine or device used for the production, reproduction or emission of sound;
 - (6) Any prolonged sounds made by people; and
 - (7) The keeping of any animal that causes frequent or long, continuous noise in such a manner as to disturb the public peace, quiet and comfort of the neighboring inhabitants or at any time with greater intensity than is necessary for convenient hearing for the persons who are in the room, vehicle or chamber in which such sound emitter is operated and who are voluntary listeners thereto. Quieter standards are expected during nighttime hours.
- (d) Any person making a complaint under this section must sign a sworn affidavit prior to a warrant being issued, otherwise no such complaint will be honored.

(Ord. No. 96-15, § I(50-498), 3-4-1996; Ord. No. 16-01, § 2, 6-4-2001)

Sec. 38-74. - Loudspeakers and public address systems.

Loudspeakers or public address systems used to produce sound signals from any source for either advertising or other purposes may not be operated on or over public property and public rights-of-way unless a license has been issued by the officer. A fee established by resolution of the city commission in the appendix A fee schedule shall be paid for such license. The permit may be canceled for noncompliance with this article. Such systems may be used Monday through Saturday during daylight hours only.

(Ord. No. 96-15, § I(50-499), 3-4-1996)

ADDENDUM A. ENFORCEMENT STANDARDS

I. General.

1.1. *Purpose.* These enforcement standards establish uniform guidelines for measuring and recording noise levels for the enforcement of the noise control ordinance of the city.

1.2. *Standards.* These enforcement standards should be used in conjunction with the following standards and recommended practices:

- (1) Acoustical Terminology, American National Standards Institute Incorporated (ANSI) S1.1-1960.

- (2) Specification for General-Purpose Sound Level Meters, ANSI S1.4-1971.
- (3) Preferred Frequencies and Band Numbers for Acoustical Measurements, ANSI S1.1967.
- (4) Method for Calibration of Microphones, ANSI S1.10-1966.
- (5) Specification for Octave, Half-Octave and Third Octave Band Filter Sets, ANSI S1.11-1966.
- (6) Specifications for Laboratory Standard Microphones, ANSI S1.12-1967.
- (7) Preferred Reference Quantities for Acoustical Levels, ANSI S1.8-1969.
- (8) Recommended Practice Qualifying a Sound Data Acquisition System, Society of Automotive Engineers, Incorporated, J184.
- (9) Standard Method for the Measurement of Sound Pressure Levels, ANSI S1.13-1971.

1.3. *Definitions.* Unless otherwise defined here in this Code or within the noise control ordinance, all terminology shall be in conformance with applicable publication of the American National Standards Institute, Incorporated (ANSI) or its successor body.

II. Instrumentation.

2.1. *Requirements.* Instrumentation used in making sound level measurements shall meet the following requirements:

- (1) *Sound level meter.* Sound level meters shall be of at least type 2 meeting ANSI S1.4-1971 requirements. Alternately, a microphone or sound level meter may be used with a magnetic tape recorder and/or graphic level recorder or indicating meter, providing the system meets at least type 2 ANSI requirements. For measurements requiring octave band analysis, the equipment will additionally meet ANSI S1.11-1966.
- (2) *Sound level calibrator.* The entire sound measurement system shall be calibrated with an acoustic calibrator recommended by the manufacturer and according to the manufacturer's recommended procedures.
- (3) *Windscreen.* An open-cell, foam windscreen recommended by the manufacturer of the sound level meter shall be used.

2.2. *Calibration.* The instruments used for acoustical measurements shall be serviced in accordance with the manufacturer's instructions. Before and after a series of measurements, the instrumentation shall be calibrated acoustically according to the manufacturer's instructions and at intervals not exceeding two hours when the instrument is used longer than a two-hour period.

