



CITY OF KIRKLAND  
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## MEMORANDUM

**To:** Houghton Community Council

**From:** Jon Regala, Senior Planner  
Joan Lieberman-Brill, AICP, Senior Planner  
Paul Stewart, AICP, Deputy Planning Director  
Eric Shields, AICP, Planning Director

**Date:** September 17, 2010

**Subject:** 2010 MISCELLANEOUS ZONING/MUNICIPAL CODE AMENDMENTS – PHASE II  
STUDY SESSION  
FILE ZON10-00013.

### **I. RECOMMENDATION**

Conduct a study session on the proposed Kirkland Zoning Code (KZC) and provide feedback to staff on whether additional information and/or staff response is needed for the public hearing.

### **II. BACKGROUND**

A joint study session with the Planning Commission was held on August 12, 2010 regarding Phase II of the 2010 Miscellaneous Zoning Code Amendment project. At the study session, staff presented a comprehensive list of code amendments being reviewed. The staff report for the meeting can be found online at this web address listed by the August 12<sup>th</sup> date:

[http://www.ci.kirkland.wa.us/depart/Planning/Planning\\_Commission.htm](http://www.ci.kirkland.wa.us/depart/Planning/Planning_Commission.htm)

During the meeting, the Planning Commission and Houghton Community Council (HCC) deliberated only on the items where additional information and/or clarification were needed. Amendments not discussed, signaled the Planning Commission's and HCC's agreement with staff's recommendations. To simplify things, these items are not being re-presented in this memo in order to focus on topics where direction is still needed. At the public hearing, all of the proposed code changes, including draft KZC code language, will be included in the staff memo. For reference, all of the proposed code changes are listed in Attachment 1.

Also, several of the items reviewed at the last study session are being removed from this project and are being deferred to a future Comprehensive Plan update. This includes the amendments to potentially allow schools and dance, music, and martial arts studios in light industrial zones. It was determined that a more in-depth review of the light industrial zones is needed. This would likely occur as part of the Comprehensive Plan update in 2012-2014 and will involve revisiting the previous industrial lands study, gathering data on vacancy trends, and considering the industrial zones on an area wide basis. These tasks are beyond the scope of this KZC amendment project.

Therefore, at the upcoming study session, the HCC should discuss and provide feedback regarding the proposed amendments where additional information/options were requested. Staff will be available to answer questions regarding the proposed changes.

One item was added that applies to the HCC's review authority since the last study session and it is in regards to window sign regulations. This item is discussed later in the staff memo. Based on the HCC's direction at the upcoming study session, staff will revise the proposals and present the updated information at the public hearing.

The sections below provide a breakdown of the proposed Phase II code amendments based on the recommendations and need for additional information made at the last meeting. As with the previous staff memo, the items have been categorized by their policy level implications: *No Policy Changes*, *Minor Policy*, *Moderate Policy*, *Major Policy*, and *Process Related Changes*. Staff has provided a brief summary followed by the rationale for the proposed code changes. Where applicable, proposed code language is being presented for review by the HCC.

### **III. NO POLICY CHANGES**

#### **A. Delete Reference to State Watercraft Noise Standards**

KZC Section 115.95(1)(b) adopts the State's watercraft noise standards in Washington Administrative Code (WAC) 173-70. However, the WAC section was repealed in 1994. Therefore, staff recommends deleting the KZC reference since it refers to a WAC section which no longer exists. Boat noise is covered locally by the following Municipal Code regulation:

*KMC Section 14.28.020 Mufflers - It is unlawful to use or operate any engine in or on Kirkland Harbor unless the engine is operated with and connected to a muffler or silencer of sufficient size and capacity effectually to muffle and prevent excessive or unusual noise from the exhaust of the engine. (Ord. 800 § 23, 1960)*

The City of Kirkland Police Department has a contract with King County Marine Patrol to help the City enforce noise violations within the Kirkland Harbor. The Kirkland Harbor is that portion of Lake Washington within Kirkland City limits (see Attachment 2). King County Marine Patrol also deals with enforcement for the rest of Lake Washington.

At the previous study session, it was agreed that the outdated reference to the WAC be deleted but the Planning Commission wanted to explore adding specific noise requirements for boats in the KZC. They requested that staff provide additional information as to how the State, King County, and San Juan County regulate watercraft/boat noise. Below is a summary of each jurisdictions code.

#### State Revised Code of Washington (RCW)

The State regulates watercraft noise through RCW 79A.60-130 (see Attachment 3). In general, the State code requires a muffler system for boats not to exceed 90 decibels and a maximum noise level of 88 decibels for engines built after January 1, 1994. In addition, the RCW requires that any watercraft cannot exceed a noise level of 75 dBA anywhere along the shoreline.

### King County Code

The County regulates watercraft noise through KCC 12.91.010 (see Attachment 4). In general, the maximum noise level is 74 dBA for any receiving property. In addition, during the evening and early morning hours, the maximum level is 64 dBA for residential property. Mufflers are required.

### San Juan County & Town of Friday Harbor Code

Both San Juan County and the Town of Friday Harbor were contacted to see how watercraft noise is regulated. Both jurisdictions have general noise regulations but do not have specific regulations on watercraft noise.

Several Planning Commissioners recalled San Juan County being in the news in recent months about watercraft noise issues. Staff looked into this and found that San Juan County currently has regulations in place to protect the southern resident killer whale from impacts from watercraft and to some extent noise produced by watercraft. The Federal Government is considering stricter regulations which would increase watercraft distance from the whales and prohibit watercraft from being in certain locations where the whales reside. The regulations are aimed at protecting the three southern resident pods which have been added to the Endangered Species List. The proposed regulations would make it unlawful for vessel operators (motorized and non-motorized) to:

1. Cause a vessel to approach within 200 yards (182.2m) of any killer whale.
2. Enter the no-go zone located along the west side of San Juan Island from May 1-September 30.
3. Position a vessel in the path of any killer whale at any point located within 400 yards of the whale.

(Source: NOAA PowerPoint Presentation *Protective Regulations for Killer Whales in the Northwest under the Endangered Species Act and Marine Mammal Protection Act*. October 9, 2009)

At this time, staff recommends no additional action on the issue of watercraft noise. Additional measures may be difficult to enforce.

## **B. KZC Chapter 115 Miscellaneous Standards**

### **1. Clarify Height of Accessory Dwelling Units in KZC Section 115.08.**

During the discussion at the previous study session, the Planning Commission asked staff KZC Section 115.08 was previously changed to address the height discrepancy among the different single-family zones (RS = 25' vs. RSX, WD I, WD III = 30' maximum height). Staff misspoke at the study session when telling the Planning Commission that this had been resolved. It was thought that the revision to the height limit was made several years ago. To address this issue, the following change can be made to KZC 115.08:

*The gross floor area shall not include area with less than five feet of ceiling height, as measured between the finished floor and the supporting members for the roof. The height (roof peak elevation) of an accessory structure may not exceed 15 feet above the existing height (roof peak elevation) of the primary residence or the maximum height allowed by the underlying zone ~~25 feet above average building elevation~~, whichever is less.*

However, there is the option of not changing the height limit if ADU's should be shorter than the primary residence. This applies only to properties that have a 30' height limit. Which option does the HCC want to pursue?

#### **IV. MINOR POLICY CHANGE**

##### **Affordable Housing – Minimum Lot Size**

As noted in the previous memo to the Planning Commission and HCC, the intent of the affordable housing regulations was to allow the basic density bonus offered in exchange for the required affordable housing without imposing any additional land use permitting process. Regulatory changes need to be made to adjust the minimum lot size for those who wish to subdivide land to create individual lots where affordable housing is provided in multifamily zones.

Staff had initially thought that an amendment should be made to the subdivision regulations, similar to other lot flexibility regulations in KMC Chapter 22.28. However, it was suggested at the last meeting that we look at the allowance for cottage homes in KZC Section 113.25 for guidance. The Minimum Lot Size provisions there state:

*Beyond the density restrictions, there is no required minimum lot size for lots created through the subdivision process. (The number of allowed units on the subject property is determined by the density provision of this chart.)*

The simplicity of this regulation acknowledges that there are other development standards, such as minimum open space requirements and required yards, maximum lot coverage and maximum building height that will shape the development and that prescribing a minimum lot size is not necessary. Including the regulation in the Zoning Code with the rest of the Cottage regulations makes it easy to find.

For the same reasons, staff recommends that no minimum lot size be required for subdivisions that include affordable housing in multifamily and commercial zones and that the General Regulation requiring affordable housing be adjusted to include that statement, as follows:

*Developments creating four or more new ~~detached, attached or stacked~~ dwelling units shall provide at least 10 percent of the units as affordable housing units as defined in Chapter 5 KZC. Two additional units may be constructed for each affordable housing unit provided. In such cases, the minimum lot size listed in the Use Regulations shall be used to establish the base number of units allowed on the site, but shall not limit the size of individual lots. See Chapter 112 KZC for additional affordable housing incentives and requirements.*

#### **V. MODERATE POLICY CHANGES**

##### **A. Fence Setback – KZC Section 115.40**

The City regulates fences in KZC Section 115.40. In general, fences cannot be taller than 3.5' within the front yard abutting a neighborhood access or collector street. Elsewhere on the property, fences no taller than 6' are allowed. Also, with the current regulations, fences may be 6' tall within the front yard if the property abuts principal and minor arterials. Attachment 5 contains a street classification map for reference.

A concern was raised by a City Council member and during discussions of the Central Houghton neighborhood plan update that allowing a 6’ tall fence along the front property line (adjoining principal and minor arterials) negatively affects the streetscape especially when located immediately next to the sidewalk. The purpose of regulating fences, especially in the front yard is to promote an aesthetically pleasing streetscape while still allowing privacy and security of property. Solid sight obscuring fences can reduce views, light, air, and vehicular and pedestrian vision and the connection to the public realm. The Planning Commission asked staff to provide background information and potential code language to address this issue.

Jurisdictions vary in regards to maximum fence heights within the front yard as shown in the following chart:

**FENCE HEIGHT WITHIN FRONT YARD SETBACK**

MAX. FENCE HEIGHT	JURISDICTION
3.5’	Renton, Mercer Island, Shoreline
4’	Yakima, Vancouver
4.5’	Bellingham
6’	Clyde Hill, Redmond, Bellevue, Seattle, Bothell, Woodinville, Kenmore

Clyde Hill requires a 2’ landscaped setback where a fence adjoins the street. This requirement does not apply to fences along arterials (see Attachment 6).

Criteria may be included in any new regulation which could allow for a 6’ tall fence within the front yard setback if certain standards are met. Such standards could be based on orientation of the residence, topography, distance of the fence from the sidewalk, and landscaping to help reduce impacts of a taller fence. The City of Lynnwood has the following regulation to help mitigate long expanses of fencing:

*Continuous Fencing Along Streets. Where continuous fencing along a street between intersections is allowed due to the length and/or number of side and/or rear lot lines abutting that street, landscaping shall be required between the fence and the property line in order to mitigate the adverse aesthetic impacts of such fencing. Where such landscaping is required, the fence may be built along the property line except for offset sections to contain the landscaping.*

*Such landscaping shall consist of ornamental landscaping of low plantings and high plantings. The minimum height of trees shall be eight feet for evergreen trees and 10 feet for all other species. Trees shall be spaced a maximum of 25 feet on center with branches eliminated to a height of six feet where necessary to prevent vision obstruction. Low evergreen plantings or a mixture of low evergreen and deciduous plantings with a maximum height of 30 inches, in bark or decorative rock, shall be provided so as to achieve 50 percent groundcover within two years.*

Staff has identified the following options for the HCC to consider:

1. Require a 2' setback for 6' tall fences along principal and minor arterials to be planted with low growing shrubs and ground cover. The proposed setback distance is the similar to the Clyde Hill example and will help mitigate the wall/enclosure effect on the pedestrian and the visual quality of the streetscape. The Lynnwood example described above mitigates long fence expanses but may not be needed if an outright setback is being required. If a fence is near a driveway or intersection, the City has separate sight distance regulations. No changes would be made to those regulations.

