

Commission Letter # : 104-10  
Commission Meeting: 4 / 05 / 2010  
**RE: Noise & Vibration Regulations – 1<sup>st</sup> Reading**

March 30, 2010

The Honorable Mayor  
and  
Members of City Commission

At their regular meeting of February 9, 2010, the Planning Commission conducted a public hearing on a proposed text amendment to the city's Zoning Ordinance. The amendment would remove regulations for noise and vibrations from §770-94 of the Zoning Ordinance. The following resolution was adopted unanimously by the Planning Commission:

**Whereas**, the Planning Commission held a public hearing on Tuesday, February 9, 2010 to consider a text amendment covering Article VI, Environmental Performance Standards, of the Zoning Ordinance, Chapter 770 of the Code of the City of Royal Oak, for the purpose of removing regulations and standards for noise and vibrations from the Zoning Ordinance; and

**Whereas**, the Planning Commission instead recommends that the City Commission adopt updated and revised standards for noise and vibrations and include them within another section of the Code of the City of Royal Oak; and

**Whereas**, the proposed amendment to the Zoning Ordinance is consistent with the goals and objectives of the Royal Oak Master Plan.

**Therefore, Be It Resolved**, that the Planning Commission hereby accepts the following Zoning Ordinance text amendments and forwards its recommendation for approval to the City Commission: §770-94, Noise and Vibrations, is hereby repealed in its entirety.

**Be It Further Resolved**, that the Planning Commission recommends that the City Commission direct staff to prepare updated noise and vibration regulations for adoption by the City Commission, and that §770-94 not be repealed until those regulations are adopted by the City Commission upon second reading.

The City Commission previously directed the Planning Commission to review §770-94 to determine if the noise level limits contained in subparagraph (A)(3) of that section were so low as to prohibit normal conversation and typical background sounds, and therefore be excessive and possibly unenforceable.

The Planning Department researched noise standards from other cities including Ann Arbor, Birmingham, East Lansing and Kalamazoo. Of those communities, only Kalamazoo had lower noise level limits than Royal Oak. The city's noise level limits in §770-94 appeared to be somewhat lower than what the other cities allow. Listed below are the sound levels imposed by other cities that are comparable to Royal Oak's current standards in §770-94 (A)(3):

**Ann Arbor**

| Use of Property Receiving the Sound | 7:00 a.m. to 10:00 p.m. | 10:00 p.m. to 7:00 a.m. |
|-------------------------------------|-------------------------|-------------------------|
| Residential                         | 61 dB(A)                | 55 dB(A)                |
| Commercial                          | 71 dB(A)                | 61 dB(A)                |

**Birmingham**

| Use of Property Producing the Sound | Use of Property Receiving the Sound | Sunday to Saturday 7:00 a.m. to 7:00 p.m. | Sunday to Saturday 7:00 p.m. to 7:00 a.m. |
|-------------------------------------|-------------------------------------|---|---|
| Residential                         | Residential                         | 75 dB(A)                                  | 60 dB(A)                                  |
| Commercial                          | Residential                         | 80 dB(A)                                  | 60 dB(A)                                  |
| Residential                         | Commercial                          | 80 dB(A)                                  | 60 dB(A)                                  |
| Commercial                          | Commercial                          | 90 dB(A)                                  | 75 dB(A)                                  |

**East Lansing**

| Decibels (dB(A)) | Adjacent Uses                     |
|------------------|-----------------------------------|
| 70               | Office / Industrial Park District |
| 65               | Commercial / Office districts     |
| 55               | Other districts                   |

**Kalamazoo**

| Zones                  | dB(A) Maximum Limitations |                         |
|------------------------|---------------------------|-------------------------|
|                        | 7:00 a.m. to 10:00 p.m.   | 10:00 p.m. to 7:00 a.m. |
| Residential 7, 7A, 8   | 50 dB(A)                  | 45 dB(A)                |
| Commercial 4, 5, 5A, 6 | 55 dB(A)                  | 50 dB(A)                |
| Industrial 1, 2, 3     | 75 dB(A)                  | 70 dB(A)                |

The noise levels allowed in those communities are measured using ANSI's "A" weighted scale or dB(A). According to sources on acoustics researched by the Planning Department, the A-weighted scale is the best method for measuring noise problems when no other information or measurements are available. Royal Oak's levels are measured using decibels with no weighted scale. There is no conversion formula for measured dB(A) values to other sound pressure levels, so an actual comparison of Royal Oak's current standards to the limits imposed by other cities is not possible although the values should be relatively close.

