

City of Framingham, Massachusetts

Article V: Health and Safety Section 32 Nuisance Noise Ordinance

October 2019

32.01 Purpose

The Massachusetts Association of Health Boards finds that chronic or repeated exposure to excessive noise is recognized by public health experts as a hazard to both physical and mental health. It has been linked to a range of non-auditory health effects including annoyance, sleep disturbance, cardiovascular diseases, and impairment of cognitive performance in children. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3988259/>)

The purpose of this Noise Ordinance is to allow the City of Framingham, Massachusetts (the City) to establish reasonable guidelines, restrictions and limitations to maintain acceptable noise conditions within the City.

This ordinance defines noise criteria limits and restrictions for the purposes of (1) maintaining acceptable existing conditions, equipment operations, social interactions, and avoidance of disruption of the peace, and (2) managing and controlling potential future noise conditions in the City stemming from development of new properties, equipment operations, and infrastructure.

This ordinance is not intended to define safe noise levels to protect people's hearing or avoid auditory damages from loud noises either within the workplace or from private activities. As such, this ordinance is not intended to maintain public health and safety with respect to noise.

To enforce this Ordinance, the City may seek civil penalties pursuant to M.G.L. c. 40, § 21D and/or misdemeanor criminal penalties permitted under M.G.L. c. 272, § 53, and may seek injunctions to prohibit current and future noise.

Therefore, it shall be unlawful for a person or persons to knowingly generate, or allow continued generation of noise levels which exceed the criteria limits found in Section 32.03, 32.04 32.05 or 32.06, except under conditions defined in Section 32.09, when measured at a receiving party's property line or at any location on the receiving property, as defined by the applicable Noise Determination methods found in Sections 32.07 and 32.08

32.02A Acoustical Terms Definitions

Community noise is generated by natural and man-made sources such as transportation systems, industrial processes, construction operations, building air handling systems, power generation, agricultural processes, landscaping machinery, human activities, meteorological conditions, etc. In general, noise can be quantified by its magnitudinal (loudness), tonal (frequency) and temporal (time) characteristics. The following are definitions of terms typically used to describe community noise:

SOUND DEFINITIONS

SOUND is a physical parameter which is produced when a vibrating surface transfers energy in the form of air pressure waves which fluctuate above and below barometric pressure to such a degree and within a frequency range that it can be perceived by the human auditory system (i.e. sound can be heard.)

SOUND LEVEL METER (SLM) – A sound level meter is a calibrated electrical device used to measure the loudness of noise. For the purposes of this bylaw, a SLM must be capable of measuring and expressing noise levels in A-weighted decibels using an RMS “slow” time constant in accordance with Type 2 or better accuracy requirements of ANSI Standard S1.4. In addition, an “integrating” SLM must be used if any time-averaged noise metrics (such as Leq or Ln percentiles) are to be reported.

AUDIBLE FREQUENCY RANGE (and A-weighting) – Human beings can perceive noise only if the fluctuating air pressure waves are within the so-called “audible frequency range” of about 20 Hz to 20,000 Hz (Hertz, or cycles-per-second). However, people do not hear noise equally well at all frequencies. As such, a frequency weighting adjustment has been standardized in ANSI Standard S1.42 to account for humans responding less sensitively to lower and higher frequency ranges. This frequency weighted adjustment is referred to as "A-weighting", with results expressed as A-weighted decibels, or dB(A).

DECIBELS (dB) – The magnitude or loudness of noise is expressed in units of decibels (dB). Decibels relate the actual fluctuating air pressure levels against a standardized reference air pressure level of 20 micro-pascals. Human beings can hear noise over a tremendously large range of air pressure so the use of a decibel scale (from about 0 dB to 140 dB) is used for convenience. Zero decibels represents the “threshold of hearing”, while at the other extreme, pain and hearing damage can occur at noise levels of about 140 decibels.

EQUIVALENT SOUND LEVEL (Leq) – The Leq represents the energy-averaged noise level over some time period of interest. The Leq is expressed in dBA, and the time period over which the Leq value applies should also be stated, i.e., Leq (1min) represents a one-minute average; Leq (24h) represents a 24-hour average, etc.

