

Submitted by: Chair of the Assembly at the
Request of the Mayor
Prepared by: Department of Health and
Human Services
For reading: July 24, 2007

ANCHORAGE, ALASKA
AO NO. 2007-105

AN ORDINANCE AMENDING ANCHORAGE MUNICIPAL CODE CHAPTER 15.70 TO CLARIFY DEFINITIONS, NOISE PERMIT CONDITIONS, AND ADD A NEW SECTION FOR MEASUREMENTS OF NOISE; AMENDING SECTION 14.60.030 TO INCREASE FINES; AND REPEALING ANCHORAGE MUNICIPAL CODE OF REGULATIONS CHAPTER 15.70.

THE ASSEMBLY HEREBY ORDAINS:

Section 1. Anchorage Municipal Code section 15.70.030 is amended to read as follows (*the remainder of the section is not affected, and therefore not set out*):

15.70.030 Definitions.

- A. The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*** *** ***

Commercial means of or relating to commerce, engaged in commerce, involved in work designed or planned for the mass market; or designating products, often unrefined, made and distributed in large quantities; or having profit as a primary aim; or paid for by an advertiser or advertising.

Commercial area means any parcel of land zoned as commercial [B-1, B-2A, B-2B, B-2C, B-3 OR B-4] under title 21.

Construction means temporary [ANY] site preparation, assembly, erection, drilling, substantial repair, alteration, demolition, or similar action or activity for or on: [OF] public or private rights-of-way;[,] structures;[,] utilities;[,] or similar public or publicly maintained property[, BUT EXCLUDES DEMOLITION]. For the purposes of this chapter, off-site fabrication and/or manufacture of materials used in construction including but not limited to modular housing fabrication, asphalt or concrete operations, sand/gravel extraction and truss manufacture are not construction.

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Contiguous means sharing a common boundary or edge.

*** **

Department means the municipal Department of Health and Human Services.

Director means the director of the Department of Health and Human Services or designee.

*** **

Industrial area means any parcel of land zoned as industrial [I-1, I-2,] under title 21.

Land use boundary means an imaginary line, along the ground surface and its vertical extension, separating a residential, commercial and/or industrial area.

*** **

L_{max} means a single event metric used to describe the greatest sound level in decibels at a given time at a given location.

*** **

Motor vehicle means any self-propelled [EVERY] motorized vehicle [WHICH IS SELF-PROPELLED] including, but not limited to, automobile, motorcycle, snow mobile, mini-bike, go-cart, motor scooter and off-road vehicle [INCLUDING THOSE DEFINED IN SECTION 9.04.010] but excluding railroad train as defined under section 9.04.010 [AND EVERY VEHICLE WHICH IS PROPELLED BY ELECTRIC POWER OBTAINED FROM OVERHEAD TROLLEY WIRES, BUT NOT OPERATED UPON RAILS AS DEFINED IN SECTION 9.04.010, AND INCLUDES MOTORCYCLES OR MOTOR-DRIVEN CYCLES AS DEFINED IN SECTION 9.04.010].

*** **

[MOTORCYCLE MEANS AN UNENCLOSED MOTOR VEHICLE HAVING A SADDLE FOR THE USE OF THE OPERATOR AND TWO OR THREE WHEELS IN CONTACT WITH THE GROUND, INCLUDING BUT NOT LIMITED TO MOTOR SCOOTERS AND MINIBIKES.]

*** **

Person means and shall extend and be applied to a corporation, company, partnership, firm, association, organization, business trust, entity or society, as well as to an individual and group of individuals.

*** **

Real property boundary means an imaginary line along the ground surface and its vertical extension, or between separate apartments or condominiums, [THAT] separating [ES] the real property owned, rented or leased by one person from real

property [THAT] owned, rented or leased by another person.

*** *** ***

Residential area means any parcel of land zoned as residential [R-1, R-1A, R-2A, R-2D, R-2M, R-3, R-4, R-5, R-6, R-7, R-8, R-9, R-O, D-2 or D-3, PLI, U or W] under title 21, [OR ANY AREA OF LAND USED AS SINGLE- OR MULTIPLE-FAMILY DWELLINGS,] hospitals, nursing homes, homes for the aged, schools and similar institutions.

*** *** ***

Vibration means a rapid linear motion of an elastic solid [AN OSCILLATORY MOTION OF SOLID BODIES OF DETERMINISTIC OR RANDOM NATURE] described by displacement, velocity, [OR] acceleration, or as measured with respect to a given reference point or equilibrium position.

*** *** ***

(GAAB 16.85.030; AO No. 78-48; AO No. 85-18; AO No. 94-77(S), § 1, 5-31-94; AO No. 2001-97, § 1, 5-22-01)

Section 2. Anchorage Municipal Code section 15.70.040 is amended to read as follows (*the remainder of the section is not affected and therefore not set out*):

15.70.040 Powers and duties of department of health and human services.

A. The noise control program established by this chapter shall be administered by the department [OF HEALTH AND HUMAN SERVICES,]. [WHICH SHALL HAVE] In addition to any other authority vested in it, the department shall have the following powers:

*** *** ***

8. The department may study existing transportation systems within the community, such as truck routes, determine areas with sensitivity to sound and vibration caused by transportation, recommend changes or modifications to the transportation systems to minimize the impact of sound and vibration on residential areas and noise-sensitive zones, and assist in or review the total transportation planning of the community, including planning for new roads and highways, bus routes, airports and other systems for public transportation to ensure the impact of sound and vibration receive adequate consideration.

9. The department may evaluate and report to the mayor and assembly on the effectiveness of the noise control program and make recommendations for legislative or budgetary changes necessary to improve the program.

- 1 B. In order to implement and enforce this chapter effectively, the department shall
2 within a reasonable time carry out the following duties:

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4 ***

5 ***

- 6 4 [5]. The department shall make recommendations for modifications or
7 amendments to this chapter to ensure consistency with all state and federal
8 laws and regulations.

9 [THE DEPARTMENT SHALL STUDY EXISTING
10 TRANSPORTATION SYSTEMS WITHIN THE COMMUNITY, SUCH
11 AS TRUCK ROUTES, DETERMINE AREAS WITH SENSITIVITY TO
12 SOUND AND VIBRATION CAUSED BY TRANSPORTATION,
13 RECOMMEND CHANGES OR MODIFICATIONS TO THE
14 TRANSPORTATION SYSTEMS TO MINIMIZE THE IMPACT OF
15 SOUND AND VIBRATION ON RESIDENTIAL AREAS AND NOISE-
16 SENSITIVE ZONES, AND ASSIST IN OR REVIEW THE TOTAL
17 TRANSPORTATION PLANNING OF THE COMMUNITY,
18 INCLUDING PLANNING FOR NEW ROADS AND HIGHWAYS, BUS
19 ROUTES, AIRPORTS AND OTHER SYSTEMS FOR PUBLIC
20 TRANSPORTATION TO ENSURE THAT THE IMPACT OF SOUND
21 AND VIBRATION RECEIVED ADEQUATE CONSIDERATION.]

- 22
23 5 [6]. The department shall develop [A GENERALIZED SOUND EXPOSURE
24 MAP OF THE MUNICIPALITY,] a long-term plan for achieving quiet in
25 the municipality, and, subject to the approval of the assembly, integrate
26 this plan into the planning process of the municipality.

- 27
28 6 [7]. The department shall administer noise program grants or other funds and
29 gifts from public and private sources, including the state and federal
30 grants.

- 31
32 8 [9]. The department shall conduct programs of public education regarding the
33 causes, effects and general methods of abatement and control of noise and
34 vibration, the actions prohibited by this chapter and the procedures for
35 reporting violations, and the participation of public interest groups in
36 related public information efforts.

37
38 [THE DEPARTMENT SHALL EVALUATE AND REPORT TO THE
39 MAYOR AND ASSEMBLY ANNUALLY ON THE EFFECTIVENESS
40 OF THE MUNICIPAL NOISE CONTROL PROGRAM AND MAKE
41 RECOMMENDATIONS FOR ANY LEGISLATIVE OR BUDGETARY
42 CHANGES NECESSARY TO IMPROVE THE PROGRAM. THE
43 FIRST SUCH EVALUATION AND REPORT UNDER THIS
44 SUBSECTION SHALL BE SUBMITTED TO THE ASSEMBLY NOT
45 LATER THAN JULY 15, 1979.]