Also, all of the cities studied and most other communities in Michigan do not have noise regulations within their zoning ordinance. They are usually contained in separate, police-power ordinances within the general codes of other communities instead of their zoning ordinance.

Based upon this information, the Planning Commission directed the Planning Department to prepare a text amendment that would remove required standards for noise from the city's Zoning Ordinance and place them within another chapter of the city's Code of Ordinances. The Planning Commission also directed staff to prepare draft noise requirements based on the standards of other cities. At the recommendation of staff the Planning Commission included vibration standards due to their similarity with noise regulations.

Attached for the City Commission's review are ordinance amendments that would revise standards for noise and vibrations as directed by the Planning Commission. The amendments would remove required standards for noise and vibrations from the city's Zoning Ordinance and place them within the chapter on disorderly conduct in the city's Code of Ordinances, the Municipal Criminal Offenses Ordinance. The specified requirements for noise would be revised based on noise level standards taken from codes in other cities.

The amended language would raise existing noise level limits to be both closer to those imposed by other cities and nearer the threshold where adverse impacts to neighboring properties can occur according to accepted industry standards. The amendment also adds a section on noise and vibrations from motor vehicles which was previously not addressed within the Zoning Ordinance. Under the disorderly conduct chapter, violations would be a misdemeanor punishable by fines and/or imprisonment rather than a civil infraction as imposed under the Zoning Ordinance.

It is also possible to place the noise and vibrations standards within the city's Public Nuisances Ordinance. However, violations under that chapter would still be a civil infraction, the same as they are under the Zoning Ordinance. Placing noise and vibration violations within the Disorderly Conduct chapter may be more beneficial due to the more strict enforcement mechanisms available for misdemeanors.

Listed below are some of the main provisions from the proposed amendment:

- Noise would now be measured using the "A" weight decibel scale, the most commonly used method for measuring noise levels by other communities and the accepted industry standard for such measurements.
- Noise level limits would be raised to be more consistent with those of other communities and those recognized by sound engineers where harm can result. Royal Oak's current noise limits are below these recognized thresholds.
- If a property has both residential and commercial uses, standards for commercial uses would apply.
- A noise level measurement would not be mandatory in order to issue a citation. Violations of the ordinance could occur even if there is no measurement or if the measurement is below specified levels, provided the sound can be detected at the property line or on adjacent properties.
- At the discretion of the City Manager, enforcement can be assigned to contractors specifically trained and equipped to measure noise and vibrations.

The Michigan Zoning Enabling Act, Public Act 110, of 2006, as amended, does not require that the City Commission conduct another public hearing on the changes proposed for § 770-94 of the Zoning Ordinance, although it may do so, if desired. No public comments were offered at the February 9<sup>th</sup> public hearing held by the Planning Commission.

The City Charter, however, provides that an amendment to an ordinance cannot be approved upon introduction but must receive a second review. Therefore, the following options are available to the City Commission:

- Adopt the ordinance, upon introduction or first reading with or without modification, and direct staff to prepare the ordinance for final disposition;
- Adopt the ordinance, upon introduction or first reading with or without modification and schedule a public hearing prior to final disposition;
- Refer the ordinance back to staff and/or the Planning Commission for additional information or study identifying specific areas of concern; or
- Reject the ordinance (no further action is required).