Some concerns with this option are:

- *Difficult Implementation.* Currently, a permit is not required to install a fence 6' in height or lower. As a result, fences are sometimes installed that do not comply with code unless homeowners research the City's fence requirements. Therefore, new fences may be installed incorrectly and potentially subject to code enforcement.
  - *Problematic Maintenance.* Because the landscape strip would be located on the street side of the fence, the long term maintenance and appearance of the landscaped area is a concern.
  - *Increased Code Enforcement.* New fence regulations could make a large number of existing fences non-conforming. Therefore, code enforcement could be costly and difficult especially since fences have already been installed.
2. No change to current fence code. Another option would be to leave the fence regulations as is because of the concerns listed above. However, not changing the fence code will not address the problem of fences up against sidewalks.

The HCC should provide direction on which option to pursue in preparation for the public hearing.

## **B. Window Signs**

This topic was not discussed at the previous study session. It has been added to the miscellaneous Zoning Code project due to recent questions on how window signs should be regulated. KZC Sections 100.30 through 100.75 contains fundamental sign regulations which determine sign type, location, and size of permanent signage. Interpretation 86-11 was issued back on June 1986 to provide guidance on how to regulate window signs (see Attachment 7). The interpretation concluded that "...all types of window signs should continue to be exempted from regulation as permanent signs under KZC 100.30 through 100.75 unless they are permanently affixed to the exterior of the building or they display the name of the business itself...".

Staff has found that this interpretation is unclear and does not relate well with how the Zoning Code defines a 'sign'. The KZC definitions of 'sign' and 'sign area' are listed below.

*KZC 5.10.845 Sign - Any communication device, structure, or fixture which is intended to identify a building, use, business, or event, or to promote the sale of a product, goods, or service, using graphics, letters, figures, symbols, trademarks or written copy. Painted wall designs or patterns which do not represent a product, service or registered trademark, and which do not identify the user, are not considered signs. If a design or pattern is combined with a sign, only that part of the design or pattern which cannot be distinguished from the sign will be considered as part of the sign.*

*KZC 5.10.850 Sign Area – The entire area of a sign on which copy is to be placed. Sign structure, architectural embellishments, framework and decorative features which contain no written or advertising copy are not included. Sign area is calculated by measuring the perimeter enclosing the extreme limits of the module or sign field containing the advertising message; provided, however, that individual letters using a wall as the background, without added decoration or change in wall color, have sign area calculated by measuring the perimeter enclosing each letter and totaling the square footage of these.*

Now that many of the City's commercial zones require design review (e.g. Juanita, Totem Lake, Downtown, and NE 85<sup>th</sup> Street business districts), there are design guidelines that require pedestrian friendly building fronts. Allowing excessive signs on windows may defeat the purpose of design guidelines. These guidelines are meant to provide a visual connection between pedestrian and retail activity. There are also guidelines which require that windows be utilized to maintain pedestrian and architectural scale. Below are examples of such guidelines (Design Guidelines: Pedestrian-Oriented Business Districts KMC Section 3.30.040.).

*Special Consideration for Downtown Kirkland - Storefronts should be highly transparent with windows of clear vision glass beginning no higher than 2' above grade to at least 10' above grade. Windows should extend across, at a minimum, 75% of the façade length. Continuous window walls should be avoided by providing architectural building treatments, mullions, building modulation, entry doors, and/or columns at appropriate intervals.*

*Special Consideration for Totem Center - Since pedestrians move slowly along the sidewalk, the street level of buildings must be interesting and varied. Since the potential exists for large tenants to locate within TL 2, efforts should be made to minimize the impacts of these uses along pedestrian-oriented streets and concourses. Along 120th Avenue NE, buildings should be designed to add vitality along the sidewalk, by providing multiple entrance points to shops, continuous weather protection, outdoor dining, transparency of windows and interactive window displays, entertainment and diverse architectural elements.*

*General Guideline - Varied window treatments should be encouraged. Ground floor uses should have large windows that showcase storefront displays to increase pedestrian interest. Architectural detailing at all window jambs, sills, and heads should be emphasized.*

Since signs are placed in windows usually without a sign permit and that there is need to ensure compliance with design regulations in most design districts, staff is

recommending that a certain amount of window signage should be allowed without review by staff.

KZC Section 100.115 contains additional regulations for a variety of “temporary/special signs” (see Attachment 8). These include real estate signs, temporary commercial signs, and private traffic directional signs. A sign permit is not required for many of these sign types unless required by the Department of Building and Fire Services in order to erect or move a sign or alter the structural components of an existing sign.

Staff recommends that windows signs be added to the list in KZC Section 100.115 - Temporary/Special Signs subject to the following regulations:

Type of Sign	Maximum Number of Signs	Maximum Sign Area	Permitted Location	Permitted Duration of Display
Window Sign	No maximum	20% of window area	Subject property	No limitation

Attachment 9 contains information on how other City’s regulate window signs.

Does the HCC agree with staff’s recommendation? Is additional information needed by the HCC before making a recommendation on this topic?

**VI. MAJOR POLICY CHANGE**

**Reduce Residential Noise Standards for Outdoor Mechanical Equipment**

The City has adopted the State’s noise standards and therefore regulates noise based on the regulations found in WAC Chapter 173-60. The City also has a general public nuisance regulation as it relates to noise. Both regulations can be found in KZC Section 115.95 below:

*115.95 Noise Regulations*

*1. Maximum Environmental Noise Levels*

- a. State Standard Adopted – The City of Kirkland adopts by reference the maximum environmental noise levels established pursuant to the Noise Control Act of 1974, RCW 70.107. See Chapter 173- 60 WAC.*
- b. Watercraft Noise Performance Standards – The City of Kirkland adopts by reference the Watercraft Noise Performance Standards established pursuant to the Noise Control Act of 1974, RCW 70.107. See Chapter 173- 70 WAC.*
- c. Availability – These regulations are available for inspection and copying in the Planning Department during regular business hours.*

- 2. Noise – Public Nuisance – Any noise which injures; endangers the comfort, repose, health or safety of persons; or in any way renders persons insecure in life, or in the use of property, is a violation of this code. The operation of power equipment, including but not limited to leaf blowers, shall be deemed a public nuisance if such operation occurs during the following hours: before 8:00 a.m. or after 8:00 p.m. Monday through Friday, or before 9:00 a.m. or after 6:00 p.m.*

*Saturday, Sunday, or the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.*

To summarize WAC Section 173-60-040 residential noise standards, the maximum noise level at the property line for residential uses is 55 dBA between the hours of 7 a.m. and 10 p.m. The maximum noise level is reduced to 45 dBA between the hours of 10 p.m. and 7 a.m. In addition, WAC Section 173-60-050 lists exemptions to the noise maximum levels. For example unamplified human voices are exempt from the noise standards. The following chart is provided as reference to the various noises we hear and their relative noise level.

<b>Environmental Noise</b>	
Weakest sound heard	0dB
Whisper Quiet Library	30dB
Normal conversation (3-5')	60-70dB
Telephone dial tone	80dB
City Traffic (inside car)	85dB
Train whistle at 500', Truck Traffic	90dB
Subway train at 200'	95dB
<i>Level at which sustained exposure may result in hearing loss</i>	<i>90 - 95dB</i>
Power mower at 3'	107dB
Snowmobile, Motorcycle	100dB
Power saw at 3'	110dB
Sandblasting, Loud Rock Concert	115dB
<i>Pain begins</i>	<i>125dB</i>
Pneumatic riveter at 4'	125dB
<i>Even short term exposure can cause permanent damage - Loudest recommended exposure <u>WITH</u> hearing protection</i>	<i>140dB</i>
Jet engine at 100', Gun Blast	140dB
Source: www.gcaudio.com	

The Air-Conditioning & Refrigeration Institute (ARI) sets the standards for mechanical equipment which includes how sound ratings are determined and how to calculate sound levels for outdoor units. Sound ratings for mechanical equipment are found in the specifications sheet accompanying the mechanical unit. Sound ratings are given in "dBA" and are consistent with how the City measures noise. Attachment 10 contains ARI Standard 275-97 which shows how noise levels are calculated.

Outdoor residential mechanical units typically range in sound levels from 68 dBA to 80+ dBA. For purposes of discussion, a standard efficiency heating, ventilating, and air conditioning (HVAC) unit with a sound level of 78 dBA will be used as an example in calculating noise at the property line. Based on ARI Standard 275-97 (see Attachment 10 pages 2-6) a stand-alone HVAC unit will need to be 60' from the property line in order to meet the required 45 dBA nighttime noise standard at the property line. A 20' setback is required to meet the daytime 55 dBA limit. This calculation assumes that the mechanical unit is not located near a wall or that there are no barriers between the unit and the property line. Based on this information, it can be difficult to locate an HVAC unit so that noise requirements are met. Many of the mechanical unit applications are for existing homes and placement of the HVAC units are limited by existing improvements and/or floor plan of the home.

Staff previously required noise information upon submittal of an application of a mechanical permit. Noise information consisted of a report from an acoustical engineer and if needed recommendations for noise mitigation. However, based on complaints from mechanical contractors and property owners ranging from the cost of sound studies to not realizing noise information was needed at the time of application, staff stopped requiring noise information at application submittal. There was an expectation from applicants that mechanical permits were to be processed quickly and that additional noise and/or noise mitigation requirements were too costly and unnecessary. Staff decided that it was not reasonable for the average home owner to submit an acoustical report with their outdoor mechanical equipment permit application.

Currently mechanical permits are *conditioned* through the issuing permit to meet noise requirements and that all HVAC and similar types of mechanical equipment should be baffled, shielded, enclosed, or placed on the property in a manner that will ensure compliance with the noise provisions of KZC 115.95. Planning staff does review mechanical permits to ensure that the minimum setback requirements are being met. Noise complaints are handled on a case by case basis.

Over the past several years, code enforcement has found it problematic to enforce on noise complaints for outdoor mechanical equipment. It is difficult to determine the exact noise levels due to the many factors that can affect noise levels such as ambient noise and reflectivity of noise. Staff currently does not have the expertise or resources to effectively enforce on these types of complaints.

For additional background information, staff has provided examples of how two jurisdictions address this type of noise issue.

#### City of Medina

The City of Medina adopts the King County Code in regards to maximum noise levels (see Attachment 11) which is similar to State code. In terms of how Medina applies the code, information regarding noise compliance is required at the time of permit application. Later a noise compliance letter/certificate, issued by an acoustical engineer, is required for the installed outdoor mechanical unit to verify compliance with the noise regulations. If a complaint is received, the complainant is required to provide evidence such as a noise study to verify the complaint. If there is a violation, the City then requires additional mitigation such as sound walls and/or screening to help resolve the issue.

### City of Vancouver (WA)

The City of Vancouver's noise regulations does not regulate noise impacts between residential uses unless the noise is a result of a home occupation (see Attachment 12). This aspect of their noise regulations was part of a new noise ordinance to implement the State's Noise Control Act at a local level. Vancouver's initial proposal was to basically mimic the State's noise regulations and have a local regulation for noise between residential uses. Although their Planning Commission agreed to this approach, Vancouver's City Council felt uncomfortable with that standard. Their Council did not want to begin regulating noise between residential properties. The residential noise limits was therefore eliminated from the proposed code language before it went to a public hearing. Later, their planning staff realized that this would potentially exempt home occupations so an amendment regulating noise from home occupations was adopted.

Staff would like some direction on the following questions:

- Should outdoor HVAC/heat pump units be exempt from the noise and nuisance regulations outright?
- Should outdoor HVAC/heat pump units be exempt from the noise and nuisance regulations if they provide a noise reducing barrier (barrier specifications still to be determined)?
- Should staff begin to require noise information as part of the application materials to ensure compliance similar to the City of Medina example? If so, should the required information be codified?
- Should HVAC units and similar types of outdoor mechanical equipment be allowed to be placed in the front yard setback in order to meet noise regulations? Criteria for allowing mechanical units within the front yard setback could include landscape buffering and screening standards, maximum size allowances, a limitation on encroachment into the front yard setback, and a priority of locations.
- Should staff maintain current the approach?