(AO No. 78-48; AO No. 85-8)

Section 3. Anchorage Municipal Code section 15.70.050 is amended to delete the last two subsections as follows (*the remainder of the section is not affected and therefore not set out*):

15.70.050 **Governmental compliance.**

*** *** ***

[D. ANY WRITTEN CONTRACT, AGREEMENT, PURCHASE ORDER OR OTHER INSTRUMENT WHEREBY THE MUNICIPALITY IS COMMITTED TO THE EXPENDITURE OF \$5,000.00 OR MORE IN RETURN FOR GOODS OR SERVICES SHALL CONTAIN PROVISIONS REQUIRING COMPLIANCE WITH THIS CHAPTER IN A FORM APPROVED BY THE MUNICIPAL ATTORNEY.]

[E. THE DIRECTOR SHALL RECOMMEND TO THE MAYOR AND THE ASSEMBLY THAT THE MUNICIPALITY PROCURE AND USE IN PREFERENCE TO ANY OTHER PRODUCT ANY PRODUCT THAT THE ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY HAS CERTIFIED AS A LOW NOISE EMISSION PRODUCT PURSUANT TO SECTION 15 OF THE NOISE CONTROL ACT OF 1972 AND DETERMINED SUITABLE FOR USE AS A SUBSTITUTE; PROVIDED, HOWEVER, THAT SUCH CERTIFIED PRODUCT IS REASONABLY AVAILABLE AND HAS A PROCUREMENT COST NOT MORE THAN 125 PERCENT OF THE LEAST EXPENSIVE TYPE OF PRODUCT FOR WHICH IT IS CERTIFIED AS A SUBSTITUTE.]

(AO No. 78-48; AO No. 85-8)

Section 4. Anchorage Municipal Code section 15.70.060 is amended to read as follows (*the remainder of the section is not affected and therefore not set out*):

15.70.060 **Prohibited acts and conditions.**

*** *** ***

B. The following acts and conditions and the causing thereof are declared to be in violation of this chapter:

1. *Aircraft and airport operations.* No person shall operate aircraft engines while the aircraft is on the ground or operate an airport facility in such a manner as to cause a noise disturbance across a residential real property boundary, on a public space or within a noise-sensitive zone. When complaints are received by the department, t[T]he director [DEPARTMENT] shall consult with the airport proprietor to recommend

1 changes in airport operations to minimize any noise disturbance that the
2 airport owner may have authority to control in its capacity as proprietor.
3 Nothing in this section shall be construed to prohibit, restrict, penalize,
4 enjoin or in any manner regulate the movement of aircraft that are in all
5 respects conducted in accordance with or pursuant to applicable federal
6 laws or regulations, including but not limited to takeoff, landing or
7 overflight procedures.

8
9 2. *Animals.* No person shall own, possess or harbor any animal [THAT]
10 causing a noise disturbance or exceeding sound levels in Table 1 of this
11 chapter. This subsection does not apply to dogs or cats under title 17.
12 [FREQUENTLY OR FOR CONTINUED DURATION MAKES
13 SOUNDS COMMON TO ITS SPECIES IN VIOLATION OF THE
14 PROVISIONS OF TITLE 17, EXCEPT FOR] This subsection also does
15 not apply to sounds created in a public zoo.

16
17 3. *Construction.* No person, unless issued a permit by the department
18 pursuant to section 15.70.070 and meeting all conditions of the permit,
19 shall engage in construction or cause or allow construction [SHALL
20 OPERATE OR CAUSE THE OPERATION OF ANY TOOLS OR
21 EQUIPMENT USED IN CONSTRUCTION, DRILLING, REPAIR,
22 ALTERATION OR DEMOLITION WORK]:

23
24 a. So [THAT] the sound therefrom creates a noise disturbance across
25 a residential real property boundary or within a noise-sensitive
26 zone between the hours of 10:00 p.m. and 6:00 a.m. during the
27 construction season, or between the hours of 10:00 p.m. and 7:00
28 a.m. during other months, or at any time on Sundays or state
29 holidays; or

30
31 b. So [THAT] the sound level therefrom exceeds an L_{eq} of 80 dB(A)
32 at or within a residential real property boundary or within a noise-
33 sensitive zone during any one hour of the daily period from 6:00
34 a.m. to 10:00 p.m. during the construction season or from 7:00 a.m.
35 to 10:00 p.m. during other months; or

36
37 c. So [THAT] the sound level therefrom exceeds an L_{eq} of 80 dB(A)
38 at or within a commercial or industrial real property boundary
39 during any one hour of the daily period from 6:00 a.m. to 10:00
40 p.m. during the construction season or from 7:00 a.m. to 10:00
41 p.m. during other months; and

42
43 The restrictions of subsection B.3. [OF THIS SECTION] do not apply to
44 emergency work of public service utilities as provided in section
45 15.70.020[.], the [USE OF] non-commercial use of [DOMESTIC]

1 power tools as provided for [PERMITTED] in subsection B.4., [OF THIS
2 SECTION] or construction where [WORK FOR WHICH] a permit has
3 been issued pursuant to section 15.70.070[A.] and all conditions of the
4 permit are met.

- 5
6 4. *Non-commercial use of [DOMESTIC] power tools.* No person shall
7 operate or permit the operation of any mechanically powered saw, sander,
8 drill, grinder, lawn or garden tool, snow blower or similar device [USED]
9 in residential areas between the hours of 10:00 p.m. and 7:00 a.m. the
10 following day so as to cause a noise disturbance across a residential real
11 property boundary.

12 *** **

- 13
14 7. *Loading and unloading.* No person shall load, unload, open, close or
15 otherwise handle boxes, crates, containers, building materials, refuse
16 containers including garbage cans or similar objects between the hours of
17 10:00 p.m. and 7:00 a.m. the following day in such a manner as to cause a
18 noise disturbance across a residential real property boundary or within a
19 noise-sensitive zone.

- 20
21 8. *Loudspeakers and public address systems.* No person shall use or operate
22 for any [COMMERCIAL OR NONCOMMERCIAL] purpose any
23 loudspeaker, public address system or similar device so [THAT] the sound
24 therefrom creates a noise disturbance across a residential real property
25 boundary or within a noise-sensitive zone unless a permit has been issued
26 for a public event by the department pursuant to section 15.70.070 and all
27 conditions of the permit are met.

28 *** **

- 29
30 15. *Radios, televisions, musical instruments and similar devices.* Except as
31 provided for [OTHERWISE PERMITTED FOR NONCOMMERCIAL
32 SPOKEN LANGUAGE] in subsection B.8 of this section, no person shall
33 operate, play or permit the operation or playing of any radio, television,
34 phonograph, DVD, cassette player, compact disk, boom box, drum, other
35 musical instrument, sound amplifier or similar device that produces,
36 reproduces or amplifies sound:

- 37
38 a. In such a manner as to create a noise disturbance across a real
39 property boundary or within a noise-sensitive zone except for
40 activities open to the public and for which a permit has been issued
41 for a public event by the department as provided in section
42 15.70.070[A.] and all conditions of the permit are met;

43 *** **

- 44
45 18. *Tampering with noise control device or sound monitoring equipment.* No

1 person shall remove or render inoperative for purposes other than
 2 maintenance, repair or replacement any noise control device or element of
 3 design or noise label of any product manufactured to meet specific noise
 4 emission limits under federal or state law. No person shall move or render
 5 inaccurate or inoperative any sound monitoring instrument or device
 6 positioned by or for the department when such device or the immediate
 7 area is clearly labeled using a placard provided by the department [IN
 8 ACCORDANCE WITH DEPARTMENT REGULATIONS] to warn of
 9 the potential illegality. No person shall use a product manufactured to
 10 meet specific noise emission limits under federal or state law with [THAT
 11 HAS HAD] a noise control device or element of design or noise label
 12 removed or rendered inoperative with knowledge [THAT] such action has
 13 occurred.