The resolution on the following pages is recommended for approval:

## RESOLUTION

**Whereas**, the Royal Oak Planning Commission held a public hearing on February 9, 2010 and recommended approval of a proposed text amendment to the City of Royal Oak Zoning Ordinance (Chapter 770, Zoning, of the Code of the City of Royal Oak) removing regulations for noise and vibrations from the Zoning Ordinance; and

**Whereas**, the Royal Oak City Commission has determined that the Zoning Ordinance amendment is consistent with the goals and objectives of the Royal Oak Master Plan and has received the record of public comments taken at the public hearing held at the Royal Oak Planning Commission meeting of February 9, 2010; and

**Whereas**, the Royal Oak City Commission has determined that revised standards for noise and vibrations should be adopted as part of the City of Royal Oak Public Nuisances Ordinance (Chapter 278, Disorderly Conduct, of the Code of the City of Royal Oak).

**Therefore, Be It Resolved**, that Ordinance 2010-2, entitled an ordinance to amend the Code of the City of Royal Oak, Chapter 278, Disorderly Conduct, thereof entitled City of Royal Oak Public Nuisances Ordinance, and Chapter 770, Zoning, thereof entitled City of Royal Oak Zoning Ordinance, is hereby adopted on First Reading.

### **The City of Royal Oak ordains:**

#### **Section 1 Ordinance**

Pursuant to the provision of the Michigan Zoning Enabling Act, P.A. 110 of 2006, as amended, and pursuant to all applicable provisions of law, Chapter 278, Disorderly Conduct, City of Royal Oak Public Nuisances Ordinance, and Chapter 770, Zoning, City of Royal Oak Zoning Ordinance, as amended, are further amended to read as described in Exhibit A attached hereto.

#### **Section 2 Severability**

If any section, subsection, clause, phrase or portion of this ordinance is for any reason held invalid or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent portion of this ordinance, and such holding shall not affect the validity of the remaining portions of this ordinance.

#### **Section 3. Savings**

As proceedings pending and all rights and liabilities existing, acquired or incurred at the time this ordinance takes effect are saved and may be consummated according to the law in force when they are commenced.

**Section 4. Repealer**

All ordinance or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

**Section 5. Effective Date**

This ordinance shall be published in a newspaper of general circulation in the City of Royal Oak and shall become effective ten (10) days after publication, as provided by law.

Respectfully submitted,



Timothy E. Thwing  
Director of Planning

Approved,



Donald E. Johnson  
City Manager

Attachment

cc: D. Gillam, City Attorney  
M. Halas, City Clerk  
C. Jahnke, Chief of Police

# Sound Pressure Levels Chart

**SYSTEM DESIGN GUIDE**

| Typical Ambient Noise Level |          |                                  | Typical Environments  |       |
|-----------------------------|----------|----------------------------------|---|-------|
| Very High Noise             | 85-95 dB | Speech Almost Impossible To Hear | Construction Site<br>Loud Machine Shop<br>Nolsy Manufacturing<br>Printing Shop  | 95 dB |
|                             |          |                                  |   | 85 dB |
| High Noise                  | 75-85 dB | Speech Is Diffcult To Hear       | Assembly Line<br>Crowded Bus/Transit Waiting Area<br>Machine Shop<br>Shipping/Warehouse<br>Supermarket (Peak Tlme)<br>Very Nolsy Restaurant/Bar | 75 dB |
|                             |          |                                  |   | 65 dB |
| Medium Noise                | 65-75 dB | Must Raise Voice to be Heard     | Bank/Public Area<br>Department Store<br>Nolsy Office<br>Restaurant/Bar<br>Supermarket<br>Transportation Waiting Room                            | 65 dB |
|                             |          |                                  |   | 55 dB |
| Low Noise                   | 55-65 dB | Speech Is Easy To Hear           | Conversational Speech<br>Doctor's Office<br>Hospital<br>Hotel Lobby<br>Quiet Office<br>Very Quiet Restaurant/Bar                                | 55 dB |
|                             |          |                                  |   |       |

**ORDINANCE 2010-2  
EXHIBIT A**

**TEXT AMENDMENTS TO ZONING ORDINANCE AND PUBLIC NUISANCES ORDINANCE  
FOR NOISE AND VIBRATIONS**

---

**I. Chapter 278, Disorderly Conduct, Article II, Definitions, §278-2, Definitions, is hereby amended to add the following definitions which shall read as follows:**

DECIBEL – A unit of measure used to express the magnitude of sound pressure and intensity on a logarithmic scale relative to the threshold of audible sound to the human ear in compliance with the American National Standards Institute Standard § 1.1-1960.