## **VII. ATTACHMENTS**

1. KZC Amendments Phase II Complete Code Amendment List
2. Kirkland Harbor Map
3. RCW 79A.60-130 – Watercraft Noise Regulations
4. King County Code – Noise Regulations
5. Street Classification Map
6. Clyde Hill Fence Regulations
7. Interpretation 86-11 Window Signs
8. KZC 100.115 Temporary/Special Signs
9. Window Signs – Other Jurisdictions
10. ARI Standard 275-97
11. City of Medina Noise Regulations
12. City of Vancouver Noise Regulations



**2010 MISCELLANEOUS ZONING/MUNICIPAL CODE AMENDMENTS  
PHASE II – LIST OF PROPOSED AMENDMENTS  
Updated September 9, 2010**

**(\*) Not subject to HCC review**

**(G) Denotes Changes to Kirkland Municipal Code**

**I. NO POLICY CHANGES**

- A. Apply Horizontal Façade Regulation Consistently in Multiple Zones
- B. Subdivisions KMC Title 22 \*
  - 1. Fix incorrect code reference in KMC Section 22.32.050. \*
  - 2. Correct typographical error in KMC Section 22.04(30)(b)(1). \*
- C. Fix Incorrect References to Landscape Buffers – PLA 1 KZC Section 60.12
- D. Affordable Housing KZC Chapter 112
  - 1. Clarify the rounding language for affordable housing.
  - 2. Clarify that voluntary use of affordable housing regulations is allowed throughout the City were affordable housing is not required.
- E. Delete Reference to State Watercraft Noise Standards
- F. KZC Chapter 115 Miscellaneous Standards
  - 1. Clarify height and size of detached Accessory Dwelling Units (ADU's).
  - 2. Clarify size of ADU's in KZC Section 115.08.
  - 3. Fix height discrepancy between different single family zones for ADU's
- G. Update School and Daycare References to State Regulations
- H. Delete Vague Stream/Wetland Regulation in PLA17
- I. Electronic Readerboard Signs for Fire Stations in the Annexation Area

**II. MINOR POLICY CHANGES**

- A. Clarify Parking Area Landscape Buffers for Vehicle/Boat Service or Repair
- B. CBD 1A & 1B KZC Chapter 50 – Ground Floor Retail Requirements \*
  - 1. Clarify that retail on alleys is not required \*
  - 2. Allow Parks, Government, and Community Facility Uses as a Street Front Use \*
- C. Affordable Housing
  - 1. Consider adding affordable housing requirement to three additional zones with density limits (PLA 6G, BC1, and BC2).
  - 2. Clarify whether subdivisions in multifamily and commercial zones are required to provide affordable housing.
  - 3. Add modification to the minimum lot size provisions in the Subdivision Regulations for developments that are allowed additional density in exchange for affordable housing. (G)
- D. Clarify Wireless Facilities KZC Chapter 117 as it relates to Historic or Landmark Locations

**III. Moderate Policy Changes**

- A. CBD 5 KZC Chapter 50 \*
  - 1. CBD 5- KZC 50.33. Restore building height measurement and consider clarification consistent with other CBD zones. \*
  - 2. CBD 5 - KZC Section 50.34(3). Delete references to the Comprehensive Plan and Design Regulations. Potentially codify Comprehensive Plan policies for Design District 5. \*
- B. Delete Limitation on Retail/Restaurant Uses above the Ground Floor – KZC Chapter 53 Rose Hill Business District. \*

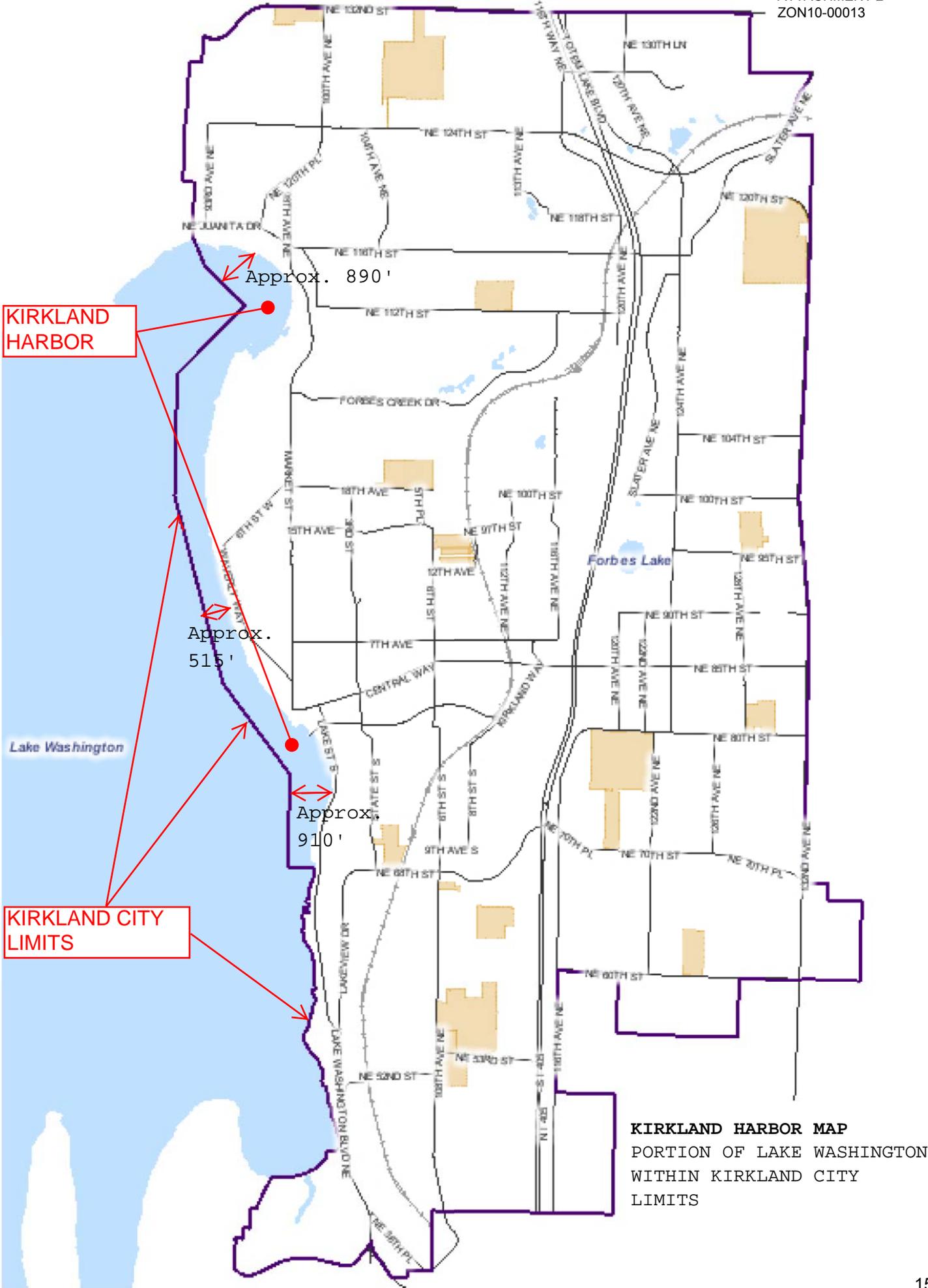
- C. Design Standards for Fences along Primary and Minor Arterials – KZC Section 115.40
- D. Allow Wireless Antennas on Water Reservoirs Railings– KZC Section 115.65 \*
- E. Clarify Limitations of Ground Floor Non-Retail Uses – Multiple KZC Zones
- F. Parking Modifications and Potential New Public Comment Process – KZC Section 105.103
- G. Window Sign Regulations

**IV. Major Policy Changes**

- A. Reduce Multi-Family Parking Standard in the CBD \*
- B. Reduce Residential Noise Standards for Outdoor Mechanical Equipment and Potentially allow Units within Front Yard Setback – KZC Section 115.95

**V. Process Related Changes**

- A. Minor Text Edit to KZC 150.85 \*
- B. Make Consistent Hearing Examiner Appeal Hearing Notice – Various KZC Sections \*
- C. Update Review Timing for Co-Location of Wireless Facilities
- D. Ask HCC to Allow Variances Exceptions in Houghton
- E. Remove the City Council as the Appeal Hearing Body for Process IIA Appeals \*
- F. Eliminate KZC Chapter 155 – Process III
- G. Correct Code Reference for Variance Process Notification



**KIRKLAND HARBOR MAP**  
PORTION OF LAKE WASHINGTON  
WITHIN KIRKLAND CITY  
LIMITS



**RCW 79A.60.130 – Muffler or underwater exhaust system required – Exemptions – Enforcement - Penalty**

- (1) All motor-propelled vessels shall be equipped and maintained with an effective muffler that is in good working order and in constant use. For the purpose of this section, an effective muffler or underwater exhaust system does not produce sound levels in excess of ninety decibels when subjected to a stationary sound level test that shall be prescribed by rules adopted by the commission, as of July 25, 1993, and for engines manufactured on or after January 1, 1994, a noise level of eighty-eight decibels when subjected to a stationary sound level test that shall be prescribed by rules adopted by the commission.
- (2) A vessel that does not meet the requirements of subsection (1) of this section shall not be operated on the waters of this state.
- (3) No person may operate a vessel on waters of the state in such a manner as to exceed a noise level of seventy-five decibels measured from any point on the shoreline of the body of water on which the vessel is being operated that shall be specified by rules adopted by the commission, as of July 25, 1993. Such measurement shall not preclude a stationary sound level test that shall be prescribed by rules adopted by the commission.
- (4) This section does not apply to:
  - (a) A vessel tuning up, testing for, or participating in official trials for speed records or a sanctioned race conducted pursuant to a permit issued by an appropriate governmental agency; or
  - (b) A vessel being operated by a vessel or marine engine manufacturer for the purpose of testing or development. Nothing in this subsection prevents local governments from adopting ordinances to control the frequency, duration, and location of vessel testing, tune-up, and racing.
- (5) Any officer authorized to enforce this section who has reason to believe that a vessel is not in compliance with the noise levels established in this section may direct the operator of the vessel to submit the vessel to an on-site test to measure noise level, with the officer on board if the officer chooses, and the operator shall comply with such request. If the vessel exceeds the decibel levels established in this section, the officer may direct the operator to take immediate and reasonable measures to correct the violation.
- (6) Any officer who conducts vessel sound level tests as provided in this section shall be qualified in vessel noise testing. Qualifications shall include but may not be limited to the ability to select the appropriate measurement site and the calibration and use of noise testing equipment.
- (7) A person shall not remove, alter, or otherwise modify in any way a muffler or muffler system in a manner that will prevent it from being operated in accordance with this chapter.

- (8) A person shall not manufacture, sell, or offer for sale any vessel that is not equipped with a muffler or muffler system that does not comply with this chapter. This subsection shall not apply to power vessels designed, manufactured, and sold for the sole purpose of competing in racing events and for no other purpose. Any such exemption or exception shall be documented in any and every sale agreement and shall be formally acknowledged by signature on the part of both the buyer and the seller. Copies of the agreement shall be maintained by both parties. A copy shall be kept on board whenever the vessel is operated.
- (9) Except as provided in RCW [79A.60.020](#), a violation of this section is an infraction under chapter [7.84](#) RCW.
- (10) Vessels that are equipped with an engine modified to increase performance beyond the engine manufacturer's stock configuration shall have an exhaust system that complies with the standards in this section after January 1, 1994. Until that date, operators or owners, or both, of such vessels with engines that are out of compliance shall be issued a warning and be given educational materials about types of muffling systems available to muffle noise from such high performance engines.
- (11) Nothing in this section preempts a local government from exercising any power that it possesses under the laws or Constitution of the state of Washington to adopt more stringent regulations.

[2000 c 11 § 97; 1993 c 244 § 39. Formerly RCW [88.12.085](#).]

Notes: Intent – 1993 c 244. See note following RCW [79A.60.010](#).

**Chapter 12.86**  
**DECLARATION OF POLICY AND FINDING**  
**OF SPECIAL CONDITIONS**

**Sections:**

- 12.86.010 Declaration of policy.
- 12.86.020 Findings of special conditions.

**12.86.010 Declaration of policy.** It is the policy of King County to minimize the exposure of citizens to the physiological and psychological dangers of excessive noise and to protect, promote and preserve the public health, safety and welfare. It is the express intent of the county council to control the level of noise in a manner which promotes commerce; the use, value and enjoyment of property; sleep and repose; and the quality of the environment. (Ord. 3139 § 101, 1977).

**12.86.020 Findings of special conditions.** The problem of noise in King County has been studied since 1969 by two appointed citizen committees and since 1974 by the councils of King County and the city of Seattle. On the basis of this experience and knowledge of conditions within King County, the King County council hereby finds that special conditions exist within the county which make necessary any and all differences between Chapters 12.86 through 12.100 and the regulations adopted by the Department of Ecology. (Ord. 3139 § 102, 1977).