- 14
 15 19. *Vibration.* No person shall operate or cause the operation of any device
 16 [THAT] producing [ES] low-frequency, audible or inaudible sound that
 17 creates vibration above the vibration perception threshold of any
 18 individual within a residential real property boundary or within a noise-
 19 sensitive zone between the hours of 10:00 p.m. and 7:00 a.m. the
 20 following day.

21
 22 (GAAB 16.85; AO No. 78-48; AO No. 94-77(S), § 2, 5-31-94; AO No. 2001-97, § 2, 5-
 23 22-01)

24
 25 **Section 5.** Anchorage Municipal Code section 15.70.070 is amended to read as follows (*the*
 26 *remainder of the section is not affected and therefore not set out*):

27
 28 **15.70.070** **Noise permits.**

- 29
 30 A. *Generally.* The department shall have the authority consistent with this section to
 31 grant permits that may be requested pursuant to sections: 15.70.060[.]B.3.,
 32 pertaining to construction;[,] 15.70.060[.]B.6., pertaining to explosives, firearms
 33 and similar devices;[,] 15.70.060B.8. and B.15[(A)]., pertaining to public
 34 events;[,] 15.70.090[.]E., pertaining to snow removal and street sweeping
 35 equipment off public rights-of-way, and 15.70.090[.]G., pertaining to motor
 36 vehicle racing events.
 37
 38 B. *Application.* Any person seeking a noise permit shall file with the department an
 39 application using a form provided by the department.
 40
 41 1. The application for a permit or variance shall contain[ING] specific
 42 information demonstrating [THAT DEMONSTRATES] that bringing the
 43 source of sound or activity [FOR WHICH THE PERMIT OR VARIANCE
 44 IS SOUGHT] into compliance with this chapter results in [WOULD
 45 CONSTITUTE] an unreasonable hardship on the applicant, the community

1 or other persons.

2
3 2. Any person seeking a noise permit shall file an application with the
4 director at least 20 days prior to the commencement of the noise for which
5 the permit is requested.

6
7 a. The director shall have authority to waive, consistent with
8 administratively established criteria, the 20-day time requirement
9 in order to expedite issuance of permits.

10
11 3. The department shall, within 10 days of the receipt of an application,
12 publish notice on a publicly accessible website soliciting public comments
13 regarding the application.

14
15 a. If the director determines the activity for which a permit is
16 requested has substantial potential for adverse impact to the public
17 due to the time of the activity, duration of the activity or other
18 reasons, or if the noise event has a duration of 21 days or longer,
19 the director may require the permit applicant to:

20
21 i. Advertise in a major distribution newspaper; and/or

22 ii. Distribute written information regarding the nature and
23 timing of the activity addressed in the application to those
24 likely to be affected by the granting of a permit.

25 [NOTICE OF AN APPLICATION FOR A PERMIT SHALL BE
26 PUBLISHED WITHIN TEN DAYS FROM THE DATE OF
27 APPLICATION, AND NO PERMIT MAY BE ISSUED
28 WITHOUT SUCH NOTICE PRIOR TO ISSUANCE;
29 PROVIDED, HOWEVER, THAT NOTICE BY PUBLICATION
30 SHALL NOT BE REQUIRED IN ORDER TO ISSUE A SHORT-
31 TERM PERMIT HAVING A DURATION OF 21
32 CONSECUTIVE CALENDAR DAYS OR LESS UNLESS THE
33 DIRECTOR DETERMINES THAT THERE IS A
34 SUBSTANTIAL POTENTIAL FOR IMPACT ON THE PUBLIC.]

35
36 4. Any individual who claims to be adversely affected by allowance of a
37 permit may file a statement with the department containing any
38 information to support the [HIS] claim. Upon the written request for a
39 hearing by [OF] any affected person, the applicant or the director, an
40 administrative hearing shall be held within 15 days, pursuant to chapter
41 3.60, to consider evidence relative to the criteria set forth in subsection C.
42 [OF THIS SECTION].

43
44 C. *Criteria for approval.* In determining whether to grant or deny an [THE]
45 application for a permit, the director or hearing officer shall balance the hardship

to [ON] the applicant, the community and other persons of not granting the permit against the adverse impact on health, safety and welfare of persons affected, the adverse impact on property affected and any other adverse impacts of granting the permit. Applicants may be required to [EITHER]:

1. M[M]easure or allow the department to measure the sound level of or the vibration from any source in accordance with the methods and procedures and at such locations and times as the department may reasonably prescribe; [,] and
2. T[T]o furnish reports of the results of such measurements to the department; and
3. T[T]o require the measurements to be conducted in the presence of a [THE] department code enforcement officer[S];[.] and
4. An a[A]pplicant[S] for a permit and persons contesting the granting of a permit may be required to submit any other information the department may reasonably require; [.] and

In granting or denying an application, the director shall keep on public file a copy of the decision. In the event a permit application is denied, written justification for denial shall be kept on public file [AND THE REASONS FOR DENYING OR GRANTING THE PERMIT]. No permit shall be granted for any source of sound or activity that violates or would violate any provision of federal or state law or any provision of any other chapter of this title or this Code.

D. *Conditions.* Permits shall be granted by notice to the applicant containing all necessary conditions, including as part of any permit a time limit on the permitted activity. The director may require the permittee to provide public notice prior to the activity pursuant to provisions in B.2. The permit shall not become effective until all conditions are agreed to in writing by the applicant. Noncompliance with any condition of a permit may [SHALL] terminate the permit and subject the person holding it to those provisions of this title regulating the source of sound for which the permit was granted.

*** *** ***

G. Fees.

1. At the time a noise permit is issued, the owner or operator shall pay to the department a permit fee as set forth below. For an event duration of:
 - a. Eight (8) hours or fewer.....\$25.00;
 - b. More than 8 hours but fewer than 10 days.....\$50.00;
 - c. More than 10 days but fewer than 21 days...\$100.00; or

d. Twenty-one (21) days or longer.....\$170.00

2 A person applying for a noise permit fewer than twenty (20) days prior to the commencement of the noise for which the permit is requested shall pay a late fee of ten percent (10%) of the permit fee, in addition to the permit fee.

*** **

(GAAB 16.85; AO No. 78-48; AO No. 89-130)

Section 6. Anchorage Municipal Code chapter 15.70 is amended to add a new section 15.70.075 to read as follows:

15.70.075 Measuring sound levels.

A. For purposes of this section, “operator” means a department code enforcement officer or other person authorized by the director to measure sound levels for purposes of this chapter.

1. If measurements are made with a sound level meter, the meter shall be an instrument in good operating condition and meeting the requirements of a Type I or Type II meter as specified by ANSI Standard 1.4-1971 or the most current ANSI Standard, if different. For purposes of this title, a sound level meter shall contain at least an A-weighted scale and both fast and slow meter response capacity.

2. If measurements are made with other instruments, procedures shall be performed in such a manner that the overall accuracy be at least that specified in ANSI standard 1.4-1971 or most current ANSI Standard if different, for Type II instruments.

3. When the location or distance prescribed in this title for measurement of sound is impractical or would provide misleading or inaccurate results, measurements may be taken at other locations or distances using standard and appropriate correction factors.

4. Copies of procedures and tests required by this chapter and not specified herein shall be kept on file at the Department.

B. A department code enforcement officer or other operator conducting sound level measurements shall understand techniques and principles of sound measurement and operation of sound measuring instrumentation.

Section 7. Anchorage Municipal Code section 15.70.080 is amended to read as follows:

15.70.080 Property line noise emission standards.

A. Except when a permit is issued by the department or as otherwise provided in subsection[S] B. [AND C OF THIS SECTION], no person shall operate or allow [CAUSE] to be operated on public or private property any source of sound in such a manner as to create a sound level that exceeds the limits set forth for the receiving land use category in Table 1 when sound levels are measured at or within the land use [PROPERTY] boundary of the receiving land use.