PURE TONE – Any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this chapter, a "pure tone" shall exist if an octave-band analysis indicates one octave-band or more over both the band above and below.

TONAL SOUND - Any sound that is judged by a listener to have the characteristics of a pure tone, whine, hum or buzz.

NOISE DEFINITIONS

NOISE is defined as “unwanted sound” which can occur when a source is either too loud, uncontrollable, conveys unwanted information, masks-out other desirable sound, occurs at unacceptable times, or has annoying characteristics.

BACKGROUND NOISE – is the prevailing or pre-existing noise conditions that can be measured at a given location of interest without the contribution the noise source of concern.

CLEARLY AUDIBLE - means any sound that can be detected by a person using his or her unaided hearing faculties. (As an example, if the sound source under investigation is a portable or personal vehicular sound amplification or reproduction device, the enforcement officer need not determine the title of a song, specific words, or the artist performing the song. The detection of the rhythmic bass component of the music is sufficient to constitute a clearly audible sound).

NOISE POLLUTION – A condition caused by a noise source that increases noise levels ten (10) dB(A) or more above background noise level except that if the noise source produces a tonal sound an increase at five (5) dB(A) or more above background noise level shall be considered sufficient to cause noise pollution.

NUISANCE NOISE – Nuisance typically exhibits aspects such as pure tone squealing or whining, loud impulsive noises, repetitive thumping, low-frequency airborne vibrations, etc. Nuisance noise is defined qualitatively by listing specific examples, as in Section 32.03 of this Ordinance.

STATIONERY NOISE SOURCE – Sources that emit noise on a continuous or repeatable basis and that are located in fixed positions. Example stationary noise sources would include, but are not limited to, building mechanical (HVAC) systems, power transformers, commercial processing machinery, etc.

32.02B General Definitions

CONSTRUCTION - Any and all activity necessary or incidental to the erection, assembling, altering, installing, repair or equipping of buildings, roadways, or utilities, including land clearing, grading, excavating and filling and paving.

COMMERCIAL SERVICE EQUIPMENT – All engine- or motor-powered equipment intended for infrequent service work in inhabited areas, typically requiring commercial or skilled operators. Examples: chain saws, log chippers, paving rollers, pavement breakers, pile drivers etc.

DAYTIME Weekdays: Monday - Friday - 7:00 a.m. to 6:00 p.m.
Weekends: Saturday and Sunday - 8:00 a.m. to 6:00 p.m.

DEMOLITION - Any dismantling, intentional destruction or removal of structures, utilities, public or private right-of-way surfaces, or similar property.

EVENING: Weekdays: Sunday - Thursday - 6:00 p.m. to 10:00 p.m.
Weekends: Friday and Saturday - 6:00 p.m. to 12:00 Midnight

EMERGENCY - An occurrence or set of circumstances requiring immediate action involving the restoration of public utilities or the restoration of property to a safe condition following a public calamity or the protection of persons or property from imminent exposure to danger.

EMERGENCY WORK - Work which must be performed to alleviate an emergency.

HEAVY MOTOR VEHICLE – shall be defined as all motor vehicles having a gross vehicle weight in excess of 10,000 pounds

HOMEOWNER'S LIGHT RESIDENTIAL OUTDOOR EQUIPMENT: All engine- or motor-powered garden or maintenance tools intended for repetitive use in residential areas, typically capable of being used by a homeowner. Examples of homeowner's light residential outdoor equipment are lawn mowers, garden tools, power tools, riding tractors, snow blowers, snowplows, etc.

MOTORCYCLE: Any motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three (3) wheels in contact with the ground, including any bicycle with a motor or driving wheel attached, except a tractor or a motor vehicle designed for carrying golf clubs and not more than four (4) persons, an industrial three-wheel truck, or a motor vehicle on which the operator and passengers ride within an enclosed cab.

MOTOR VEHICLE: Any vehicle which is propelled or drawn on land by a motor, such as, but not limited to, passenger cars, trucks, buses, truck-trailers, semi-trailers, campers, go-carts, snowmobiles, dune buggies, or racing vehicles, but not including motorcycles.