DEFINITIONS

**Chapter 12.87**  
**DEFINITIONS**

Sections:

- 12.87.010 Definitions generally.
- 12.87.020 Administrative code.
- 12.87.030 Administrator.
- 12.87.040 Commercial agriculture.
- 12.87.050 Construction.
- 12.87.060 dB(A).
- 12.87.070 District.
- 12.87.080 EDNA.
- 12.87.090 Emergency work.
- 12.87.100 Equipment.
- 12.87.110 Gross combination weight rating (GCWR).
- 12.87.120 Gross vehicle weight rating (GVWR).
- 12.87.130 Impulsive sound.
- 12.87.133 Leq.
- 12.87.137 Loud and raucous.
- 12.87.140 Motor vehicle.
- 12.87.150 Motor vehicle racing event.
- 12.87.160 Motorcycle.
- 12.87.170 Muffler.
- 12.87.180 New motor vehicle.
- 12.87.190 Noise.
- 12.87.200 Off-highway vehicle.
- 12.87.210 Periodic sound.
- 12.87.220 Person.
- 12.87.230 Property boundary.
- 12.87.240 Public highway.
- 12.87.250 Public nuisance noise.
- 12.87.260 Pure tone component.
- 12.87.270 Real property.
- 12.87.280 Receiving property.
- 12.87.285 Sheriff.
- 12.87.290 Shoreline.
- 12.87.300 Sound level.
- 12.87.310 Sound level meter.
- 12.87.320 Special construction vehicle.
- 12.87.330 Use.
- 12.87.340 Warning device.
- 12.87.350 Watercraft.
- 12.87.360 Weekday.
- 12.87.370 Weekend.

DEFINITIONS

**12.87.010 Definitions generally.** All technical terminology used in K.C.C. chapters 12.86 through 12.100, not defined in this chapter, shall be interpreted in conformance with American National Standards Institute Specifications, Section 1.1-1994 and Section 1.4-1983. Words used in the masculine gender include the feminine and words used in the feminine gender include the masculine. For the purposes of K.C.C. chapters 12.86 through 12.100, the words and phrases have the meanings set forth in this chapter. (Ord. 14114 § 1, 2001; Ord. 3139 § 2(part), 1977).

**12.87.020 Administrative code.** "Administrative code" means King County Ordinance No. 2165, codified in Chapter 2.98. (Ord. 3139 § 201, 1977).

**12.87.030 Administrator.** "Administrator" means the director of the Seattle-King County Department of Public Health or his authorized representative. (Ord. 3139 § 202, 1977).

**12.87.040 Commercial agriculture.** "Commercial agriculture" means the production of livestock or agricultural commodities on lands defined as "Farm and Agricultural" by RCW 84.34.020(2) and the offering of the livestock and agricultural commodities for sale. (Ord. 3139 § 203, 1977).

**12.87.050 Construction.** "Construction" means any site preparation, assembly, erection, demolition, substantial repair, alteration or similar action for or of public or private rights-of-way, structures, utilities or similar property. (Ord. 3139 § 204, 1977).

**12.87.060 dB(A).** "dB(A)" means the sound level measured in decibels, using the "A" weighting network. (Ord. 3139 § 205, 1977).

**12.87.070 District.** "District" means the land use zones to which the provisions of Chapters 12.86 through 12.100 are applied. For the purposes of Chapters 12.86 through 12.100:

A. "Rural district" includes zones designated in the King County zoning code as A, F, and RA greater than thirty-five thousand square feet;

B. "Residential district" includes zones designated in the King County zoning code as UR and R-1 through R-48 less than thirty-five thousand square feet as well as zones designated as RS, RW, RD, RM, RMH, RM-MD, RMV, and BN in the comprehensive zoning ordinance of the city of Seattle;

C. "Commercial district" includes zones designated in the King County zoning code as O, NB, CB and RB as well as zones designated as BI, BC, BM, CM, CMT, and CG in the comprehensive zoning ordinance of the city of Seattle; and

D. "Industrial district" includes zones designated in the King County zoning code as I and M and special uses as well as zones designated as M, IG, and IH in the comprehensive zoning ordinance of the city of Seattle. (Ord. 11792 § 10, 1995; Ord. 3139 § 206, 1977).

**12.87.080 EDNA.** "EDNA" means the environmental designation for noise abatement, as defined and described by the State Department of Ecology Regulations on Environmental Noise Levels, WAC Chapter 173-60. (Ord. 3139 § 207, 1977).

**12.87.090 Emergency work.** "Emergency work" means work required to restore property to a safe condition following a public calamity, work required to protect persons or property from an imminent exposure to danger, or work by private or public utilities for providing or restoring immediately necessary utility service. (Ord. 3139 § 208, 1977).

**12.87.100 Equipment.** "Equipment" means any stationary or portable device or any part thereof capable of generating sound. (Ord. 3139 § 209, 1977).

**12.87.110 Gross combination weight rating (GCWR).** "Gross combination weight rating (GCWR)" means the value specified by the manufacturer as the recommended maximum loaded weight of a combination vehicle. (Ord. 3139 § 210, 1977).

**12.87.120 Gross vehicle weight rating (GVWR).** "Gross vehicle weight rating (GVWR)" means the value specified by the manufacturer as the recommended maximum loaded weight of a single vehicle. (Ord. 3139 § 211, 1977).

**12.87.130 Impulsive sound.** "Impulsive sound" means sound having the following qualities: the peak of the sound level is less than one second and short compared to the occurrence rate; the onset is abrupt; the decay rapid; and the peak value exceeds the ambient level by more than 10 dB(A). (Ord. 3139 § 212, 1977).

**12.87.133 Leq.** "Leq" means the constant sound level that, in a given situation and time period conveys the same sound energy as the actual time-varying sound. The applicable time period must be specified. (Ord. 14114 § 2, 2001).

**12.87.137 Loud and raucous.** "Loud and raucous" means any sound or combination of sounds that is above the background sound level and is indiscriminate, disagreeably harsh, clamorous, blaring or discordant. (Ord. 14114 § 3, 2001).

**12.87.140 Motor vehicle.** "Motor vehicle" means any vehicle which is self-propelled, used primarily for transporting persons or property upon public highways and required to be licensed under RCW 46.16.010. Aircraft, watercraft and vehicles used exclusively on stationary rails or tracks are not motor vehicles as that term is used herein. (Ord. 3139 § 213, 1977).

**12.87.150 Motor vehicle racing event.** "Motor vehicle racing event" means any competition between motor vehicles and/or off-highway vehicles under the auspices of a sanctioning body recognized by the administrator in accordance with the administrative code. (Ord. 3139 § 214, 1977).

**12.87.160 Motorcycle.** "Motorcycle" means any motor vehicle having a saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground; except that farm tractors and vehicles powered by engines of less than five horsepower shall not be included. (Ord. 3139 § 215, 1977).

**12.87.170 Muffler.** "Muffler" means a device consisting of a series of chambers or other mechanical designs for the purpose of receiving exhaust gas from an internal combustion engine, or for the purpose of introducing water to the flow of the exhaust gas, and which is effective in reducing sound resulting therefrom. (Ord. 5096 § 1, 1980; Ord. 3139 § 216, 1977).

**12.87.180 New motor vehicle.** "New motor vehicle" means a motor vehicle manufactured after December 31, 1975, the equitable or legal title of which has never been transferred to a person who, in good faith, purchases the new motor vehicle for purposes other than resale. (Ord. 3139 § 217, 1977).

**12.87.190 Noise.** "Noise" means the intensity, duration and character of sounds from any and all sources. (Ord. 3139 § 218, 1977).

**12.87.200 Off-highway vehicle.** "Off-highway vehicle" means any self-propelled motor-driven vehicle not used primarily for transporting persons or property upon public highways nor required to be licensed under RCW 46.16.010. "Off-highway vehicle" shall not include special construction vehicles. (Ord. 3139 § 219, 1977).

**12.87.210 Periodic sound.** "Periodic sound" means sound having the following qualities; the sound level varies repetitively with a period of one minute or less, and the peak value is more than 5 dB(A) above the minimum value. (Ord. 3139 § 220, 1977).

DEFINITIONS

**12.87.220 Person.** "Person" means any individual, firm, association, partnership, corporation or any other entity, public or private. (Ord. 3139 § 221, 1977).

**12.87.230 Property boundary.** "Property boundary" means an imaginary line exterior to any enclosed structure, at ground surface, which separates the property of one or more persons from that owned by others, and its vertical extension. (Ord. 3139 § 222, 1977).

**12.87.240 Public highway.** "Public highway" means the entire width between the boundary lines of every way publicly maintained by the Department of Highways or any county or city when any part thereof is generally open to the use of the public for purposes of vehicular travel as a matter of right. (Ord. 3139 § 223, 1977).

**12.87.250 Public nuisance noise.** "Public nuisance noise" means any sound which unreasonably either annoys, injures, interferes with, or endangers the comfort, repose, health or safety of any entire community or neighborhood, although the extent of damage may be unequal. (Ord. 3139 § 224, 1977).

**12.87.260 Pure tone component.** "Pure tone component" means sound having the following qualities: a one-third octave band sound pressure level in the band with the tone that exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above, by 8 dB for center frequencies between 160 and 400 Hz, and by 15 dB for center frequencies less than or equal to 125 Hz. (Ord. 3139 § 225, 1977).

**12.87.270 Real property.** "Real property" means an interest or aggregate of rights in land which is guaranteed and protected by law; for purposes of Chapters 12.86 through 12.100, "real property" includes a leasehold interest. (Ord. 3139 § 226, 1977).

**12.87.280 Receiving property.** "Receiving property" means real property within which sound originating from outside the property is received. (Ord. 3139 § 227, 1977).

**12.87.285 Sheriff.** "Sheriff" means the sheriff of King County or his authorized representative. (Ord. 14114 § 4, 2001).

**12.87.290 Shoreline.** "Shoreline" means the existing intersection of water with the ground surface or with any permanent, shore-connected facility. (Ord. 5096 § 3, 1980).

**12.87.300 Sound level.** "Sound level" means the weighted sound pressure level measured by the use of a metering characteristic and weighted as specified in American National Standards Institute Specifications, Section 1.4. The sound pressure level of a sound expressed in decibels is twenty times the logarithm to the base ten of the ratio of the pressure of the sound to the reference sound pressure of twenty micropascals. In the absence of any specific modifier, the level is understood to be that of a root-mean-square pressure. (Ord. 14114 § 5, 2001; Ord. 3139 § 228, 1977).

**12.87.310 Sound level meter.** "Sound level meter" means a sound level measuring device, either Type I or Type II, as defined by American National Standards Institute Specifications, Section 1.4. (Ord. 14114 § 6, 2001; Ord. 3139 § 229, 1977).

**12.87.320 Special construction vehicle.** "Special construction vehicle" means any vehicle which is designed and used primarily for grading, paving, earthmoving, and other construction work; which is not designed or used primarily for the transportation of persons or property on a public highway; and which is only incidentally operated or moved over the highway. (Ord. 3139 § 230, 1977).

**12.87.330 Use.** "Use" means the nature of the occupancy, the type of activity, or the character and form of improvements to which land is devoted or may be devoted. (Ord. 3139 § 231, 1977).

**12.87.340 Warning device.** "Warning device" means any device intended to provide public warning of potentially hazardous, emergency or illegal activities, including but not limited to a burglar alarm or vehicle backup signal, but not including any fire alarm. (Ord. 3139 § 232, 1977).

**12.87.350 Watercraft.** "Watercraft" means any contrivance, including aircraft taxiing, but excluding aircraft in the act of actual landing or takeoff, used or capable of being used as a means of transportation or recreation on water, powered by an internal or external combustion engine. (Ord. 5096 § 2, 1980: Ord. 3139 § 233, 1977).

**12.87.360 Weekday.** "Weekday" means any day Monday through Friday which is not a legal holiday. (Ord. 3139 § 234, 1977).

**12.87.370 Weekend.** "Weekend" means Saturday and Sunday or any legal holiday. (Ord. 3139 § 235, 1977).

ENVIRONMENTAL SOUND LEVELS

**Chapter 12.88  
 ENVIRONMENTAL SOUND LEVELS**

**Sections:**

- 12.88.010 Unlawful sounds.
- 12.88.020 Maximum permissible sound levels.
- 12.88.030 Modifications to maximum permissible sound levels.
- 12.88.040 Construction and equipment operation.