Table 1. Sound Levels By Emitting and Receiving Land Use

Receiving Land Use Boundary Limits (7 AM – 10 PM) (dB (A) L_{max})			
Receiving Land Use	Emitting Property		
	Residential	Commercial	Industrial
Residential	60	65	65
Commercial	70	70	75
Industrial	80	80	80

Receiving Land Use Boundary Limits (10 PM – 7 AM)			
Receiving Land Use	Emitting Property		
	Residential	Commercial	Industrial
Residential	50	55	55
Commercial	60	60	70
Industrial	80	80	80

[TABLE 1. SOUND LEVELS BY RECEIVING LAND USE

RECEIVING LAND USE CATEGORY	TIME	SOUND LEVEL LIMIT (DB(A))
RESIDENTIAL AREA	7:00 A.M.—10:00 P.M.	60
	10:00 P.M.—7:00 A.M.	50
COMMERCIAL AREA	7:00 A.M.—10:00 P.M.	70
	10:00 P.M.—7:00 A.M.	60
INDUSTRIAL AREA	AT ALL TIMES	80]

B [C]. The provisions of subsection[S] A. [AND B OF THIS SECTION] shall not apply to the unamplified human voice or [AND] activities covered by sections 15.70.060[.]B.1., pertaining to aircraft and airport operations;[,] 15.70.060[.]B.3.,

1 pertaining to construction during the construction season between the hours of
 2 6:00 a.m. and 10:00 p.m. or between 7 a.m. and 10 p.m. other than construction
 3 season;[,] 15.70.060[.]B.4., pertaining to non-commercial use of [DOMESTIC]
 4 power tools;[,] 15.70.060[.]B.5., pertaining to emergency signaling devices;[,]
 5 15.70.060[.]B.6., pertaining to explosives, firearms and similar devices;[,]
 6 15.70.060[.]B.9., pertaining to motorboats;[,] 15.70.060[.]B.14., pertaining to
 7 public service utilities;[,] 15.70.060[.]B.16., pertaining to stationary non-
 8 emergency signaling devices;[,] 15.70.090[.]A., pertaining to motor vehicles
 9 operating on public rights-of-way;[,] 15.70.090[.]D., pertaining to refuse
 10 collection vehicles;[,] and 15.70.090[.]E., pertaining to snow removal vehicles on
 11 Anchorage School District property and other street sweeping equipment.

12
 13 [NO PERSON SHALL OPERATE OR CAUSE TO BE OPERATED ANY
 14 SOURCE OF SOUND IN SUCH A MANNER AS TO CREATE A SOUND
 15 LEVEL MEASURED AT ANY LOCATION ON A BOUNDARY BETWEEN
 16 TWO RECEIVING LAND USE CATEGORIES THAT EXCEEDS THE
 17 ARITHMETIC MEAN OF THE RESPECTIVE SOUND LEVEL LIMITS SET
 18 FORTH FOR SUCH RECEIVING LAND USE CATEGORIES IN TABLE 1.]
 19

20 C [D]. Notwithstanding the above provisions in this section, no person shall cause,
 21 suffer, allow or permit the operation of any amplified sound on private property in
 22 such a manner that it raises the total sound levels of the permissible sound limits
 23 set forth in Table 2 when measured within the residence, dwelling, or building
 24 structure of a complainant. If the source of sound is amplified sound on private
 25 property, and the complainant states that the rhythmic bass component of the
 26 music is disturbing within their residence, dwelling, or building structure, then the
 27 noise enforcement officer may take sound level measurements within the
 28 residence, dwelling, or building structure of the complainant. These sound level
 29 shall be measured using the "C" weighted sound level, with the sound level meter
 30 set for "C" weighting, "fast" response. Such measurements shall not be taken in
 31 areas that receive only casual use, such as hallways, closets and bathrooms. For
 32 the purposes of these measurements, the ambient sound level is that sound level
 33 which is measured in the residence, dwelling, or building structure when the
 34 sound source under investigation is not prominent, or in a room on the same floor
 35 that is relatively unaffected by the sound source under investigation. The "C"-
 36 scale is more sensitive to low frequency sound levels than the "A"-scale; an
 37 increase of 3dB is perceived by humans as being plainly audible, an increase of
 38 5dB is plainly louder and an increase of 10dB is perceived as being twice as loud.

39 *** *** ***

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 41
 42 (GAAB 16.85; AO No. 78-48; AO No. 2001-97, § 3, 5-22-01)

43
 44 **Section 8.** Anchorage Municipal Code section 15.70.090 is amended to read as follows (*the*
 45 *remainder of the section is not affected and therefore not set out*):

15.70.090 Motor vehicle noise emission standards.

*** *** ***

E. No person shall operate or permit the operation of any motor vehicle operating for the purpose of removing snow or sweeping streets if at any time the motor vehicle produces a sound level in excess of the level set forth in table 2 at a distance of 50 feet (15 meters) or more from any point on the vehicle.

1. As provided in section 15.70.080B.[C], motor vehicles operating for the purpose of removing snow or sweeping streets [SUCH MOTOR VEHICLES] are exempt from complying with the sound levels set forth in table 1 when operating on Anchorage School District property or other public rights-of-way.

2. Motor vehicles operating for the purpose of removing snow or sweeping streets when operating off a public right-of-way may be exempt from complying with the sound levels [SUCH MOTOR VEHICLES OPERATING OFF A PUBLIC RIGHT OF WAY FOR THE PURPOSE OF REMOVING SNOW MAY BE EXEMPT FROM COMPLYING WITH THE SOUND LEVELS] of table 1 when operating in compliance with the terms and conditions of a permit issued pursuant to section 15.70.070[A].

*** *** ***

(GAAB 16.85; AO No. 78-48)

Section 9. Anchorage Municipal Code chapter 15.70 is amended to add a new section 15.70.110 as follows:

15. 70.110 Penalties and remedies other than for motor vehicles.

A. Notwithstanding provisions for penalties and remedies in section 15.70.095, the department may seek any or all of the following remedies:

1. Enjoin or abate a violation of this chapter.
2. Recover the costs of abatement.
3. Recover damages suffered because of the violation.
4. Recover a fine as set forth in section 14.60.030 or, if no fine is set forth in section 14.60.030, a fine of not less than \$100.00 for each day in violation, including each day the violation continues or is not abated after an enforcement order is issued.
5. Assess up to double the amount of fine, penalty, costs and damages for a second or subsequent offense committed by the same person within one

year of service of an enforcement order, even if the offense occurs on a different property parcel. For purposes of this subsection, a second or subsequent offense shall be categorized the same as the original offense identified in section 15.70.060.

6. Recover a civil penalty not exceeding \$1,000.00 for each violation.

B. The department shall keep an account of the cost, including incidental expenses, incurred by the municipality in the abatement of any violation of this section. A bill for collection shall be forwarded to the violator, specifying the nature and costs of the work performed.

1. For purposes of this section, “*incidental expenses*” shall include, but is not limited to, the actual expenses and costs to the municipality in the preparation of the notices, specifications, contracts, work inspection, and interest from date of completion at the rate prescribed by law for delinquent real property taxes.

C. The remedies provided in this section are not exclusive, but are cumulative of all other remedies available at law or in equity.

Section 10. Anchorage Municipal Code section 14.60.030 is amended to read as follows (*the remainder of the section is not affected and are therefore not set out*):

14.60.030 Fine Schedule.

The fine schedule under this chapter is as follows:

TABLE INSET:

<u>Code Section</u>	<u>Offense</u>	<u>Penalty/Fine</u>
*** *** ***		
15.70.060	Prohibited <u>acts and conditions</u> [NOISE PRACTICES]:	
	A. Making improper noise	<u>\$150.00</u> [\$75.00]
	B. Act in violation	<u>\$150.00</u> [\$75.00]
15.70.080	Property line noise:	
	A. Exceed limit	<u>\$150.00</u> [\$75.00]
	B. Exceed limit	<u>\$150.00</u> [\$75.00]
15.70.090	Vehicle noise standards (identity specific violation)	<u>\$150.00</u> [\$75.00]
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(AO No. 93-167(S-1), § 1, 4-13-94; AO No. 94-108, § 1, 10-5-94; AO No. 94-134, § 2, 9-8-94; AO No. 95-42, § 2, 3-23-95; AO No. 95-67(S), § 9, 7-1-95; AO No. 95-102, § 1, 4-26-95; AO No. 95-118, § 3, 9-1-95; AO No. 95-163(S), § 21, 8-8-95; AO No. 95-195(S-1), 1-1-96; AO No. 96-51(S-1), § 2, 8-1-96; AO No. 96-96(S-1), § 2, 2-1-97; AO No. 96-126(S), § 3, 10-1-96; AO No. 96-137(S), § 9, 1-2-97; AO No. 97-88, § 3, 6-3-97; AO No. 97-107, § 3, 11-17-97; AO No. 97-133(S), § 1, 11-11-97; AO No. 98-27(S-1), § 2, 11-11-97; AO No. 98-160, § 2, 12-8-98; AO No. 99-13(S), 2-9-99; AO No. 99-91(S), § 4, 7-13-99; AO No. 2000-64, § 1, 4-18-00; AO No. 2000-116(S), § 4, 7-18-00; AO No. 2000-127(S), § 2, 10-14-00; AO No. 2000-129(S), § 26, 11-21-00; AO No. 2001-48, § 1, 3-13-01; AO No. 2001-74(S), § 2, 4-17-01; AO No. 2001-4, § 2, 2-6-01; AO No. 2001-145(S-1), § 11, 12-11-01; AO No. 2003-68, § 1, 9-30-03; AO No. 2003-97, § 4, 9-30-03; AO No. 2003-117, § 2, 1-28-03; AO No. 2003-130, § 8, 10-7-03; AO No. 2003-152S, § 10, 1-1-04; AO No. 2004-1, § 2, 1-1-03; AO No. 2004-99, § 2, 6-22-04; AO No. 2004-100(S-1), § 6, 1-1-05; AO No. 2004-171, § 1, 1-11-05; AO No. 2005-160, § 9, 11-1-05; AO No. 2005-84(S), § 3, 1-1-06; AO No. 2005-185(S), § 35, 2-28-06; AO No. 2005-124(S-1A), § 33, 4-18-06; AO No. 2006-39, § 6, 4-11-06; AO No. 2006-54, § 1, 5-2-06; AO No. 2006-80, § 1, 6-6-06)

Section 10. Anchorage Municipal Code of Regulations chapter 15.70 is repealed in its entirety. A copy of AMCR chapter 15.70 is attached hereto, pursuant to Anchorage Municipal Code section 1.05.050B.

Section 11. This ordinance shall become effective immediately upon its passage and approval by the Assembly.

PASSED AND APPROVED by the Assembly this ____ day of _____, 2007.

Chair

ATTEST:

Municipal Clerk

MUNICIPALITY OF ANCHORAGE
Summary of Economic Effects -- General Government

AO Number: 2007-

Title: AMC Chapter 15.70 Noise Control amending to clarify definitions, noise permit conditions, and add a new section for measurements of noise; amending section 14.60.030 to increase fines; and repealing anchorage municipal code of regulations chapter 15.70.

Sponsor: Mayor
 Preparing Agency: Department of Health and Human Services
 Others Impacted: APD and Parks & Recreation

CHANGES IN EXPENDITURES AND REVENUES:		(In Thousands of Dollars)				
	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	
Operating Expenditures						
1000 Personal Services	\$ -	\$ -	\$ -	\$ -	\$ -	
2000 Non-Labor	-	-	-	-	-	
3900 Contributions	-	-	-	-	-	
4000 Debt Service	-	-	-	-	-	
TOTAL DIRECT COSTS:	\$ -	\$ -	\$ -	\$ -	\$ -	
Add: 6000 Charges from Others	\$ -	\$ -	\$ -	\$ -	\$ -	
Less: 7000 Charges to Others	-	-	-	-	-	
FUNCTION COST:	\$ -	\$ -	\$ -	\$ -	\$ -	
REVENUES:	\$ -	\$ -	\$ -	\$ -	\$ -	
CAPITAL:	\$ -	\$ -	\$ -	\$ -	\$ -	
POSITIONS: FT/PT and Temp	0	0	0	0	0	

PUBLIC SECTOR ECONOMIC EFFECTS:

There is no anticipated change to the operating budget as a result of the proposed ordinance changes.

PRIVATE SECTOR ECONOMIC EFFECTS:

It is anticipated that there may be some impact to individual businesses and others in meeting sound limit requirements and there will be some added expense to noise permit applicants who are required to provide notice about the permit application to the public.



MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 451-2007

Meeting Date: July 24, 2007

1 **From:** Mayor

2
3 **Subject:** Amendments to the Anchorage Municipal Code Chapter 15.70 to clarify definitions, noise
4 permit conditions, and add a new section for measurements of noise; amending section
5 14.60.030 to increase fines and repealing Anchorage Municipal Code of Regulations Chapter
6 15.70.
7
8

9 As Anchorage continues to grow and develop, homeowners, businesses, tenants, recreational area users
10 and others find themselves closer and closer together. As people become closer noise becomes more of
11 an issue. Noise has especially become a concern in areas where residential areas adjoin industrial zones.
12

13 Notable changes being proposed include:

- 14 • Adding to language in the definition of “construction” to clarify that off-site fabrication, manufacture
15 or extraction of materials used in construction are not themselves construction.
- 16 • Changing from “shall be” to “may be” current requirements that the Department of Health and Human
17 Services perform noise studies, develop sound exposure maps and prepare noise control program
18 reports.
- 19 • Restructuring Table 1 (AMC 15.70.080) regarding allowable property line noise limits to emitter-
20 receiver, instead of the existing receiver-only model with adjustments to levels to accommodate this.
- 21 • Deleting the arithmetic mean provision (AMC 15.70.080.B) taken into consideration in restructuring
22 Table 1.
- 23 • Under the current code the department is required to publish notice of receipt of a noise permit
24 application for activities exceeding 21 days duration. Proposed changes allow the department to
25 advertise permit applications on a website and the director to determine whether a permit application
26 notice must be published/advertised based on whether the activity is anticipated to have a substantial
27 impact on the public.
- 28 • Increasing fines for non-compliance.
- 29 • Deleting noise regulations, AMCR 15.70 and incorporating portions into the AMC.

30
31 Meetings held with known stakeholders, including people bothered by noise and people generating it,
32 provided an opportunity for the exchange of concerns, issues and solutions. As many suggestions as
33 possible have been incorporated into the draft document while maintaining the goal of having a code that
34 is reasonable, practical and enforceable.
35

36
37 **RECOMMENDATION:**

38
39 **THE ADMINISTRATION RECOMMENDS APPROVAL OF THE ATTACHED ASSEMBLY**
40 **ORDINANCE.**

41
42 Prepared by: Beverly K. Wooley, Director, Department of Health and Human Services

43 Concur: Denis C. LeBlanc, Municipal Manager

44 Respectfully submitted: Mark Begich, Mayor

Regulation 15.70 SOUND MEASUREMENT PROCEDURES

- 15.70.001 Scope of regulations.
- 15.70.002 Instruments.
- 15.70.003 Personnel.
- 15.70.004 General sound level measurement procedures.
- 15.70.005 Fifty-foot pass-by test.
- 15.70.006 Measurement sites.
- 15.70.007 Restrictions on measurement site selection.
- 15.70.008 Sound level measurement procedures.
- 15.70.009 Snowmobile retesting procedures.
- 15.70.010 Motorcycle retesting procedures.
- 15.70.011 Twenty-inch stationary motor vehicle test.
- 15.70.012 Sound level measurement procedures.
- 15.70.013 Allowable sound levels.
- 15.70.014 Twenty-five foot stationary motor vehicle test.
- 15.70.015 Measurement sites.
- 15.70.016 Sound level measurement procedures.
- 15.70.017 Allowable sound levels.

15.70.001 Scope of regulations.

- A. Except as otherwise provided in Anchorage Municipal Code 15.70 and in the other test procedures referred to in this section, Sections 15.70.002--15.70.004 of these regulations establish general practices and procedures pursuant to Anchorage Municipal Code 15.70.020.D and 15.70.040.B.1 for the measurement of all sources of sound by noise control officers or any other persons charged with the enforcement of Anchorage Municipal Code 15.70.
- B. Sections 15.70.005--15.70.010 of these regulations establish practices and procedures for the 50-foot pass-by test for measurement of noise emissions from motor vehicles.
- C. Sections 15.70.011--15.70.013 of these regulations establish practices and procedures for the 20-inch stationary test for measurement of noise emissions from motor vehicles.
- D. Sections 15.70.014--15.70.017 of these regulations establish practices and procedures for the 25-foot stationary test for measurement of noise emissions from motor vehicles.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.002 Instruments.