NIGHTTIME Weekdays: Sunday - Thursday - 10:00 p.m. to 7:00 a.m.
Weekends: Friday and Saturday - 12:00 Midnight to 8:00 a.m.

PERSON: Any individual, partnership, association, firm, syndicate, company, trust, corporation, department, bureau or agency, or any other entity recognized by law as the subject of rights and duties, including the city, its agencies and departments and any person, as herein defined, operating under a contractual arrangement or agreement with the city.

PAVEMENT BREAKER: Any hydraulically or pneumatically powered impact device intended to cut or trench pavement, subbase macadam, gravel, concrete or hard ground.

PILE DRIVER: An impact device designed or used for the driving of piles, columns and other supports into soil or other material by means of impact, vibrations, pressure or other means.

REASONABLE PERSON – Acting on behalf of the greater good of the public, a reasonable person is able to judge in an unbiased manner the appropriateness of a given social situation. A reasonable person is appropriately informed, rational, capable, aware of the law, and fair-minded when applications of the law is sought, compatible with planning, working, or getting along with others. For the purpose of this Ordinance, a reasonable person shall be defined as a police officer of the City, as further described in Section 32.07

RESIDENTIAL AREA - For the purpose of this ordinance, a Residential Area will be defined as land used in which housing predominates within the boundary from street corner to street corner irrespective of any other Zoning Ordinance or By-Law. Housing may vary significantly between, and through, residential areas. These include single-family housing, multi-family residential, apartment complexes, mixed use, mixed use complexes, mobile homes, or any building who use includes human habitation. For the purpose of this ordinance, an apartment complex will be considered residential, not commercial.

32.03 Nuisance Noise Prohibitions

Noise which has the potential to annoy or disturb can be described as nuisance noise. Nuisance noise typically exhibits aspects such as pure tone squealing or whining, loud impulsive noises, repetitive thumping, low-frequency air-borne vibrations, etc.

Noise criteria limits in this ordinance are based on the type of noise being produced, the time of day during which the noise is generated, and the existing background noise level. For the purposes of this bylaw, nuisance noise shall be qualitatively defined by listing specific examples which are deemed to be annoying.

It is prohibited for persons or equipment to generate the following nuisance noises during the hours of 10:00 p.m. to 7:00 a.m. Sunday - Thursday and 11:00 p.m. to 8:00 a.m. on Friday and Saturday.

1. The use of loud music, radios, automobile sound systems (i.e. radios), public address systems, shouting, or other noises associated with communications or advertisement, that have the potential to disturb receiving party or parties.
2. The offering for sale or selling of anything by shouting or outcry within a residential area of the city by peddlers, or hawkers.
3. Operating or causing to be operated a public-address loudspeaker, whether mobile or stationary, without a permit granted by the permitting authority.
4. Operating, playing or permitting the operation or playing of any, radio, stereo, compact disc player, phonograph, television, musical instrument, public address system, loudspeaker, or sound amplifier from any source (including, but not limited to, smart phones, tablets, computers, musical instruments, etc.) or similar device which produces, reproduces or amplifies sound in a manner that makes it clearly audible across either a residential real property boundary or in the case of multi-unit dwellings, the receiving parties abode.
 - a. Exemption: Activities open to the public, or special occasions, for which a proper permit has been granted.
 - b. Any establishment granted a license for entertainment that is amplified by microphone, amplifier, or the like shall be subject to this provision with the extension of one (1) hour from 11:00 p.m. to 12:00 midnight on Friday and Saturday nights.
5. The use of loud amplified or non-amplified instruments, including, but not limited to, Brass (trumpet, trombone) Percussion (drums, cymbals) or any other instruments that have the potential to disturb nearby residents.
6. The unnecessary (i.e. false) sounding of vehicle security alarm systems.
7. The emptying and/or replacing of waste dumpsters.
8. The use of HOMEOWNER'S LIGHT RESIDENTIAL OUTDOOR EQUIPMENT such as but not limited to lawn mowers and leaf blowers.
9. The keeping of any animal or bird which frequently and for continued periods of time causes a condition of noise.
10. The loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects in a manner that causes a condition of noise pollution across a residential real property boundary.
11. No establishment granted a liquor license shall permit crowd noise to be audible beyond the premises that has the potential to disturb nearby residents.