DECIBEL ON THE A-WEIGHTED NETWORK [dB(A)] – The sound pressure level expressed in decibels as measured on the “A” scale from a calibrated sound level meter utilizing the A-level weighting scale as specified in American National Standards Institute standard S 1.4-1971 for a Type 2 instrument.

---

**II. Chapter 278, Disorderly Conduct, Article VI, Offenses Directed Against Public Order, is hereby amended to add § 278.35.1, Noise and Vibrations, which shall read as follows:**

**§ 278.35.1. Noise and Vibrations.**

A. Excessive Noise Prohibited. It shall be unlawful for any person to create, assist in creating, permit, or as an owner, lessee or occupant on which the activity is located, continue or permit the continuance of any frequent or long-continued, unreasonably loud, disturbing, unusual or unnecessary noise, measured or unmeasured, which annoys, disturbs, injures, or endangers the comfort, repose, health, peace or safety of others within the limits of the City of Royal Oak. All noise and sound which violates the provisions set forth in this section are hereby deemed and declared to be a public nuisance, and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

No person shall conduct or permit any activity that produces a clearly and plainly audible sound at or beyond the lot line of the property on which that activity occurs, which is readily identifiable in relation to any surrounding or background noise typically associated with the activity, with a dB(A) exceeding the levels specified in the following table:

**Sound Levels in dB(A) at Lot Lines**

| <b>Use of Property Receiving the Sound</b> | <b>7:00 a.m. to 9:00 p.m.</b> | <b>9:00 p.m. to 7:00 a.m.</b> |
|--|-------------------------------|-------------------------------|
| Residential or Institutional               | 80                            | 60                            |
| Commercial, Office or Industrial           | 90                            | 75                            |

Where property is used for a combination of residential, institutional, office, and/or commercial purposes, the limitations set forth for commercial, office or industrial use shall apply. Harmonic or pure tones with a specific frequency or pitch, and impulsive sounds of very short duration which may

**Ordinance 2010-2**  
**Exhibit A**

be repeated at regular or irregular intervals shall be in violation of this section when such sounds have a sound pressure level of 5 dB(A) less than those listed in the table above.

B. Prohibited Activities. The following activities are prohibited if they produce clearly and plainly audible sound to persons within any structure other than that from which the activities occur, or beyond the lot line of the property on which the activities are conducted or from which the sound is generated, even if the sound level produced by a prohibited activity does not exceed the applicable level specified in §278.35.1 (A), Excessive Noise Prohibited:

- (1) The operation of power tools or equipment between 9:00 p.m. and 7:00 a.m.
- (2) The operation of any device that produces an audible sound for killing, trapping, attracting, or repelling insects or other pests between 9:00 p.m. and 7:00 a.m.
- (3) The sounding of any bell, chime, siren, whistle or similar device between 9:00 p.m. and 7:00 a.m., except:
  - (a) to alert persons to the existence of an emergency, danger or attempted crime; or
  - (b) as provided in §278.35.1 (C), Noise Exemptions.
- (4) The operation or playing of any radio, television, electronic device for playing recorded music, drum, amplified or unamplified musical instrument, or similar sound-producing device between 9:00 p.m. and 7:00 a.m.
- (5) The operation or use between 9:00 p.m. and 7:00 a.m. of any loudspeaker, sound amplifier, public address system or similar sound-producing device used to amplify sounds.
- (6) Construction, repair, remodeling, alteration, demolition, drilling or excavation work of any site and/or structure at any time on Sunday and between 9:00 p.m. and 7:00 a.m. Monday through Saturday, except as permitted by §278.35.1 (C), Noise Exemptions.
- (7) The creation of a loud, unnecessary noise in connection with the loading or unloading of any vehicle or the opening and closing or destruction of bales, boxes, crates, or other containers.
- (8) The use of any drums, loud-speakers, amplified or unamplified musical devices, other instruments or sound-producing devices for the purpose of attracting attention by the creation of noise to any gathering, performance, show, sale, display of merchandise, or other activities.
- (9) The blowing of any amplified or electronic whistles, signals, air horns, or sirens, except as permitted by §278.35.1 (C), Noise Exemptions.
- (10) Continuous or repeated yelling, shouting, whistling, or singing.
- (11) The keeping of any animals or birds which create frequent or long-continued noise.
- (12) The discharge into the open air of exhaust from any steam engine or stationary internal-combustion engine, except through a muffler or other device which effectively prevents loud or explosive noises from such engine.
- (13) Other activities which create any excessive or unreasonably loud noise.