2.3. *Meter operation.* Unless expressed otherwise in this Code, the sound level meter shall be operated in accordance with the instrument manufacturer's instruction and as follows:

- (1) *Microphone location.* The microphone shall be located at a height of four feet above the ground level. All microphone positions shall be described in the recording of all data.
- (2) *Microphone orientation.* The microphone shall be oriented in relation to the source of the sound in accordance with the instrument manufacturer's instructions. Where the instruction manual is vague or does not include adequate information, a specific recommendation shall be obtained from the manufacturer.
- (3) *Meter setting.* The meter shall be set for the A-weighted network and fast response.
- (4) *Ambient sound.* Measurements shall be made only when the A-weighted ambient sound level, including wind effects and all sources other than that being measured, is at least ten decibels lower than the sound level of the source. (Methodologies are available for determining source levels when the source-ambient difference is less than ten decibels. These methodologies should be covered in a training course.)

III. Personnel.

3.1. *Personnel.* Persons selected to conduct sound measurement tests shall have received training in the techniques of sound measurement and the operation of sound measurement instruments.

3.2. *Technician location.* The technician making direct readings of the meter shall be positioned in relation to the microphone in accordance with the instrument manufacturer's instructions. Where the instruction manual is vague or does not include adequate information, a specific recommendation shall be obtained from the manufacturer.

3.3. *Bystander location.* During sound measurements, bystanders shall not be within ten feet of the microphone or noise source, except for a witness or trainee, who may be positioned behind the technician on a line with the technician and the microphone.

IV. Measurement procedures.

4.1. *Measurement procedures.* The following procedure shall be used to determine if a violation exists pursuant to section 38-71:

(1) *Sound level meter location.*

- a. The sound level meter shall be located on the adjacent boundary closest to the noise source or on a lot from which the complaint arises, unless otherwise specified in the noise control ordinance.
- b. If a complaint arises from a multistory structure, the height of the sound level meter shall be adjusted so that it is on a direct line between the noise source and noise receiver.
- c. The microphone shall be at least three feet from any adjacent structures.

(2) *Sound level exceeded ten percent of the time.*

- a. Every ten seconds read the level from the sound level meter.
- b. Record this level on the data sheet (figure 1) as a check mark at the appropriate level.
- c. After 60 samples, test by the confidence criterion discussed below. If the samples meet the criterion, then the measurement is complete. If not, then 40 more samples must be taken and the confidence test repeated. If the confidence criterion is still not met, additional groups of 50 samples must be completed until the confidence criterion is met.
- d. The confidence criterion is as follows:
 1. Counting down from the top of the data sheet (and from left to right within each level), circle the "test samples" shown in table 1. For instance, after 60 samples have been taken, then the second, the sixth, and the 12th samples from the top are circled. (See figure 1, example 1.)
 2. If these three test samples fall into three contiguous levels, the measurement is complete. Otherwise, another group of samples must be taken and tested again. (Sometimes the test samples will be even more closely packed, falling into only one or two contiguous levels. In these cases, the criterion is also met.)
 3. If 100 or more samples have been taken, skewing is allowed. The two outer test samples (the error limits) can be shifted by one sample (not one level) both in the same direction. (See figure 1, example 2.) This sometimes provides the necessary accuracy without requiring further sampling. However, if the criterion is still not met after skewing, then 50 more samples must be taken and tested.
- e. Once the confidence criterion has been met, the level exceeded ten percent of the measurement period (the second sample circled), has been determined with dB with 95 percent confidence.

(3) *Maximum sound level.*

- a.

As noise source radiates sound, read the maximum deflection of the needle of the sound level meter.

b. If possible, determine and record the minimum sound level during the period of observation.

V. Reporting measurements.

5.1. *Information.* The following information shall be obtained and reported for each sound measurement period:

- (1) Dimensioned sketch or photograph of the test area showing location of sound sources and receivers.
- (2) Note any possible reflecting objects within the test area.
- (3) Physical and topographical description of the ground surface.
- (4) Meteorological conditions, including temperature, relative humidity, wind direction and speed.
- (5) Equipment and settings used for sound measurement.
- (6) Date, time and length of measurement period.
- (7) Measured sound levels.
- (8) Background sound level.

(Ord. No. 96-15, § I(add. A), 3-4-1996)

Editor's note— The data sheets, figures and examples referred to in these standards are not printed in this article.

Secs. 38-75—38-105. - Reserved.