12. Construction and/or demolition activities. It is understood that construction and demolition are inherently noisy activities which will likely be heard by adjacent residents and business operators. As such, the intent is to balance the needs for the construction contractors to perform the necessary work with the needs of the community for peace and quiet. (See **Table #2** - Construction Noise Criteria Limits - for Hours.)

32.04 Stationary Noise Sources

Stationary sources of noise may include, but are not limited to, building HVAC systems, power generation facilities, industrial equipment, water or sewage pump stations, railroad and subway lay-over facilities, electric power transformers, commercial factories and plants, truck depots, and recreational events. The noise level emitted by stationary noise sources shall not exceed the limits contained in **Table 1** when measured at the property line of the receiving property.

Table 1
Noise Criteria Limits from Stationary Noise Sources

| Receiver Land-Use | Daytime Noise Limit (7 a.m. to 6 p.m.) | Evening Noise Limit (6 p.m. to 10 p.m.) | Nighttime Noise Limit (10 p.m. to 7 a.m.) |
|--|--|--|--|
| Residential: -including private residences, multi-family residences, apartment complexes, retirement homes, etc. | 55 dBAs Leq (1 minute) or Background Leq (1 min), whichever is greater | 50 dBAs Leq (1 minute) or Background Leq (1 min), whichever is greater | 45 dBAs Leq (1 minute) or Background Leq (1 min), whichever is greater |
| Residential within Commercial: -mixed land-use, primarily commercial areas but with some residential development, hotel/motels, hospitals etc. | 60 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater | 60 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater | 55 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater |
| Commercial: -including retail stores, business offices, houses of worship, restaurants, libraries, theaters, public parks etc. | 65 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater | 65 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater | 60 dBAs Leq (1 min) or Background Leq (1 min), whichever is greater |

Note: Background Leq (1 min) noise levels should be measured without the noise source in question operating.

Average Noise levels measurements can be estimated if an integrating Leq noise meter is not available.

Section 32.05 Construction Noise Sources

In general, construction and/or demolition activities shall only be permitted to occur within the City during the hours of 7:00 a.m. to 6:00 p.m. However, it is understood that construction and demolition are inherently noisy activities which will likely be heard by adjacent residents and business operators during short periods of time. As such, the intent of this section is to balance the needs for the construction contractors to perform the necessary work with the needs of the community for peace and quiet.

Therefore, cumulative noise generated by construction and/or demolition activities and operations shall not exceed the limits contained in **Table 2** when evaluated at the property line of the receiving property, nor shall the noise emission level of any individual piece of construction equipment exceed the noise emission limits contained in Table 2 when measured at a distance of 50 feet from the loudest side of the piece of equipment.

Table 2
Construction Noise Criteria Limits

| Receiver Land-Use | Daytime Noise Limit (7 a.m. to 6 p.m.) | Evening Noise Limit (6 p.m. to 10 p.m.) | Nighttime Noise Limit (10 p.m. to 7 a.m.) |
|---|--|--|---|
| Residential: - including private residences, multi-family residences, apartment complexes, retirement homes, etc | 65 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is great | 60 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is greater | N/A (*) Non-emergency construction and/or demolition activities are prohibited |
| Residential within Commercial: - mixed land-use, primarily commercial areas but with some residential development, hotel/motels, hospitals, etc. | 75 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is greater | 70 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is greater | N/A (*) Non-emergency construction and/or demolition activities are prohibited |
| Commercial: including retail stores, business offices, houses of worship, restaurants, libraries, theaters, public parks, etc. | 80 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is greater | 75 dBAs L10 or Bkgd L10 + 5 dBAs, whichever is greater | N/A (*) Non-emergency construction and/or demolition activities are prohibited |

Notes: Criteria approach taken from [FHWA Roadway Construction Noise Handbook](#) (FHWA, 2006).