**12.88.010 Unlawful sounds.** It is unlawful for any person to cause sound, or for any person in possession of property to permit sound originating from such property, to intrude into the real property of another person whenever such sound exceeds the maximum permissible sound levels established by this chapter. (Ord. 3139 § 301, 1977).

**12.88.020 Maximum permissible sound levels.**

A. For sound sources located within King County or the city of Seattle, the maximum permissible sound levels are as follows:

District of Sound Source	District of Receiving Property Within King County			
	Rural	Residential	Commercial	Industrial
Rural	49 dB(A)	52 dB(A)	55 dB(A)	57 dB(A)
Residential	52 dB(A)	55 dB(A)	57 dB(A)	60 dB(A)
Commercial	55 dB(A)	57 dB(A)	60 dB(A)	65 dB(A)
Industrial	57 dB(A)	60 dB(A)	65 dB(A)	70 dB(A)

B. For sound sources located outside King County and the city of Seattle, the maximum permissible sound levels are as follows:

EDNA of Sound Source	District of Receiving Property Within King County			
	Rural	Residential	Commercial	Industrial
Class A	52 dB(A)	55 dB(A)	57 dB(A)	60 dB(A)
Class B	55 dB(A)	57 dB(A)	60 dB(A)	65 dB(A)
Class C	57 dB(A)	60 dB(A)	65 dB(A)	70 dB(A)

(Ord. 3139 § 302, 1977).

**12.88.030 Modifications to maximum permissible sound levels.** The maximum permissible sound levels established by this chapter shall be reduced or increased by the sum of the following:

A. Between ten p.m. and seven a.m. during weekdays, and between ten p.m. and nine a.m. on weekends, the levels established by K.C.C. 12.88.020 are reduced by 10 dB(A) where the receiving property lies within a rural or residential district of King County. The following sounds are exempt from this subsection:

1. Sounds created by existing stationary equipment used in the conveyance of water by a utility; and
2. Sounds created by electrical substations.

B. For any source of sound that is periodic, that has a pure tone component or that is impulsive and is not measured with an impulse sound level meter, the levels established by this chapter shall be reduced by 5 dB(A).

C. For any source of sound that is of short duration, the levels established by this chapter are increased by:

1. 5 dB(A) for a total of fifteen minutes in any one-hour period; or
2. 10 dB(A) for a total of five minutes in any one-hour period; or
3. 15 dB(A) for a total of one and one-half minutes in any one-hour period. (Ord. 14114 § 7, 2001:

Ord. 3139 § 303, 1977).

**12.88.040 Construction and equipment operation.**

A. For the equipment and activities described in this subsection, the maximum permissible sound levels specified in K.C.C. 12.88.020A and 12.88.030 may be exceeded as measured at the real property of another person or fifty feet from the equipment, whichever is greater, between seven a.m. and ten p.m. on weekdays and between nine a.m. and ten p.m. on weekends, by no more than:

1. Twenty-five dB(A) for equipment used on construction sites, including crawlers, tractors, bulldozers, rotary drills and augers, loaders, power shovels, cranes, derricks, graders, off-highway trucks, ditchers, trenchers, compactors, compressors and pneumatic-powered equipment;
2. Twenty dB(A) for portable powered equipment used in temporary locations in support of construction activities or used in the maintenance of public facilities, including chainsaws, log chippers, lawn and garden maintenance equipment and powered hand tools; or
3. Fifteen dB(A) for powered equipment used in temporary or periodic maintenance or repair of the grounds or appurtenances of any property, including lawnmowers, powered hand tools, snow-removal equipment and composters.

B. 1. Sounds created by impact types of construction equipment, including pavement breakers, pile drivers, jackhammers, sandblasting tools or other types of equipment or devices that create impulse noise or impact noise or are used as impact equipment, as measured at the property line or fifty feet from the equipment, whichever is greater, may exceed the maximum permissible sound levels established in subsection A of this section in any one period between eight a.m. and five p.m. on weekdays and between nine a.m. and ten p.m. on weekends, but not to exceed the following:

- a. Leq ninety dB(A) continuously;
- b. Leq ninety-three dB(A) for thirty minutes;
- c. Leq ninety-six dB(A) for fifteen minutes; or
- d. Leq ninety-nine dB(A) for seven and one-half minutes, but sound levels in excess of Leq ninety-nine dB(A) are prohibited unless authorized by variance obtained from the administrator. Also, sources producing sound levels less than ninety dB(A) shall comply with subsection A of this section during those hours not covered by this subsection B.

2. For purposes of this subsection B, the standard of measurement shall be a one-hour Leq. Leqs may be measured for times of at least one minute to project an hourly Leq. Reference to one hour is for measurement definition purposes only and does not limit construction to a one-hour period.

C. Construction activity that exceeds the maximum permissible sound levels established in K.C.C. 12.88.020, when measured from the interior of buildings within a commercial or industrial district, is prohibited between eight a.m. and five p.m. For purposes of this subsection, interior sound levels may be measured only after every reasonable effort, including closing windows and doors, is taken to reduce the impact of the exterior construction noise. (Ord. 14114 § 8, 2001).

MOTOR VEHICLE SOUND LEVELS

**Chapter 12.90  
 MOTOR VEHICLE SOUND LEVELS**

**Sections:**

- 12.90.010 Sounds created by operation of motor vehicles.
- 12.90.020 Mufflers.
- 12.90.030 Modification to motor vehicles.
- 12.90.040 Tire noise.
- 12.90.050 Sale of new motor vehicles which exceed limits.
- 12.90.060 Motor vehicle exemptions.

**12.90.010 Sounds created by operation of motor vehicles.** It is unlawful for any person to operate upon any public highway any motor vehicle or any combination of motor vehicles under any conditions of grade, load, acceleration or deceleration in such manner as to exceed the following maximum permissible sound levels for the category of vehicle, as measured at a distance of fifty feet from the center of the lane of travel within the speed limits specified, by measurement procedures established by the State Commission on Equipment.

<b>Vehicle Category</b>	<b>35 mph or less</b>	<b>over 35 mph</b>
Motorcycles	80 dB(A)	84 dB(A)
Motor vehicles over 10,000 pounds GVWR or GCWR	86 dB(A)	90 dB(A)
All other motor vehicles (Ord. 3139 § 401, 1977).	76 dB(A)	80 dB(A)

**12.90.020 Mufflers.** It is unlawful for any person to operate, or for any owner to permit any person to operate, any motor vehicle upon the public highways which is not equipped with a muffler in good working order and in constant operation. (Ord. 3139 § 402, 1977).

**12.90.030 Modification to motor vehicles.** It is unlawful for any person to modify or change any part of a motor vehicle or install any device thereon in any manner that permits sound to be emitted by the motor vehicle in excess of the limits prescribed by this chapter. It is unlawful for any person to remove or render inoperative, or cause to be removed or rendered inoperative, other than for purposes of maintenance, repair, or replacement, any muffler or sound-dissipative device on a motor vehicle. (Ord. 3139 § 403, 1977).

**12.90.040 Tire noise.** It is unlawful for any person to operate a motor vehicle in such a manner as to cause, or allow to be emitted, squealing, screeching, or other such sound, from the tires in contact with the ground because of rapid acceleration or excessive speed around corners or other such reason; provided, that sound resulting from emergency braking to avoid imminent danger shall be exempt from this section. (Ord. 3139 § 404, 1977).

**12.90.050 Sale of new motor vehicles which exceed limits.** It is unlawful for any person to sell or offer for sale a new motor vehicle, except an off-highway vehicle, which produces a maximum sound level exceeding the following maximum permissible sound levels at a distance of fifty feet, by acceleration test procedures established by the State Commission on Equipment.

<b>Vehicle Category</b>	
Motorcycles manufactured after 1975	83 dB(A)
Any motor vehicle over 10,000 lbs. GVWR manufactured after 1975 and prior to 1978	86 dB(A)
Any motor vehicle over 10,000 lbs. GVWR manufactured after 1978	83 dB(A)
All other motor vehicles (Ord. 3139 § 405, 1977).	80 dB(A)

12.90.060

PUBLIC PEACE, SAFETY AND MORALS

**12.90.060 Motor vehicle exemptions.** Sounds created by motor vehicles are exempt from the maximum permissible sound levels of Chapter 12.88; except that sounds created by any motor vehicle operated off public highways shall be subject to the sound levels of Chapter 12.88 when such sounds are received in rural or residential districts of King County. (Ord. 3139 § 406, 1977).

**Chapter 12.91**  
**WATERCRAFT SOUND LEVELS**

**Sections:**

- 12.91.010 Operation exceeding maximum noise limits prohibited.
- 12.91.020 Mufflers.
- 12.91.030 Exemptions.

**12.91.010 Operation exceeding maximum noise limits prohibited.** It is unlawful for any person to operate any watercraft on the water of King County in such a manner as to exceed the following maximum noise limits when measured within fifty feet of the shoreline or anywhere within a receiving property:

- A. At any hour of the day or night, the limit for any receiving property shall be 74 dB(A); except that
- B. Between sunset and sunrise, the limit for sounds received within a rural or residential district shall be 64 dB(A). For the purpose of administering and enforcing this section, sunset will be interpreted as ten p.m. and sunrise will be interpreted as seven a.m. (Ord. 5096 § 5, 1980).

**12.91.020 Mufflers.**

A. It is unlawful for any person to operate any watercraft, except aircraft, on the waters of King County which is not equipped with a functioning underwater exhaust or a properly installed and adequately maintained muffler. Any of the following defects in the muffling system shall constitute a violation of this section:

- 1. The absence of a muffler;
  - 2. The presence of a muffler cut-out, bypass, or similar device which is not standard or normal equipment for the exhaust system being inspected;
  - 3. Defects in the exhaust system including, but not limited to, pinched outlets, holes, or rusted-through areas of the muffler or pipes;
  - 4. The presence of equipment which will produce excessive or unusual noise from the exhaust system.
- B. Dry stacks or water-injected stacks not containing a series of chambers or mechanical designs effective in reducing sound shall not be considered as adequately maintained mufflers. (Ord. 5096 § 6, 1980).

**12.91.030 Exemptions.** The following exemptions shall apply to the operation of watercraft in the waters of King County:

- A. Subject to the provisions of subsection D 5 of this section, sounds created by watercraft are exempt from the maximum permissible sound levels of K.C.C. Chapter 12.88;
- B. Normal docking and undocking operations of all watercraft shall be exempt from the provisions of Section 12.91.010;
- C. Watercraft picking up or dropping off waterskiers shall be exempt from the provisions of Section 12.91.010 while operating within the temporary speed limit exemption authorized in K.C.C. 12.44.230(2);
- D. The following sounds shall be exempt from the provisions of Sections 12.91.010 and 12.91.020:
  - 1. Sounds created by the operation of commercial, nonrecreational watercraft;
  - 2. Sounds created by safety and protective devices where noise suppression would defeat the intent of the device;
  - 3. Sounds created by a warning device not operating continuously for more than thirty minutes;
  - 4. Sounds created by emergency equipment for emergency work necessary in the interests of law enforcement or for the health, safety, and welfare of the community;
  - 5. Sounds created by auxiliary equipment operated on watercraft for the purposes of dredging, pile driving, operation of a marina, and clam and oyster harvesting, except that such sounds are not exempt from the maximum permissible sound levels of K.C.C. Chapter 12.88;
  - 6. Sounds created by motorboats competing in a regatta or boat race held under a permit issued by the department of public safety and sounds created while on trial runs or while on official trials for speed records during the time and in the designated area authorized by such permit. (Ord. 5096 § 7, 1980).

**Chapter 12.92**  
**PUBLIC NUISANCE AND DISTURBANCE NOISES**

**Sections:**

- 12.92.010 Public nuisance noises.
- 12.92.020 Public disturbance noises.
- 12.92.030 Exempted sources.

**12.92.010 Public nuisance noises.** It is unlawful for any person to cause, or for any person in possession of property to allow to originate from the property, sound that is a public nuisance noise. Pursuant to the notice and order procedure incorporated by Chapter 12.99, the administrator may determine that a sound constitutes a public nuisance noise as defined in Section 12.87.220. It is unlawful for any person to cause, or for any person in possession of property to allow to originate from the property, sound which has been determined a public nuisance noise. (Ord. 14114 § 9, 2001: Ord. 3139 § 501, 1977).