- A. All sound level meters shall conform to American National Standards Institute (ANSI) number S1.4-1971. A type II specification is the minimum requirement for the sound level meters.
- B. All octave band filter sets shall conform to American National Standards Institute (ANSI) number S1.11-1966. Type O class II is the minimum requirement for octave band filter sets.
- C. Impulse (impact) sound measurement instruments shall conform to American National Standards Institute (ANSI) number S1.4-1971. A type II specification is the minimum requirement for sound level meters with a peak detector circuit.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.003 Personnel.

Personnel conducting sound measurements shall have been trained and experienced in the current techniques and principles of sound measurement and in the selection and operation of sound measuring instrumentation appropriate to the measurements being taken.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.004 General sound level measurement procedures.

- A. Except as otherwise provided in other test procedures set forth in these regulations the operator shall follow the procedures described in this section for the measurement of noise emissions from all stationary and mobile sources regulated by Anchorage Municipal Code 15.70.
- B. The operator shall calibrate the sound level meter immediately prior to use and at intervals not exceeding two hours when the instrument is used for more than a two-hour period, using the procedures described in factory instruction manuals.
- C. The operator shall check the batteries in both the meter and the calibrator before calibration.
- D. The operator shall set the instrument to the correct level range, weighting scale and meter response, place the calibrator on the microphone of the meter and adjust the output indicated on the meter to the correct calibration level as described in the factory instruction manuals.
- E. A least once each year every sound level meter and calibrator shall receive laboratory calibration in accordance with the manufacturer's specifications. This calibration shall be traceable to the National Bureau of Standards.
- F. Except as otherwise provided in other test procedures set forth in these regulations, the operator may choose a measurement site at any point on or within the real property boundary of any property that is affected by the noise source in question or at or within an adjacent real property boundary. In general the operator shall make measurements at points where the noise level is greatest. The operator should use an adequate number of different measurement locations to determine if there is a violation of Anchorage Municipal Code 15.70 and the extent of any such violation. No measurement shall be made within ten feet of any sound-reflective surface sufficiently large to cause inaccuracies in measurement.
- G. Except as otherwise provided in other test procedures set forth in these regulations, the sound level meter or microphone may be either hand held or mounted on a tripod four feet or more above the ground. A microphone extension cable may be used. The microphone shall be oriented in accordance with the manufacturer's instructions.
- H. The operator shall not make measurements when the wind exceeds 12 miles per hour. A

wind screen shall always be in place on the microphone. Measurements may be taken when precipitation is falling if the microphone is adequately protected. Measurements shall not be taken when the outside temperature is less than ten degrees Celsius.

- I. The operator shall use the fast characteristic for determining if a steady sound exists and for any measurement where the meter is required to follow rapid changes in sound level excluding impulsive noise. The operator shall use the slow characteristic for all other measurements described in these procedures except impulse measurements.
- J. The operator shall make A-weighting scale measurements with the sound level meter switched to the A network in accordance with the manufacturer's instructions. The operator will note the maximum noise level from the noise source being measured and record it on an appropriate field report form. Where noise level standards are expressed as L_{eq} measurements may be read directly on instruments provided with instantaneous readout or may be calculated from a series of measurements using accepted sampling techniques.
- K. The operator shall make octave band noise measurements on an octave band frequency analyzer. These measurements will be made in the same manner as A-weighting scale measurements except that octave band filters will be used instead of the A-weighting network.
- L. The operator shall make impulse measurements with a nonaveraging, absolute peak detector. Impulse measurements will be made in the same manner as A-weighting scale measurements except that the meter will be set to the linear unweighted scale with the peak detector circuit engaged.
- M. The operator shall use cable calibration when the meter manufacturer's instructions specify the use of such a correction.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.005 Fifty-foot pass-by test.

- A. Sections 15.70.005--15.70.010 of these regulations establish practices and procedures for conducting tests to determine the total sound level output of an in-use motor vehicle, as measured 50 feet from the center of the lane of travel.
- B. The 50-foot test may be used for all motor vehicles or any combination of vehicles towed by such vehicles, for motorboats and for licensed or unlicensed off-road or recreational vehicles.
- C. The operator may conduct the 50-foot pass-by test according to the procedures in Section 15.70.008 of these regulations after selecting an appropriate measurement site and determining the appropriate correction factors as set forth in Sections 15.70.006--15.70.007 of these regulations.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.006 Measurement sites.

- A. Two types of sites are established for measuring vehicles in use on the highway. They are a standard measuring site requiring a large clear open area and a restricted site in which sound-reflecting objects are permitted. Correction factors will be applied when required.
- B. As shown in figure 1, standard measuring sites are those where the microphone can be placed 50 feet from the center of the vehicle path and where there are no sound-reflecting objects within a 100-foot radius of the microphone and a 100-foot radius of the microphone point (the point on the vehicle path that is closest to the microphone). When making measurements of vehicle sound levels in standard measuring sites, the instrument readings shall be recorded with no correction factor applied.

FIGURE 1. STANDARD MEASURING SITE

ADD FIGURE page 15.70-5

- C. As shown in figure 2, restricted measuring sites are those where the distance from the center of the vehicle path to the microphone is other than 50 feet or where there are sound-reflecting surfaces closer than 100 feet from the microphone or the microphone point. Vehicle noise measurements may be made in such areas when the proper correction factors described in this test are applied to the recorded sound levels. The actual distance from the microphone to the microphone point at the center of the vehicle path may range from 35 to 118 feet when the appropriate correction factor is applied from table I.

FIGURE 2. RESTRICTED MEASURING SITE

ADD FIGURE page 15.70-5

TABLE I. CORRECTION FACTORS

TABLE INSET:

Distance from Microphone to Center of Vehicle Path in Feet	Correction Factor dB(A)
35--39	-3
39--43	-2
43--48	-1
48--58	0
58--70	+1
70--83	+2
83--99	+3
99--118	+4

- D. A sound-reflecting surface is any object or landscape surface in the immediate vicinity of a measurement site which reflects sufficient sound to require the application of a correction factor to the sound level meter reading. Correction factors from table I may be applied only when sound-reflecting surfaces are basically parallel to the lane of travel. A

basically parallel surface may have irregularities or projections of not more than two feet measured perpendicular to the lane of travel, with the distance to the microphone line or vehicle path measured from the closest point of the projection.

- E. Correction factors shall not be applied to the sound level reading when the following surfaces are within a standard measuring site:
1. Any surface that measures less than eight feet in length in a direction parallel to the portion of the microphone line on which the microphone is positioned regardless of height, such as a telephone booth or a tree trunk, or less than one foot in height regardless of length, such as a curb or guardrail;
 2. Any vertical surface regardless of size, such as a billboard, with the lower edge more than 15 feet above the roadway;
 3. Any uniformly smooth slanting surface with less than a 45-degree slope above horizontal;
 4. Any slanting surface with a 45- to 90-degree slope above horizontal where the line at which the slope begins to exceed 45 degrees is more than 15 feet above the roadway;
 5. Any trees, bushes, shrubs, hedges, grass or other vegetation.
- F. Correction factors shall be applied to sound level meter readings when there are sound-reflecting surfaces within 100 feet of either the microphone or microphone point as follows:
1. Sites where there are sound-reflecting surfaces basically parallel to the vehicle path within the clear area of the standard site may be used by measuring the distance and applying the correction factor obtained from the nomogram in figure 3.

FIGURE 3. NOMOGRAM FOR REFLECTING SURFACES

ADD FIGURE page 15.70-7

2. The point of measurement from smooth embankments shall be the place on the embankment where the slope begins to exceed 45 degrees above horizontal. The point of measurement from irregular embankments shall be the place on the embankment where the irregularity begins. A smooth embankment is one with vegetation, concrete, asphalt, dirt or other relatively smooth cover.