1. L10 noise levels shall be measured over a period of 20 minutes.
2. Background (Bkgd) L10 noise levels should be measured prior to construction commencing in the field or without the noise source in question operating.
3. L10 noise levels measurements can be estimated if an integrating noise meter is not available by determining the average or Leq noise level plus 3 dBA.
4. Table 2 noise limits do not apply to roadway construction activities.

(*) Except when determined necessary by the City Council to protect public safety.

Section 32.06 Motor Vehicle Noise Sources

No person shall operate or cause to be operated a public or private motor vehicle or motorcycle on a public right-of-way at any time in such a manner that the sound level emitted by the vehicle exceeds the following limits measured at a distance of 50 feet or 15 meters from the center line of travel.

Table 3
Motor Vehicle and Motorcycle Noise Criteria Limits

| Vehicle Class | Speed Limit 35 mph or Less | Speed Limit over 35 mph |
|--|---------------------------------------|------------------------------------|
| Vehicles in excess of 10,00 pounds engaged in interstate commerce as permitted by 40 CFR 303 (EPA Noise emission standards) | 86 dBAs | 90 dBAs |
| All other vehicles if 10,000 pounds or more | 86 dBAs | 90 dBAs |
| Motorcycles | 82 dBAs | 86 dBAs |

32.07 Nuisance Noises Determination

It shall be unlawful to knowingly generate, or allow continued generation of, noise as listed in Section 32.03.

To be applicable, the police officer must hear for him/herself the noise source in question. The police officer must take conditional, circumstantial and extenuating factors into account. Time of day is not to be considered an extenuating circumstance. The following are examples of extenuating circumstances:

1. The necessity of the noise source to continue to operate.
2. The quality of the noise, e.g., volume, pitch, and intensity of the noise complained of.
3. The duration of time that the noise is expected to continue.

32.08 Noise Compliance Measurements Determination

If fines do not result in compliance with this ordinance, or it becomes necessary to collect quantitative noise level measurements in order to demonstrate compliance or exceedance of the various noise criteria limits contained in this ordinance, they must be collected in accordance with accepted practices and procedures as recommended in ASTM Standards E1686-03, E1780-04, and E1014-84, using a sound level meter (SLM) capable of meeting or exceeding ANSI Standard S1.4 for Type 2 accuracy.

Noise data shall be collected using a calibrated SLM using a “slow” time constant with results expressed in A-weighted decibels (dBAs). The minimum information necessary to collect and report shall include the following:

1. The make and model of SLM and portable calibrator used for the noise readings
2. The date which the SLM was last certified by the manufacturer, or other independent calibration laboratory, as meeting ANSI S1.4 Standards for Type 2 or better accuracy requirements (should be within previous two years).
3. The SLM calibration readings obtained prior to, and immediately following, performing the compliance noise measurements.
4. The type of windscreen used to cover the microphone.
5. The height at which the noise readings were collected (should be at least 5 feet above ground), and an estimate of the distance (in feet) from the noise source to the SLM.
6. The time of day, date, and duration of noise data collected by the SLM.
7. An indication of the background noise level collected in the absence of the noise source in question.
8. A brief description of the meteorological conditions during the noise readings including wind speed and direction, air temperature, precipitation, and ground cover conditions.
9. A clear and concise comparison of the measured noise level data (expressed in dBAs) versus the applicable noise criteria limits contained in Tables 1, 2 and 3 of this Ordinance.
10. The findings and conclusions to be drawn from the noise compliance measurements taken.

32.09 Exceptions

The following cases shall be exceptions to the restrictions and criteria limits contained in this noise ordinance.