**12.92.020 Public disturbance noises.** It is unlawful for any person to cause, or for any person in possession of property to allow to originate from the property, sound that is a public disturbance noise. The following sounds are determined to be public disturbance noises:

- A. The frequent, repetitive or continuous sounding of any horn or siren attached to a motor vehicle, except as a warning of danger or as specifically permitted or required by law;
- B. The creation of frequent, repetitive or continuous sounds in connection with the starting, operation, repair, rebuilding or testing of any motor vehicle, motorcycle, off-highway vehicle or internal-combustion engine so as to unreasonably disturb or interfere with the peace, comfort and repose of property owners or possessors of real property;
- C. The use of a sound amplifier or other device capable of producing or reproducing amplified sound upon public streets for the purpose of commercial advertising or sales or for attracting the attention of the public to any vehicle, structure, or property or the contents therein, except as permitted by law, and except that vendors whose sole method of selling is from a moving vehicle shall be exempt from this subsection;
- D. The making of any loud and raucous sound within one thousand feet of any school, hospital, sanitarium, nursing or convalescent facility;
- E. The creation by use of a musical instrument, whistle, sound amplifier, or other device, capable of producing or reproducing sound, of loud and raucous sounds that emanate frequently, repetitively or continuously from any building, structure or property located within a rural or residential district, such as sounds originating from a band session or social gathering;
- F. Loud, raucous, frequent, repetitive or continuous sound created by: the use of any device capable of producing an impulsive sound such as when being struck by an object; by a whistle; by a sound amplifier; or by any audio equipment such as a radio, tape player, disc player or any other audio device capable of producing, reproducing or amplifying sound that can be clearly heard or felt at seventy five feet or more from the source of sound whether stationary, portable or in a motor vehicle when the sound is received in a residential or rural district; and
- G. Any sound out of doors that interferes with normal conversation at a distance of seventy five feet or more from the source of the sound when the sound is received in a residential or rural district. (Ord. 14114 § 10, 2001: Ord. 10192 § 1, 1991: Ord. 9341, 1990: Ord. 3139 § 502, 1977).

**12.92.030 Exempted sources.** No sound source specifically exempted from a maximum permissible sound level by Chapters 12.86 through 12.100 shall be a public nuisance noise or public disturbance noise, insofar as the particular source is exempted. (Ord. 3139 § 503, 1977).

EXEMPTIONS

**Chapter 12.94  
EXEMPTIONS**

**Sections:**

- 12.94.010 Sounds exempt at all times.
- 12.94.020 Sounds exempt during daytime hours.
- 12.94.040 Sounds exempt during daytime hours - Aircraft testing and maintenance.

**12.94.010 Sounds exempt at all times.** The following sounds are exempt from K.C.C. chapters 12.86 through 12.100:

- A. Sounds originating from aircraft in flight and sounds that originate at airports and are directly related to flight operations;
- B. Sounds created by safety and protective devices, such as relief valves, if noise suppression would defeat the safety release intent of the device;
- C. Sounds created by fire alarms;
- D. Sounds created by emergency equipment and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community;
- E. Sounds created by the discharge of firearms in the course of lawful hunting activities;
- F. Sounds caused by natural phenomena and unamplified human voices;
- G. Sounds originating from forest harvesting and silviculture activity and from commercial agriculture if the receiving property is located in a rural, commercial or industrial district of King County;
- H. Sounds created by auxiliary equipment on motor vehicles used for highway maintenance;
- I. Sounds created by off-highway vehicles while being used in officially designated all-terrain vehicle parks, except when the sound is received off the park site in a rural or residential district of King County and the sound measurably increases the ambient level; and
- J. Sounds created by warning devices not operated continuously for more than thirty minutes per incident.
- K. Sounds created by the legal discharge of fireworks as defined in K.C.C. 6.26.060 and K.C.C. 6.26.080.
- L. Sounds created by lawful pickets, marches, parades, rallies and other public events in rural districts. (Ord. 14114 § 11, 2001: Ord. 5096 § 4, 1980: Ord. 3139 § 601, 1977).

**12.94.020 Sounds exempt during daytime hours.** The following sounds are exempt from the K.C.C. chapters 12.86 through 12.100 between seven a.m. and ten p.m. on weekdays and between nine a.m. and ten p.m. on weekends, unless other hours are specified:

- A. Sounds created by bells, chimes or carillons not operating for more than five minutes in any one hour;
- B. Sounds originating from officially sanctioned parades and other public events;
- C. Sounds created by the discharge of firearms on legally established shooting ranges;
- D. Sounds created by blasting;
- E. Sounds originating from forest harvesting and silviculture activity and from commercial agriculture if the receiving property is located in a residential district of King County. The administrator is authorized to promulgate regulations which extend the hours during which this exemption is in effect to conform with operating hours designated by the Washington state Department of Natural Resources in directing an official fire closure; and
- F. Sounds created by motor vehicle racing events at existing, authorized facilities between 9 a.m. and, provided that such sounds shall be exempt until eleven p.m. on Fridays and Saturdays;
- G. Sounds originating from lawful pickets, marches, parades, rallies and other public events in residential districts. (Ord. 14114 § 12, 2001: Ord. 4449 § 1, 1979: Ord. 3139 § 602, 1977).

**12.94.040 Sounds exempt during daytime hours - Aircraft testing and maintenance.** Subject to the conditions of subsections A. through B. of this section, sounds created by the testing and maintenance of aircraft, or components of aircraft, are exempt from the maximum permissible sound levels of Chapter 12.88 between the hours of seven a.m. and ten p.m. daily; provided, that aircraft which are regularly scheduled to depart between the hours of seven a.m. and eight-thirty a.m. shall, subject to the same conditions, be exempt between the hours of six a.m. and ten p.m.

A. Testing and maintenance shall be performed at an airport designated as such by the Federal Aviation Administration prior to the effective date of this section, or by the administrator.

B. The aircraft or component shall be oriented parallel to the direction of any operational runway of the airport, or within ten degrees of parallel to any operational runway of the airport, provided that this shall apply only to Seattle-Tacoma International Airport.

C. If the testing or maintenance is performed at the Seattle-Tacoma International Airport, the aircraft or component shall be entirely within the airport building restriction line boundary as defined on the map entitled "Seattle-Tacoma International Airport - Airport Plan" (prepared July 18, 1973, revised June 30, 1977) and at areas designated by the airport proprietor. It is intended that this map be the reference map regardless of any future changes, provided that the administrator may grant exceptions to this part for good cause shown. A copy of this map is on file in the county clerk's office and at the Planning and Research Department of the Port of Seattle.

D. If the testing or maintenance is performed at the Boeing Field/King County International Airport, the aircraft or component shall be entirely within the ultimate airport property line as shown on the map entitled "Boeing Field/King County International Airport - Airport Layout Plan" (prepared December 1, 1976, revised October 10, 1978), at areas designated by the airport manager. It is intended that this map be the reference map regardless of any future changes, provided that the administrator may grant exceptions to this subsection for good cause shown. A copy of the Boeing Field/King County International Airport layout plan map is on file in the Seattle city clerk's office, at the office of the airport manager of the Boeing Field/King County International Airport, and at the Planning and Research Department of the Port of Seattle. (Ord. 4449 § 2, 1979).

VARIANCES

**Chapter 12.96  
VARIANCES**

**Sections:**

- 12.96.010 Variance procedure.
- 12.96.020 Types of variances.
- 12.96.030 Plan review fee.

**12.96.010 Variance procedure.**

A. Any person who owns or is in possession of any property or use, or any process or equipment, may apply to the administrator for relief from the requirements of Chapters 12.86 through 12.100 or rules or regulations promulgated hereunder governing the quality, nature, duration or extent of discharge of noise. In a proper case, the variance may apply to all sources of a particular class or type. The application shall be accompanied by such information and data as the administrator may require. In accordance with the administrative code, the administrator shall promulgate rules and regulations governing the application for and granting of such variances, including hearings and notice.

B. Application for a variance or renewal of a variance shall be accompanied by payment of a nonrefundable base fee as follows:

- 1. Temporary variance \$200.00;
- 2. Technical or economic variance, source in rural or residential district \$200.00;
- 3. Technical or economic variance, source in commercial or industrial district \$500.00.

C. In addition to the base fee the review fee for technical or economic variance shall be the actual costs associated with application review over and above the base fee.

D. A variance or its renewal shall not be a right of the applicant or holder thereof, but shall be at the reasonable discretion of the administrator.

E. No variance shall be granted pursuant to this section until the administrator has considered the relative interests of the applicant, other owners or possessors of property likely to be affected by the noise, and the general public. A technical or economic variance may be granted only after a public hearing on due notice. The administrator may grant a variance, if he finds that:

- 1. The noise occurring or proposed to occur does not endanger public health or safety; and
- 2. The applicant demonstrates the criteria required for temporary, technical or economic variance under Section 12.96.020.

F. Variances, except temporary variances, granted pursuant to Chapters 12.86 through 12.100 may be renewed on terms and conditions and for periods which would be appropriate on the initial granting of a variance. No renewal shall be granted except on application made at least sixty days prior to the expiration of the variance.

G. Any person aggrieved by the denial, grant, or the terms and conditions on the grant of an application for a variance by the administrator may appeal such decision under procedures incorporated by Chapter 12.99.

H. Any person or source granted a variance pursuant to the procedures of this section or an appeal shall be exempt from the maximum permissible sound levels established by Chapters 12.86 through 12.100, to the extent provided in the variance. (Ord. 12920 § 1, 1997: Ord. 9224 § 1, 1989: Ord. 7415 § 1, 1985: Ord. 4181 § 1, 1979: Ord. 3139 § 701, 1977).

**12.96.020 Types of variances.**

A. Temporary variance. The administrator may grant a temporary variance, not to exceed fourteen days of operation, for any activity, use, process or equipment that the administrator determines, in accordance with rules and regulations, does not annoy a substantial number of the people and does not endanger public health or safety.

B. Technical variance. A technical variance may be granted by the administrator on the grounds that there is no practical means known or available for the adequate prevention, abatement or control of the noise involved. Any technical variance shall be subject to the holder's taking of any alternative measures that the administrator may prescribe. The duration of each technical variance shall be until such practical means for prevention, abatement or control become known or available. The holder of a technical variance, as required by the administrator, shall make reports to the administrator detailing actions taken to develop a means of noise control or to reduce the noise involved and must relate these actions to pertinent current technology.

C. Economic variance. An economic variance may be granted by the administrator on the ground that compliance with the particular requirement or requirements from which the variance is sought will require the taking of measures that, because of their extent or cost, must be spread over a period of time. The duration of an economic variance shall be for a period not to exceed such reasonable time as is required in the view of the administrator for the taking of the necessary measures. An economic variance shall contain a timetable for the taking of action in an expeditious manner and shall be conditioned on adherence to the timetable. (Ord. 14114 § 14, 2001; Ord. 3139 § 702, 1977).

**12.96.030 Plan review fee.** Whenever any project is submitted to the administrator for review, relating to any special noise studies and mitigating measures, proposed as part of a mitigated declaration of non-significance or environmental impact statement under any of the following:

- A. Chapter 43.21C of the Revised Code of Washington, the state environmental policy act;
- B. Chapter 197-11 of the Washington Administrative Code, the state environmental policy act rules;
- C. Chapter 20.44 of the King County Code, the county environmental procedures;
- D. The environmental review ordinance of any other city or town or other municipal corporation;

The request for review shall be accompanied by a plan review fee of fifty dollars (\$50.00). This fee shall be nonrefundable, and shall accompany each request for comment by the administrator, including each request for comment on a declaration of non-significance with mitigation, a declaration of significance, or an environmental impact statement. (Ord. 9224 § 2, 1989).

**Chapter 12.98**  
**ADMINISTRATION AND NOISE MEASUREMENT**

**Sections:**

- 12.98.010 Authority of administrator and sheriff.
- 12.98.020 Duties of administrator.
- 12.98.030 Measurement of sound.
- 12.98.040 Technical corrections.
- 12.98.050 Receiving properties within more than one district.