FIGURE 4. MEASUREMENT OF DISTANCE TO EMBANKMENT

ADD FIGURE page 15.70-8

3. To determine the correction factor for sound-reflecting surfaces within the measuring site, measure the distances shown in figure 5. Measurement D is the shortest distance between the sound-reflecting surface and the centerline of the lane of travel. Measurement L is the shortest distance between the sound-reflecting surface and a line parallel to the lane of travel that passes through the microphone (microphone line).

FIGURE 5. CORRECTION FACTOR DISTANCES

ADD FIGURE PAGE 15.70-8

4. Locate the points on the left and right scales of the nomogram corresponding to the distances D and L. Place a straight edge through the nomogram so that it connects the two points. The point where the straight line intersects the center axis indicates the correction factor to be applied to the sound level meter reading.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.007 Restrictions on measurement site selection.

- A. Roadways selected for sound level measuring sites shall be paved with concrete or asphalt. All other pathways selected for sound level measuring sites shall be on hard-packed earth or live vegetation of less than four inches in height.
- B. Snowmobile sites shall be covered with snow or live vegetation no more than four inches in height.
- C. Boat sites shall be on water with waves less than 12 inches.
- D. Sound measurements shall not be made within 100 feet of a tunnel or overpass through which the roadway passes.
- E. The vehicle path and microphone shall not be within 50 feet of overhangs on buildings which project more than two feet from the wall of the building.
- F. Sound-reflecting surfaces other than the ground or water shall be no closer than ten feet from the microphone line.
- G. Sound-reflecting surfaces shall be no closer than ten feet from the center of the lane of travel for a distance of 100 feet parallel to the vehicle path on either side of the microphone point.
- H. Large reflecting surfaces that are not basically parallel to the lane of travel shall be 100 feet or more from the microphone or microphone point.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.008 Sound level measurement procedures.

- A. The operator shall follow the general procedures set forth in Section 15.70.004 of these regulations, except as otherwise provided in this section.
- B. The operator shall ensure that the noise recorded is actually from the vehicle being measured.
- C. The sound level of the vehicle under scrutiny must rise at least six dB(A) before and fall

at least six dB(A) after the maximum sound level occurs.

- D. The sound level recorded shall be the highest level obtained as the vehicle passes by, disregarding unrelated peaks due to extraneous ambient noises.
- E. The operator shall not conduct the 50-foot pass-by test when wind velocity at the test location exceeds ten miles per hour.
- F. The ambient sound level shall be at least ten dB(A) below the sound level of the vehicle being measured.
- G. The sound level meter may be hand held, placed on a tripod according to the manufacturer's instructions or mounted on a vehicle according to the manufacturer's instructions.
- H. The operator shall set the sound level meter on the A scale and shall use the fast response mode.
- I. The operator shall place the microphone at a height of four feet or more as shown in figure 6.

FIGURE 6. MICROPHONE HEIGHT

ADD FIGURE page 15.70-10

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- J. After an initial 50-foot pass-by test has been conducted, a vehicle may be retested according to one or more of the tests designated for the motor vehicles described in Sections 15.70.011 and 15.70.014 of these regulations.
 - K. All other motor vehicles not designated in Sections 15.70.011 and 15.70.014 of these regulations, including off-road and recreational vehicles, may be retested using the 50-foot pass-by test and the additional retesting procedures set forth in Sections 15.70.009--15.70.010 of these regulations as may apply.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.009 Snowmobile retesting procedures.

- A. Snowmobiles shall be retested as provided in this section.
- B. Other off-road vehicles not subject to the testing procedures in Section 15.70.010 of these regulations shall be retested as provided in this section.
- C. The test area shall include a vehicle path of sufficient length for safe acceleration, deceleration and stopping of the vehicle.
- D. The following points and zones shown in figure 7, where only one directional approach is illustrated for the purpose of clarity, shall be established on the vehicle path so that measurements can be made on both sides of the vehicle.

1. Microphone point;

2. End point--a location 50 feet beyond the microphone point;
3. Acceleration point--a location on the vehicle path established as follows: Position the vehicle headed away from the microphone point with the vehicle reference point at 25 feet from the microphone point. From a standing start with transmission in low gear, rapidly apply wide-open throttle, accelerating until maximum rpm is attained. The location on the vehicle path where maximum rpm was attained is the acceleration point for test run in the opposite direction.

FIGURE 7. TEST AREA LAYOUT FOR SNOWMACHINES

ADD FIGURE page 15.70-12

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- E. From a standing start, with transmission in low gear and the vehicle reference point positioned at the acceleration point, the throttle shall be rapidly and fully opened and held through the maximum rpm zone until the reference point on the vehicle reaches the end point after which the throttle shall be closed.
 - F. Sufficient preliminary runs shall be made to enable the test driver to become familiar with the operation of the vehicle and to stabilize engine operating conditions.
 - G. At least four test runs shall be made for each side of the vehicle.
 - H. The reported sound level for each side of the vehicle shall be the average of the two highest readings on the side which are within two dB(A) of each other. The sound level reported for the vehicle shall be the sound level of the louder side.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.010 Motorcycle retesting procedures.

- A. Although the 20-inch test set forth in Section 15.70.011 of these regulations is the test of choice for motorcycles, motorcycles may also be retested as provided in this section.
- B. Off-road vehicles similar to motorcycles shall be retested as provided in this section.
- C. A test area shall include a vehicle path of sufficient length for safe acceleration, deceleration and stopping of the vehicle.
- D. The following points and zones shown in figure 8 where only one directional approach is illustrated for purpose of clarity shall be established on the vehicle path so that measurements can be made on both sides of the vehicle:
 1. Microphone point;
 2. Acceleration point--a location 25 feet before the microphone point;
 3. End point--a location 100 feet beyond the microphone point;
 4. End zone--the last 75-foot distance between the microphone point and the end

point.

FIGURE 8. TEST AREA LAYOUT FOR MOTORCYCLES

ADD FIGURE page 15.70-13

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- E. Motorcycles shall be operated in second gear. Vehicles which reach maximum rpm at less than 30 mph or before a point of 25 feet beyond the microphone point shall be operated in the next higher gear.
 - F. If the motorcycle has an automatic transmission or torque converter, then gear selection shall depend upon whether the gear range is selectable. If the gear range is selectable, employ the lowest range. If the vehicle reaches maximum rpm at less than 30 mph, use the next higher range. If maximum rpm is reached before a point 25 feet beyond the microphone point when the vehicle is in the highest gear range, then the throttle shall be opened less rapidly, but in such a manner that full throttle and maximum rpm are attained while within the end zone. If the gear range is not selectable, then the throttle shall be opened less rapidly, but in such a manner that full throttle and maximum rpm are attained while within the end zone.
 - G. The vehicle shall proceed along the test path at a constant approach speed which corresponds either to an engine speed of 60 percent of maximum rpm or to 30 mph, whichever is lower. When the vehicle reference point reaches the acceleration point, the throttle shall be rapidly and fully opened. The throttle shall be held open until the vehicle reference point reaches the end point or until the maximum rpm is reached within the end zone at which point the throttle shall be closed. Wheel slip shall be avoided.
 - H. Tests during deceleration shall be conducted when deceleration noise appears excessive. The vehicle shall proceed along the vehicle path at maximum rpm in the same gear selected for the test during acceleration. When the reference point on the vehicle reaches the acceleration point, the throttle shall be rapidly closed and the vehicle shall be allowed to decelerate to less than one-half of maximum rpm.
 - I. The engine temperature shall be within normal operating range before each test run.
 - J. The total weight of test driver and test instrumentation shall be at least 165 pounds.
 - K. Sufficient preliminary runs shall be made to enable the test driver to become familiar with the operation of the vehicle and to stabilize engine operating conditions.
 - L. At least four test runs shall be made for each side of the vehicle.
 - M. The reported sound level for each side of the vehicle shall be the average of the two highest readings on that side which are within two dB(A) of each other. The sound level reported for the vehicle shall be the sound level of the louder side.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.011 Twenty-inch stationary motor vehicle test.