**Ordinance 2010-2**  
**Exhibit A**

C. Noise Exemptions.

- (1) Applicability. The provisions of this section shall apply to all sources of sound except the following:
  - (a) Motor vehicles as defined in the State Motor Vehicle Code, 1949 P.A. 300 (MCLA 257.1 et seq.) in operation on a public right-of-way;
  - (b) Aircraft in flight which are in all respects conducted in accordance with, or pursuant to, federal law, federal air regulations and air-traffic-control instructions;
  - (c) Railroad equipment in operation on railroad rights-of-way;
  - (d) Sirens, warning devices, and related apparatus used solely for public safety purposes by any police, fire, or emergency medical agency;
  - (e) Excavations or repairs of any street, bridge, public right-of-way, sidewalk, or right-of-way, or any public utility installation, by or on behalf of the City of Royal Oak, any public utility, or any agency of Oakland County or the State of Michigan; and
  - (f) Temporary construction activity.
- (2) General Exemptions. The following activities are exempted from the requirements of section §278.35.1 (A) Excessive Noise Prohibited, and (B) Prohibited Activities:
  - (a) Emergency work necessary to restore property to a safe condition following a fire, accident, natural disaster, or public calamity, to restore public utilities, or to protect persons or property from an imminent exposure to danger or potential danger.
  - (b) Devices or activity creating sound made to alert persons to the existence of an emergency, danger, or attempted crime.
  - (c) Regular activities or operations of law enforcement and governmental units or agencies.
  - (d) Parades, concerts, festivals, fairs, and similar activities with a special event permit issued by the City Commission subject to any sound limits approved as part of that permit.
  - (e) Athletic, musical, or cultural activities and events including practices and rehearsals conducted by or under the auspices of public or private schools and other recognized sanctioning bodies.
  - (f) Equipment, vehicles and activities creating sound from the collection of solid waste after 6:00 a.m. and before 10:00 p.m.
  - (g) Equipment, vehicles and activities creating sound from the removal of snow and ice from public rights-of-way and parking facilities.
- (3) Limited Exemptions. The following limited activities are exempted from the sound level limitations of §278.35.1 (A), Excessive Noise Prohibited:

**Ordinance 2010-2**  
**Exhibit A**

- (a) Operation of power equipment that does not produce a sound level exceeding 100 dB(A) beyond the property line of the property on which the equipment is operated between 7:00 a.m. and 9:00 p.m.
  - (b) Construction, repair, remodeling, demolition, drilling, wood cutting or excavation work conducted between 7:00 a.m. and 9:00 p.m. Monday through Saturday, except legal holidays, which does not produce a sound level exceeding 105 dB(A) beyond the property line of the property on which the work is being conducted. Also, a person may engage in such activities at their residence between 9:00 a.m. and 7:00 p.m. on Sundays.
  - (c) Operation or use of any loud-speaker, sound amplifier, public address system, or similar device to amplify sounds between 7:00 a.m. and 9:00 p.m. outside of the Central Business District and 12:00 a.m. within the Central Business District whether stationary or mounted on a vehicle, subject to the following:
    - [1] The only sounds permitted are human speech or music.
    - [2] Operations are permitted for a period not in excess of 4 hours daily.
    - [3] The volume of sound shall be controlled so that it will not be audible for a distance in excess of 100 feet from the equipment and so that the volume is not unreasonably loud, raucous, jarring or disturbing to persons within the area of audibility.
    - [4] No sound-amplifying equipment shall be operated with an excess of 15 watts of power in the last stage of amplification outside of the Central Business District and 60 watts of power in the last stage of amplification within the Central Business District.
  - (e) The operation between 7:00 a.m. and 9:00 p.m. of any device for killing, trapping, attracting, or repelling insects or other pests which does not produce a sound level exceeding 83 dB(A) beyond the property line of the property on which the device is operated.
  - (r) The use of one or more bells or chimes which does not exceed 90 seconds in duration in an hour.
  - (t) Carillon playing between 7:00 a.m. and 9:00 p.m.
  - (h) Singing or playing a musical instrument without electric amplification between 7:00 a.m. and 9:00 p.m. outside of the Central Business District and 12:00 a.m. within the Central Business District that does not produce a sound level in excess of 67 dB(A) beyond the property line of the property on which the singing or music is produced outside of the Central Business District, and 90 dB(A) on any public street or beyond the property line of the property on which the singing or music is produced within the Central Business District.
  - (i) Cases of emergency or extraordinary circumstance subject to such terms and conditions as deemed necessary with authorization by the City Manager or their designee.
- (4) Temporary Exemptions. The City Manager is authorized to grant a temporary exemption from the maximum permissible sound levels established by this section if such temporary exemption would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary exemption is sought. The

**Ordinance 2010-2  
Exhibit A**

following factors shall be considered by the City Manager in determining whether to grant a temporary exemption:

- (a) The balance of the hardship to the applicant, the community and other persons in not granting the variance against the adverse impact on the health, safety and welfare of persons adversely affected and any other adverse effects of the granting of the variance.
- (b) The nearness of any residence or residences, or any other use which would be adversely affected by sound in excess of the limits prescribed by this article.
- (c) The level of the sound to be generated by the event or activity.
- (d) Whether the type of sound to be produced by the event or activity is usual or unusual for the location or area for which the variance is requested.
- (e) The density of population of the area in which the event or activity is to take place.
- (f) The time of day or night which the activity or event will take place.
- (g) The nature of the sound to be produced, including but not limited to, whether the sound will be steady, intermittent, impulsive, or repetitive.

A temporary exemption must be in writing and signed by the City Manager or their appointed representative and must set forth the name of the party granted the exemption, the location of the property for which it is authorized, the date(s) and time(s) for which it is effective, and the dB(A) level(s) authorized. A temporary exemption may be granted only for the period of time that is reasonably necessary to conduct the activity, which in no case may exceed 30 days.

D. Excessive Vibrations Prohibited. It shall be unlawful for any person to create, assist in creating, permit, or as an owner, lessee or occupant on which the activity is located, continue or permit the continuance of any inherent and recurring ground-transmitted vibration that is perceptible without instruments at any point along the lot line of the use from which the vibration is generated and/or in excess of the limits set forth below. Vibration shall be measured at the nearest adjacent lot line. The vibration maximums set forth below are stated in terms of particle velocity, which may be measured with suitable instrumentation or computed on the basis of displacement and frequency. All vibrations which violate the provisions set forth in this section are hereby declared to be a public nuisance, and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

(1) When computed, the following standards shall apply:

| <b>Frequency (cycles per second)</b> | <b>Particle Velocity in Inches Per Second</b> | <b>Displacement (inches)</b> |
|--------------------------------------|---|------------------------------|
| 0 to 10                              |   | 0.0010                       |
| 10 to 20                             |   | 0.0008                       |
| 20 to 30                             |   | 0.0006                       |
| 30 to 40                             |   | 0.0004                       |
| 40 and over                          |   | 0.0002                       |

(2) If requested by the City Manager, the petitioner shall provide evidence of compliance with the above-noted vibration calculations.