**12.98.010 Authority of administrator and sheriff.** The administrator and sheriff are authorized to administer and enforce K.C.C. chapters 12.86 through 12.100 of this code; provided, that the sheriff is authorized to [provided, that the director of the department of public safety is directed to]\* enforce K.C.C. chapter 12.90 and 12.91 and K.C.C. 12.87.180, 12.87.290, 12.87.350, 12.92.020 and 12.94.010. Upon request by the administrator or the sheriff, all other county departments and divisions may assist them in enforcing K.C.C. chapters 12.86 through 12.100. (Ord. 14114 § 15, 2001: Ord. 5096 § 8, 1980: Ord. 3139 § 801, 1977).

**Reviser's note:**

\*Not deleted in accordance with K.C.C. 1.24.075 in Ordinance 14114, Section 15.

**12.98.020 Duties of administrator.** The duties of the administrator shall include, but are not limited to:

- A. Obtaining assistance from other appropriate county departments and divisions;
- B. Training field inspectors;
- C. Purchasing measuring instruments and training inspectors in their calibration and use;
- D. Promulgating and publishing rules and procedures, in accordance with the administrative code, to establish techniques for measuring or reducing noise and to provide for clarification, interpretation, and implementation of Chapters 12.86 through 12.100;
- E. Investigating citizens' noise complaints;
- F. Issuing orders for the reduction or elimination of noise in accordance with Chapter 12.99;
- G. Assisting citizens and other county departments in evaluating and reducing the noise impact of their activities;
- H. Assisting county planning officials in evaluating the noise component in planning and zoning actions;
- I. Instituting a public education program on noise; and
- J. Reviewing at least every three years the provisions of Chapters 12.86 through 12.100 and recommending revisions consistent with technology to reduce noise. (Ord. 3139 § 802, 1977).

**12.98.030 Measurement of sound.** If the measurements of sound are made with a sound level meter, it shall be an instrument in good operating condition and shall meet the requirements for a Type I or Type II instrument, as described in American National Standards Institute Specifications, Section 1.4-1971. If the measurements are made with other instruments, or assemblages of instruments, the procedure must be carried out in such manner that the overall accuracy shall be at least that called for in Section 1.4-1971 for Type II instruments. (Ord. 3139 § 803, 1977).

**12.98.040 Technical corrections.** When the location, distance or technique prescribed in Chapters 12.86 through 12.100 for measurement of sound is impractical or would yield misleading or inaccurate results, measurements shall be taken at other locations or distances using appropriate correction factors, as specified in the rules promulgated by the administrator. (Ord. 3139 § 804, 1977).

**12.98.050 Receiving properties within more than one district.** Where a receiving property lies within more than one district, the maximum permissible sound level shall be determined by the district within which the measurement is made. (Ord. 3139 § 805, 1977).

(King County 9-2008)

**Chapter 12.99**  
**ENFORCEMENT AND APPEALS**

**Sections:**

- 12.99.010 Enforcement.
- 12.99.015 Penalties – civil infraction.
- 12.99.020 Appeals.

**12.99.010 Enforcement.** The administrator and the sheriff may enforce K.C.C. chapters 12.86 through 12.100 and any rules and regulations promulgated under those chapters and in accordance with K.C.C. Title 23. If the administrator or sheriff has reason to believe that a violation of K.C.C. chapters 12.86 through 12.100 has occurred, the administrator or sheriff may initiate an administrative notice and order proceeding or other appropriate legal action in accordance with K.C.C. Title 23. (Ord. 14114 § 16, 2001; Ord. 3139 § 901, 1977).

**12.99.015 Penalties – civil infraction.** A violation of K.C.C. chapters 12.86 through 12.100 is a class 2 civil infraction punishable under chapter 7.80 RCW. (Ord. 14114 § 18, 2001).

**12.99.020 Appeals.** Any person aggrieved by an order of the administrator or sheriff, including a final variance decision, may appeal to the King County hearing examiner in accordance with K.C.C. Title 23. (Ord. 14114 § 17, 2001; Ord. 3139 § 902, 1977).

MISCELLANEOUS

**Chapter 12.100  
MISCELLANEOUS**

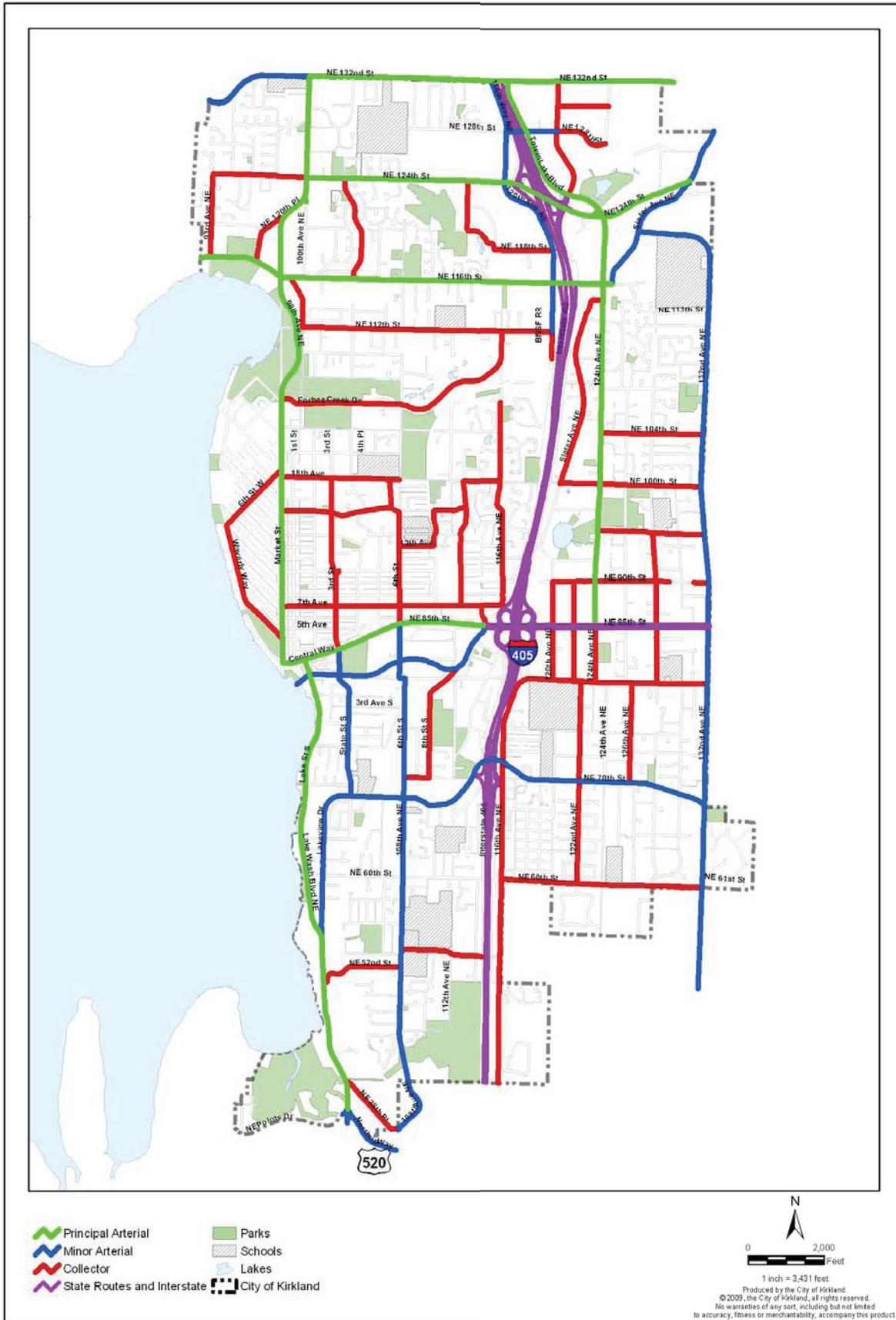
**Sections:**

- 12.100.010 Ordinance additional to other law.
- 12.100.020 Severability.

**12.100.010 Ordinance additional to other law.** The provisions of Chapters 12.86 through 12.100 shall be cumulative and nonexclusive and shall not affect any other claim, cause of action or remedy; nor shall proof of a violation of Chapters 12.86 through 12.100 constitute prima facie proof of any private cause of action. Unless specifically provided, Chapters 12.86 through 12.100 shall not be deemed to repeal, amend or modify any law, ordinance or regulation relating to noise, but shall be deemed additional to existing legislation and common law on noise. (Ord. 3139 § 1001, 1977).

**12.100.020 Severability.** If any provision of K.C.C. chapters 12.86 through 12.100 or its application to any person or circumstance is held invalid, the remainder of K.C.C. chapters 12.86 through 12.100 or the application of the provision to other persons or circumstances is not affected. (Ord. 14114 § 19, 2001; Ord. 3139 § 1002, 1977).





**Figure T-1: Street Classifications and State Routes**



Clyde Hill Municipal Code

Chapter 17.37

FENCES

Sections:

- 17.37.010 Retaining walls.
- 17.37.020 Fences.
- 17.37.030 Fence heights adjacent to arterial streets.
- 17.37.035 Fences over six feet in height required to obtain a building permit – Establishment of fee.
- 17.37.040 Electric fences.

**17.37.010 Retaining walls.**

Retaining walls which exceed 30 inches in height above original grade shall not be located in any setback area. Whenever a fence is placed on top of a retaining wall, the height of the fence and the retaining wall together shall not exceed six feet measured from the original grade. (Ord. 805 § 1, 1999)

**17.37.020 Fences.**

A. Constructed fences shall not exceed six feet in height measured from the original grade, except as permitted under Chapter 17.40 CHMC for recreational facilities. Whenever a fence is placed on top of a retaining wall, the height of the fence and the retaining wall together shall not exceed six feet as measured from the original grade, except as permitted under Chapter 17.40 CHMC for recreational facilities. Naturally grown fences shall not exceed eight feet in height as measured from the original grade.

B. Except as provided in subsection (C) of this section and in Chapter 17.48 CHMC relating to swimming pools, fences are not subject to the setback requirements set forth elsewhere in this title; provided, that no fence shall restrict traffic visibility as defined by CHMC 17.08.100. Fences for recreational facilities that exceed six feet in height are subject to the setback requirements set forth in Chapter 17.40 CHMC.

C. Except as provided in CHMC 17.37.030(B), front yard fences shall be located not less than two feet from the right-of-way line to allow for aesthetic softening of the fence by the landscaping required under subsection (D) of this section; provided, however, that this provision shall not apply to fences which are legally within the two-foot area and existing as of the date of the ordinance codified in this section except where the property has been substantially redeveloped as defined in CHMC 17.60.030.

D. Where a fence is located or extends into a front yard setback, landscaping shall be provided between the fence and the right-of-way line according to the following guidelines:

1. The purpose of the landscaping shall be to reduce the visual impacts of the fencing to enhance the city's appearance by preventing the look of a walled enclosure.

2. The planting design should be a harmonious composition of plant materials that balances color, texture, form, line, proportion and scale.

3. Plants selected should be of a type suited to the climate and selection should be made with an awareness of growth requirements, tolerances, ultimate size, and soil preference. Plants selected shall be guided by "A Citizen's Guide to Urban Forest Management in the Town of Clyde Hill," as amended. Plants shall be placed in such a manner as to prevent them from protruding into the public right-of-way and to prevent them from restricting traffic visibility as required in this section.

4. Plantings shall be of adequate quantity, size, and spacing to fulfill the purpose of landscaping within a reasonable time.

5. Whenever landscaping is required under this subsection, the owner shall maintain the same in compliance with these regulations as long as the fence remains located within the front yard setback. The city administrator is authorized to notify the owner of any property landscaped under this subsection of the fact that the landscaping is not being adequately

**17.37.030**

maintained, and the specific nature of such maintenance failure. The notice shall specify a date by which the property owner shall comply. Upon failure to perform the required maintenance within the time specified in the notice, the city administrator is authorized to cause the maintenance to be completed and all expenses thereof shall become a lien against the real property of the owner. (Ord. 805 § 1, 1999)

**17.37.030 Fence heights adjacent to arterial streets.**

A. For purposes of this section, “arterial” shall be those streets as described or designated in CHMC 12.04.020, as the same now exists or may be amended from time to time.