1. Grandfathering: All existing residential, commercial, industrial and/or agricultural stationary noise sources as described in Section 32.04, which have been operating on a lawful basis prior to the effective date of this ordinance, shall be allowed. However, this exception does not apply to any new or upgraded sources of noise subsequently brought into operation at an existing location.
2. Noise generated by transportation systems, such as aircraft overflights, commuter trains, public transit systems and buses, are generally not regulated by local ordinances, and as such, shall not be a part of this noise ordinance.
3. Noise emitted by utility or City service crews and equipment performing emergency repairs to restore supply of and/or operation of critical public utilities such as natural gas, electrical power, steam, potable water, telecommunications,

sewerage removal, etc., or when it is determined that non-emergency utility work at night is the preferred course of action due to vehicular traffic concerns.

4. Any noise emitted by public safety or emergency response vehicles while performing their intended duties. Specific examples of exempt emergency equipment include sirens, horns, generators, pumps, public address systems, created by schools, factory bells or whistles or governmental alerts, such as noon whistles or siren.
5. Noise generated by sources intended for public entertainment, when said sources are part of a legal activity such as, but not limited to, parades, sporting events, public concerts, fireworks display, etc. and which have been granted a permit from the permitting authority.
 - a. Any establishment granted a license for entertainment that is amplified by microphone, amplifier, or the like will be subject to this Ordinance.
6. All snow clearance activities at any time of day, evening or night performed by the municipality.
7. Noise from snow blowers, snowplows, and other snow removal equipment during or immediately after a snowfall, and the use of power equipment necessary for emergency repairs or debris removal due to severe weather.
8. The performance of City-sponsored street sweeping operations at night on public ways which are otherwise inaccessible during daytime hours.

32.10 Enforcement

1. A noise complaint may be made by a resident or business owner, or, at any time at the discretion of the City in and of their own accord, to request a response and investigation by a representative of the Framingham Police Department, of the circumstances surrounding the noise issue.
2. In the case of a multi-unit dwelling, the front door of the closest unit to the unit being complained against by a properly designated investigating agent of his own accord.
3. The investigating agent shall collect all relevant information and prepare a written report summarizing their findings if the circumstances are determined to be a violation of Sections 32.03, 32.04, 32.05 or 32.06.
4. If the investigating agent's findings indicate a violation of Sections 32.03, 32.04, 32.05 or 32.06 said noise shall be found in violation of this Noise Ordinance and will be cited to a civil penalty consistent with the guidelines in Section 32.11 Penalties

32.11 Penalties

1. The first violation of this ordinance shall result in the issuance of a *written warning* indicating the reason(s) for the violation and stating, at the investigating

agent's discretion, a time period within which the offender(s), must cease production of the noise, or mitigate (reduce) the noise down to acceptable levels which will then comply with the restrictions and noise criteria limits in this ordinance.

2. The second violation of this ordinance stemming from the same noise issue within any 12-month period shall be punished by a fine of one hundred dollars (\$100.00).
3. Further violations of this ordinance within any 12-month period shall be punished by a fine of three hundred dollars (\$300.00).
4. Each such act in violation of this ordinance which either continues or occurs more than one hour after issuance of notice of violation of this ordinance shall be deemed a separate offense and shall be prosecuted as such.
5. If the violation occurs on the premises of rental property which is not owned by the offender, then in the interest of assisting property owners in exercising responsible property management, the City will notify the owner-of-record in writing that the violation has occurred, including the nature and circumstances of the violation.

32.12 Appeals

1. An offender who has been cited and/or fined under the terms and procedures of this noise ordinance can appeal the citation within 30 days after receiving it by presenting to the City appointed Hearing Officer any alternative information, situational evidence, noise measurement data, extenuating circumstances, or explanation to the contrary of the investigating agent's findings.
2. The Hearing Officer will serve in judgment of the appeal, and will have full discretion to reject, request additional details, reduce the severity of the penalties, continue, or enforce as issued the violation under appeal.
3. The Hearing Officer may allow an offender a reasonable amount of time, as determined by the chief of police, to come into compliance with this Ordinance, and may take into-account the time and cost of any required remediation efforts.
4. The ruling of the Hearing Officer shall be final and not subject to further appeals within the City's governance system.

32.13 Severability

If any provision of this ordinance shall be determined to be invalid or unenforceable by final judgment or order of a court of competent jurisdiction, the remaining provisions of this ordinance shall continue in effect to the fullest extent permitted by law.