**Ordinance 2010-2**  
**Exhibit A**

- E. Vibration Exemptions. Vibrations resulting from temporary construction activity shall be exempt from the requirements of this section.
  - F. Liability of Owner, Lessee, or Occupant. If the person responsible for an activity which violates this section cannot be determined, the owner, lessee or occupant of the property on which the activity is located shall be deemed responsible for the violation.
  - G. Additional Enforcement. In addition to employees and officers regularly required to enforce City ordinances generally, the City Manager may assign duties of enforcement of this section to personnel and/or contractors trained in noise-control or vibration-control techniques and procedures and equipped with calibrated sound level or vibration meters of a standard design.
- 

**III. Chapter 278, Disorderly Conduct, Article VI, Offenses Directed Against Public Order, is hereby amended to add § 278.35.2, Vehicular Noise, which shall read as follows:**

**§ 278.35.2. Vehicular Noise.**

- A. Applicability. The provisions of this section apply only to motor vehicles as defined in the Michigan Vehicle Code, being 1949 P.A. 300, as amended, (MCLA 257.1 et seq.), in operation on a public right-of-way. The definitions provided in the Michigan Vehicle Code shall apply to this section.
- B. Horns and Other Warning Devices. A person shall not operate a motor vehicle in a manner or with equipment that does not comply with the following requirements:
  - (1) A motor vehicle, when operated upon a public right-of-way, shall be equipped with a horn in good working order and capable of emitting sound audible under normal conditions from a distance of not less than 200 feet, but a horn or other warning device shall not emit an unreasonably loud or harsh sound or a whistle. The driver of a motor vehicle shall, when reasonably necessary to insure safe operation, give audible warning with his horn but shall not otherwise use the horn.
  - (2) A vehicle shall not be equipped with nor shall a person use upon a vehicle a siren, whistle, or bell, except as otherwise permitted in this section.
  - (3) A commercial vehicle may be equipped with a theft alarm signal device which is so arranged that it cannot be used by the driver as an ordinary warning signal.
  - (4) An authorized emergency vehicle may be equipped with a siren, whistle, air horn, or bell capable of emitting sound audible under normal conditions from a distance of not less than 500 feet, but the siren shall not be used except when the vehicle is operated in response to an emergency call or in the immediate pursuit of an actual or suspected violator of the law. In those cases the driver of the vehicle shall sound the siren when necessary to warn pedestrians and other drivers of the approach of the vehicle.
  - (5) A motor vehicle licensed as a historic vehicle may be equipped with a siren, whistle, or bell which may be used when participating in a parade, exhibition, tour, or similar event.

**Ordinance 2010-2**  
**Exhibit A**

C. Mufflers and Exhaust Systems.

- (1) A person shall not operate a motor vehicle unless the motor vehicle is equipped with a muffler in good working order and in constant operation to prevent excessive or unusual noise and annoying smoke. A person shall not remove, destroy, or damage any of the baffles contained in the muffler, nor shall a person use a muffler cutout, bypass, or similar device upon a motor vehicle on a public right-of-way or street.
- (2) A person shall not operate a motor vehicle unless the engine and power mechanism of the motor vehicle is so equipped and adjusted as to prevent the escape of excessive fumes or smoke.
- (3) A person shall not operate a motor vehicle unless the motor vehicle is equipped with a properly operating exhaust system which shall include a tailpipe and resonator on a vehicle where the original design included a tailpipe and resonator.

D. Exhaust Systems and Backfiring Devices.

- (1) A person shall not operate a motor vehicle unless the vehicle is equipped with an exhaust system in good working order to prevent excessive or unusual noise and is equipped to prevent noise in excess of the limits established in §278.35.2 (E) Vehicle Noise Limits.
- (2) No person shall introduce any gasoline, foreign material or obstruction into the muffler or exhaust pipe which causes or is capable of causing exhaust gases to ignite, burn or flash in any manner or form.
- (3) For purposes of this section, a motor vehicle does not include special mobile equipment.