- A. Sections 15.70.011--15.70.013 of these regulations establish practices and procedures for conducting tests to determine the sound level output of a stationary vehicle as measured 20 inches (0.5 meter) from the exhaust exit. This procedure allows testing indoors and at sites limited in open space.
- B. The 20-inch test will be the test of choice for all motorcycles, motor vehicles under 10,000 pounds GVWR or GCWR, except off-road vehicles or any combination of vehicles towed by such motor vehicles.
- C. If a vehicle is suspected to be in violation, the operator shall conduct a visual inspection of the exhaust system. The inspection will include the entire system from the engine to the exhaust outlet pipe.
- D. If the initial evaluation warrants further inspection or if the visual check does not disclose an obvious violation of Anchorage Municipal Code 15.70.090.B, then the operator shall conduct the 20-inch test set forth in this section. This test uses a sound level meter to measure the noise level of the vehicle under controlled test conditions.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.012 Sound level measurement procedures.

- A. The operator shall follow the general procedures set forth in Section 15.70.004 of these regulations except as otherwise provided in this section.
- B. The vehicle must rest on the ground or pavement, shop floor, or on a dynamometer. It should not be on a hoist, rack or over a pit. Shop doors should be open to avoid excessively high readings, and reflective surfaces should be as far as possible from the sound level meter.
- C. The operator shall take care to prevent interference with sound level measurements caused by personnel in the measurement area. Bystanders shall not stand within ten feet of the microphone or vehicle during noise tests.
- D. The ambient noise level shall be at least ten dB(A) below the sound level of the vehicle being tested.
- E. The operator shall not take noise measurements when wind velocity at the test location exceeds 20 miles per hour.
- F. The operator shall use a calibrated engine tachometer to determine when the test rpm is attained. Tachometers shall have an accuracy of \pm two percent of full scale. Each tachometer shall be calibrated at least once a year in accordance with manufacturer's calibration procedures.
- G. The operator shall set the sound level meter on the A scale and use the slow response mode.
- H. The microphone for the sound level meter shall be at the same height as the center of the exhaust outlet but no closer to the ground surface than eight inches. The

microphone shall be positioned with its longitudinal axis parallel to the ground, 20 inches from the edge of the exhaust pipe, and 45 ±ten degrees from the axis of the outlet. For exhaust outlets located inboard from the vehicle body, the microphone shall be located at the specified angle and at least eight inches from the nearest part of the vehicle. For vehicles having more than one exhaust outlet, the measurement shall be taken at each outlet. For motorcycles with more than one outlet per side, the measurement shall be made at the rearmost outlet.

- I. When the exhaust system sound levels of automobiles, light trucks and other automotive-powered vehicles are tested, the engine shall be operated at normal operating temperature with the transmission in park or neutral. Sound level measurements shall be made at 75 percent of the rpm for rated horsepower ±100 rpm of meter readings.
- J. When the exhaust system sound levels of motorcycles are tested, the rider shall sit astride the motorcycle in a normal riding position with both feet on the ground. If the motorcycle engine data is available, the operator shall test the motorcycle at 50 percent of the rpm for maximum rated horsepower ±100 rpm. If the engine data is not available and if the motorcycle has a tachometer indicating the manufacturer's recommended maximum engine speed ("red line") the operator shall test the motorcycle at 45 percent of the red line rpm ±100 rpm. If the engine data and red line rpm are not available, the operator shall test the motorcycle at 3,500 rpm ±100 rpm for motorcycles with total cylinder displacement between zero to 950 cc (zero to 58 cm³ [in³]) or 2,800 rpm ±100 rpm for motorcycles with total cylinder displacement greater than 950 cc (58 in³).
- K. The reported exhaust system sound level reading shall be the highest reading obtained during the test, exclusive of peaks due to unrelated ambient noise or extraneous impulsive type noise obtained during the acceleration or deceleration portion of the test. When there is more than one exhaust outlet, the noise level shall be reported for each outlet.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

FIGURE 9. MICROPHONE PLACEMENT FOR AUTOMOBILES AND LIGHT TRUCKS

ADD FIGURES page 15.70-17

FIGURE 10. MICROPHONE PLACEMENT FOR MOTORCYCLES

ADD FIGURES page 15.70-13

15.70.013 Allowable sound levels.

The following standards shall be used for the 20-inch test, and a violation of these standards shall be a violation of Anchorage Municipal Code 15.70.020.D:

TABLE INSET:

The following standards shall be used for the 20-inch test, and a violation of these standards shall be a violation of Anchorage Municipal Code 15.70.020.D:

TABLE INSET:

Vehicle Type	Model Year	Maximum Noise Level dB(A)
Front-engine automobiles and light trucks, and all other front-engine road vehicles	All	95
Rear-engine automobiles and light trucks, and mid-engine automobiles and light trucks	All	97
Motorcycles	1975 and before 1976 and after	102 99

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.014 Twenty-five foot stationary motor vehicle test.

- A. Sections 15.70.014--15.70.017 establish practices and procedures for conducting tests to determine the sound level output of a stationary vehicle as measured 25 feet from the vehicle.
- B. The 25-foot test shall be used only for motor vehicles in excess of 10,000 pounds GVWR or GCWR.
- C. If a vehicle is suspected to be in violation, the operator shall conduct a visual inspection of the exhaust system. The inspection will include the entire system from the engine to the outlet pipe.
- D. If the initial evaluation warrants further inspection or if visual check does not disclose an obvious violation of Anchorage Municipal Code 15.70.090.B then the operator shall conduct the 25-foot test. This test uses a sound level meter to measure the noise level of the vehicle under controlled test conditions.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.015 Measurement sites.

- A. Measurement sites shall be free of sound-reflecting surfaces within 50 feet of the microphone and 50 feet of the vehicle to be tested. The following surfaces are not sound reflective:
 - 1. Any surface that measures less than eight feet in length in a direction parallel to the portion of the microphone line on which the microphone is positioned, regardless of height (such as a telephone booth or a tree trunk) or less than one foot in height, regardless of length (such as a curb or guardrail);
 - 2. Any vertical surface regardless of size (such as a billboard) with the lower edge more than 15 feet above the roadway;
 - 3. Any uniformly smooth slanting surface with less than a 45-degree slope above

4. Any slanting surface with a 45- to 90-degree slope above the horizontal where the line at which the slope begins to exceed 45 degrees is more than 15 feet above the roadway;
 5. Any trees, bushes, shrubs, hedges, grass or other vegetation.
- B. All other surfaces are considered sound-reflecting surfaces.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

FIGURE 11. STATIONARY MEASUREMENT SITE

ADD FIGURE page 15.70-21

15.70.016 Sound level measurement procedures.

- A. The operator shall follow the general procedures set forth in Section 15.70.004 of these regulations, except as otherwise provided in this section.
- B. The microphone shall be located 25 feet \pm six inches from the rear or from either side of the vehicle to be tested. The locus of points thus defined is the microphone line. The microphone shall be located at the point on the microphone line at which the maximum sound level occurs.
- C. The ambient sound level shall be at least ten dB(A) below the sound level of the vehicle being tested.
- D. The operator shall set the sound level meter on the A scale and use the fast response mode.
- E. Vehicles shall be stationary, in neutral gear, with the clutch engaged, and at its normal operating temperature.
- F. Engines with speed governors shall be run at low idle with the throttle closed. The throttle shall then be fully opened as fast as possible. As soon as the engine reaches and stabilizes at governed speed, the throttle shall be fully closed as quickly as possible.
- G. Engines without speed governors shall be operated the same as governed engines except that the throttle shall be closed quickly enough to prevent excessive engine speed and possible damage to the engine. Drivers of vehicles supplied with tachometers should use the tachometer to monitor engine speed.
- H. The reported sound level for the vehicle shall be the highest reading which is no more than one dB(A) higher than the next highest reading, exclusive of peaks due to unrelated ambient noise.

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

15.70.017 Allowable sound levels.

The following standards shall be used for the 25-foot test, and a violation of these

standards shall be a violation of Anchorage Municipal Code 15.70.020.D:

TABLE INSET:

Vehicle Type	Model Year	Maximum Noise Level dB(A)
Motor vehicle of 10,000 GVWR or GCWR	Before 1976	94
	1976 and after	91
Buses, wheel and crawler tractors	Before 1976	94
	1976 and after	91

(AR No. 82-148)

Authority--Anchorage Municipal Code 3.40, 15.70.040.

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Author: pinkleyda

Initiating Dept: HHS

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