E. Vehicle Noise Limits.

- (1) A person shall not operate a motor vehicle on a public right-of-way or street if the motor vehicle produces total noise exceeding one of the following limits at a distance of 50 feet except as provided in subparagraphs (b)(iii) and (c)(iii):
  - (a) A motor vehicle with a gross weight or gross vehicle weight rating of 8,500 pounds or more, combination vehicle with gross weight or gross vehicle weight ratings of 8,500 pounds or more.
    - [1] Ninety dB(A) if the maximum lawful speed on the public right-of-way or street is greater than 35 miles per hour.
    - [2] Eighty-six dB(A) if the maximum lawful speed on the public right-of-way or street is not more than 35 miles per hour.
    - [3] Eighty-eight dB(A) under stationary run-up test.
  - (b) A motorcycle or a moped:
    - [1] Eighty-six dB(A) if the maximum lawful speed on the public right-of-way or street is greater than 35 miles per hour.

**Ordinance 2010-2**  
**Exhibit A**

- [2] Eighty-two dB(A) if the maximum lawful speed on the public right-of-way or street is not more than 35 miles per hour.
  - [3] Ninety-five dB(A) under stationary run-up test at 75 inches.
- (c) A motor vehicle or a combination of vehicles towed by a motor vehicle not covered in subparagraph (a) or (b).
- [1] Eighty-two dB(A) if the maximum lawful speed on the public right-of-way or street is greater than 35 miles per hour.
  - [2] Seventy-six dB(A) if the maximum lawful speed on the public right-of-way or street is not more than 35 miles per hour.
  - [3] Ninety-five dB(A) under stationary run-up test 20 inches from the end of the tailpipe.
- (2) A dealer shall not sell or offer for sale for use upon a street or public right-of-way a new motor vehicle manufactured after April 1, 1978, which produces a maximum noise exceeding the following limits:
- (a) A motor vehicle with a gross vehicle weight rating of 8,500 pounds or more = 83 dB(A).
  - (b) A motorcycle or a moped = 83 dB(A).
  - (c) A motor vehicle not covered in subparagraph (a) or (b) = 80 dB(A).
- (3) A person shall not operate a vehicle on a public right-of-way or street if the vehicle has a defect in the exhaust system which affects sound reduction, is not equipped with a muffler or other noise dissipative device, or is equipped with a cutout, bypass, amplifier, or a similar device.
- (4) A person, either acting for himself or herself or as the agent or employee of another, shall not sell, install, or replace a muffler or exhaust part that causes the motor vehicle to which the muffler or exhaust part is attached to exceed the noise limits established by this article.
- (5) A person shall not modify, repair, replace, or remove a part of an exhaust system causing the motor vehicle to which the system is attached to produce noise in excess of the levels established by this article, or operate a motor vehicle so altered on a street or public right-of-way.
- (6) A dealer shall not sell a used or secondhand motor vehicle for use upon a street or public right-of-way which is not in compliance with this article.
- F. Test Procedures. Test instrumentation and procedures used for implementation and enforcement of this section shall substantially conform with applicable standards and recommended practices established by the Society of Automotive Engineers, Inc., and the American National Standards Institute, Inc., for the measurement of motor vehicle sound levels. Rules establishing these test procedures that have been promulgated by the Michigan Department of Transportation shall also be followed in the implementation and enforcement of this section. If such rules so provide, sound level measurements may be made at distances other than those specified in §278.35.2 (E) Vehicle Noise Limits, provided that the decibel limits applied at the other distances are adjusted accordingly.

**Ordinance 2010-2**  
**Exhibit A**

- G. Operation of Electronically Amplified Sound System In Motor Vehicles. No person operating or in control of a parked or moving motor vehicle shall operate, or permit the operation of, an electronically amplified sound system, including but not limited to portable or standard factory-installed or owner installed devices for playing recorded sounds or music, alone or combined with component speakers, in or on such vehicle so as to produce either a sound that is clearly and plainly audible more than 20 feet from the vehicle and/or a vibration that is perceptible without instruments outside of the vehicle, except as permitted under a special event permit issued by the City Commission.
- 

- IV. Chapter 770, Zoning, Article VII, Environmental Performance Standards, §770-94, Noise and Vibrations, is hereby deleted in its entirety, and the section number reserved for future use.**
-