B. The height of a fence shall be measured from arterial grade, or the original grade of the property, whichever is higher and shall not exceed six feet for constructed fences and eight feet for living fences; provided, however, the permitted height along 84th Avenue N.E., N.E. 12th Street and State Route 520 shall be eight feet from arterial grade or original grade of the property, whichever is higher, for a constructed fence, and 10 feet for a living fence; provided further, that fences along 84th Avenue N.E., N.E. 12th Street and State Route 520 shall not be subject to the two-foot setback requirement as provided in CHMC 17.37.020(C) as it now exists or may hereafter be amended. Arterial grade or original grade contours as provided in this subsection shall be followed in determining the height of the fence.

C. Notwithstanding the foregoing provisions of this section, no fence structure constructed along an arterial as defined in subsection (A) of this section shall exceed 10 feet in height from its base. (Ord. 805 § 1, 1999)

**17.37.035 Fences over six feet in height required to obtain a building permit – Establishment of fee.**

Any fences permitted under this title to be in excess of six feet in height whether by code

provision or variance must obtain a building permit, comply with the provisions of CHMC Title 15 and pay the fees for same as established from time to time by resolution adopted by the city council. (Ord. 855 § 1, 2003)

**17.37.040 Electric fences.**

Electric fences or any device capable of giving an electric shock to any person or animal coming in contact therewith are prohibited within the city. This prohibition shall not be construed to restrict or prohibit underground “invisible” fencing which controls animals by use of an receiver collar worn by the animal(s). (Ord. 805 § 1, 1999)

**CITY OF KIRKLAND**

123 FIFTH AVENUE KIRKLAND, WASHINGTON 98033-6189 (425) 828-1257

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**DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT  
MEMORANDUM**

**To:** Interpretation File 86-11  
**From:** Joe Tovar  
**Date:** June 18, 1986  
**Subject:** Window Signs

KZC 100.30 through 100.75 set forth the fundamental sign regulations which apply to permanent on-site business signs. KZC 100.115 sets forth regulations for numerous types of “special signs” which are allowed in addition to the signs permitted under KZC 100.30 through 100.75. Included in these special signs are “temporary commercial signs.” KZC 5.10.923 defines a temporary commercial sign as:

“...a sign associated with a business; painted on a window or constructed of cloth, paper or similar flexible material; readily removable; and displaying a temporary commercial message; but not including a real estate, on-site or real estate, off-site sign.”

Certain types of window signs do not meet the strict definition of a temporary sign. Neon signs displaying the name or logo of a particular product, for example, are not made of flexible materials. At the same time, these window signs customarily have not been regulated through KZC 100.30 through 100.75 as permanent business signs, although a strict reading of the code would not support this position. In most cases, however, window signs either serve a similar function as temporary commercial signs or function primarily as interior furnishings.

It is my interpretation, therefore, that all types of window signs should continue to be exempted from regulation as permanent signs under KZC 100.30 through 100.75 unless they are permanently affixed to the exterior of the building or they display the name of the business itself, in which case they are clearly assuming the form or serving the function of a permanent sign.



**100.115 Temporary/Special Signs**

- A. The chart below establishes regulations that apply to numerous signs of a temporary or special nature or purpose. These signs shall be permitted in addition to the signs permitted in Sign Categories A through F, and shall be subject to the requirements set forth in the following chart. Except as specifically stated in the chart, the signs in the chart are not subject to the regulations of KZC [100.30](#) through [100.75](#) and KZC [100.95](#).

No temporary or special signs shall be posted or placed upon public property; provided that, certain temporary signs may be posted or placed within certain portions of a public street right-of-way as identified by the chart below.

TYPE OF SIGN	MAXIMUM NUMBER OF SIGNS	MAXIMUM SIGN AREA	MAXIMUM PERMITTED LOCATION	PERMITTED
				DURATION OF DISPLAY
Real Estate, On-site	For each dwelling unit, use or development: 1 per broker per abutting right-of-way.	Dwelling units: 6 sq. ft. per sign face. Other uses or developments: 32 sq. ft. per sign face – not to exceed 64 sq. ft. per property for sale or rent.	Subject property.	Must remove when property is sold or rented.
Real Estate, Off-site	1 per block per property for sale or rent.	6 sq. ft. per sign face.	Private property/public right-of-way.(3)	Must remove when property is sold or rented.
Construction	1 per abutting right-of-way.	32 sq. ft. per sign face.	Subject property.	Shall not be displayed prior to issuance of a building permit. Must be removed prior to issuance of a certificate of occupancy.
Temporary Commercial	No maximum.	No maximum.	Subject property. Must be entirely attached to a building face or fence.	Must remove at end of use, event or condition.
Integral	1 per structure.	6 sq. ft. per sign face.	Subject property.	No limitation.
Private Notice and Instructional	No maximum.	2 sq. ft. per sign face.	Subject property.	No limitation.
Private Advertising	No maximum.	16 sq. ft. per sign face.	No closer than 50 ft. from another sign advertising the same use, event or condition.	Must remove at end of use, event or condition.
Private Traffic Direction	No maximum.	4 sq. ft. per sign face.	Subject property.	No limitation.
Off-site	1.	16 sq. ft. per use,	Private property/public	Determined on case-

Directional(1)		not to exceed 64 sq. ft.	right-of-way.(3)	by-case basis.
Political	No maximum.	6 sq. ft. per sign face.	Private property/public right-of-way.(3)	No later than 7 days after the final election.
Projecting and Under Marquee	1 per pedestrian or vehicular entrance.	4 sq. ft. per sign face.	Subject property right-of-way abutting subject property. For uses subject to Sign Categories C, D, E and F only. Shall not project above roofline of structure to which sign is attached.	No limitation.
Fuel Price(2)	1 per abutting right-of-way.	20 sq. ft. per sign face.	Subject property.	No limitation.

(1) Must be approved by the Planning Director. Shall only be approved if there is a demonstrated need for an off-site sign because of poor visibility or traffic patterns. All uses in an area wanting a permanent off-site directional sign must use one sign. The applicant must show that the proposed sign can accommodate all uses in the area that may reasonably need to be listed on the sign. The decision of the Planning Director in approving or denying an off-site directional sign may be appealed using the appeal provision, as applicable, of Process I, KZC [145.60](#) through [145.110](#).

(2) Fuel price signs are also subject to KZC [100.95](#).

(3) Signs which are permitted to be placed within a public street right-of-way shall be located between the curb and the abutting private property, or where no curb exists, between the edge of the paved travel lane or paved shoulder and the abutting private property, but in no case on a sidewalk or driveway.

- B. All temporary or special signs which are in violation of any provision of this section, shall be brought into conformance upon ten day's written notice of violation to the responsible party by the Planning Official, pursuant to the notice provisions of KZC [170.35](#). If the responsible party fails to remove or correct the sign violation within seven calendar days after being served with notice of the violation, the Planning Official shall have the authority to remove the violative sign (s), and to assess the charges for such removal against the responsible party. For the purposes of this section, the "responsible party" shall be the owner or operator of the subject property upon which the sign violation occurs; provided that, in the case of off-site directional signs, the "responsible party" shall be the applicant(s) for the off-site directional sign; and provided further that, in the case of political signs, the responsible party shall be the political candidate and/or the manager of the political campaign promoted by the violative sign(s).
- C. Notwithstanding the other provisions of this section, the Planning Official may remove without notice any temporary or special sign which is in violation of any provision of this chapter and is located in the public right-of-way or on public property, and may assess the costs of removal of such signs against the responsible party.

## **WINDOW SIGN BACKGROUND INFORMATION**

### **Bellevue**

22B.10.020 "Window sign" means all signs located inside and affixed to or within three feet of windows of a building, whether temporary or permanent, lighted or unlighted, which may be viewed from the exterior of the building. The term does not include merchandise located within three feet of a window.

22B.10.030.H. Window Signs. The total surface area of all window signs shall not exceed 15 square feet, or 10 percent of the window area. Such signs shall not be included in determining the number of primary signs, nor in determining the permissible sign area for each facade; provided, that such signs shall not exceed an area total to 15 square feet, or 10 percent of the window area.

### **Kenmore**

18.20.2720 Sign, wall.

"Wall sign" means any sign painted on, or attached directly to and supported by, a building or structure; with the exposed face of the sign on a plane parallel to the portion of the building or structure to which it is attached; projecting no more than one foot from the building or structure; including *window signs* which are permanently attached.

### **Woodinville**

21.20.030.8 Exempt: Signs or displays not intended to be visible from streets or public ways, signs in the interior of a building more than three feet from the closest window and not facing a window, and point of purchase advertising displays, such as vending machines;

21.20.110 Window signs. Window signs are allowed without a permit. The maximum allowable sign area is twenty (20) percent of the window area.

### **Renton**

4.4.100.5 Exemptions from Sign Code Regulations:

a. Indoor Signage: This Code does not apply to any signs or sign structures located within a building.

4.11.190.K. Sign, Window: Any sign, temporary or permanent, designed to communicate information about an activity, business, commodity, event, sale, or service, that is placed inside a window. Interior display of merchandise for sale, including accessory mannequins and other props, shall not be considered window signs.

**Bothell**

<b>Use</b>	<b>Permitted Sign Type(s) and Number Permitted</b>	<b>Maximum Allowable Sign Area</b>	<b>Maximum Allowable Sign Height/Width</b>
Advertisement and identification of permitted uses.	Wall/Window/Projecting/Awning: No maximum number. <sup>1</sup>	Wall/Window/Projecting/Awning: Total area of all signs shall not exceed two square feet of sign area per lineal foot of front face of building containing a public entrance. <sup>1</sup> A minimum of 36 square feet of sign area is permitted.	Wall/Window/Projecting/Awning: Shall not project above the uppermost extent of wall.

1. There is no limit to the number of wall/window/projecting/awning signs a use may have, nor is there any particular locational requirement (though they must be located on the building where the use is occurring). The total maximum sign area may be applied to one sign, or be divided among several signs.

# 1997 STANDARD for

# APPLICATION OF SOUND RATING LEVELS OF OUTDOOR UNITARY EQUIPMENT



**Standard 275**

**IMPORTANT**

***SAFETY RECOMMENDATIONS***

It is strongly recommended that the product be designed, constructed, assembled and installed in accordance with nationally recognized safety requirements, appropriate for products covered by this standard.

ARI, as a manufacturer's trade association, uses its best efforts to develop standards, employing state-of-the-art and accepted industry practices. However, ARI does not certify or guarantee safety of any products, components or systems designed, tested, rated, installed or operated in accordance with these standards or that any test conducted under its standards will be non-hazardous or free from risk.

Note:

This Standard supersedes ARI Standard 275-84.

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# APPLICATION OF SOUND RATING LEVELS OF OUTDOOR UNITARY EQUIPMENT

## Section 1. Purpose

**1.1 Purpose.** The purpose of this standard is to establish for outdoor unitary equipment: definitions, procedures for estimating A-Weighted sound pressure levels, and recommended application practices.

**1.1.1 Intent.** This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

**1.1.2 Review and Amendment.** This standard is subject to review and amendment as technology advances.

## Section 2. Scope

**2.1 Scope.** This standard applies to the outdoor sections of factory-made air-conditioning and heat pump equipment, as defined in Section 3 and ARI Standard 210/240 when rated in accordance with ARI Standard 270.

## Section 3. Definitions

**3.1 Definitions.** All terms in this document will follow the standard industry definitions established in the current edition of ASHRAE *Terminology of Heating, Ventilation, Air Conditioning and Refrigeration*, unless otherwise defined in this section.

**3.2 Sound Rating Level.** That number which is assigned to equipment rated in accordance with ARI Standard 270.

**3.2.1 Standard Sound Rating Level.** That number assigned to equipment rated at Standard Rating Conditions in accordance with ARI Standard 270.

**3.2.2 Application Sound Rating Level.** A number assigned to equipment rated in accordance with ARI Standard 270 at conditions other than Standard Rating Conditions.

**3.3 A-Weighted Sound Pressure Level.** As used herein, the sound pressure level, as measured on the "A" scale of a sound level meter manufactured in accordance with the provisions of ANSI Standard S1.4.

**3.4 C-Weighted Sound Pressure Level.** As used herein, the sound pressure level, as measured on the "C" scale of a sound level meter manufactured in accordance with the provisions of ANSI Standard S1.4.

**3.5 "Shall," "Should," "Recommended," or "It Is Recommended."** "Shall," "should," "recommended," or "it is recommended" shall be interpreted as follows:

**3.5.1 Shall.** Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

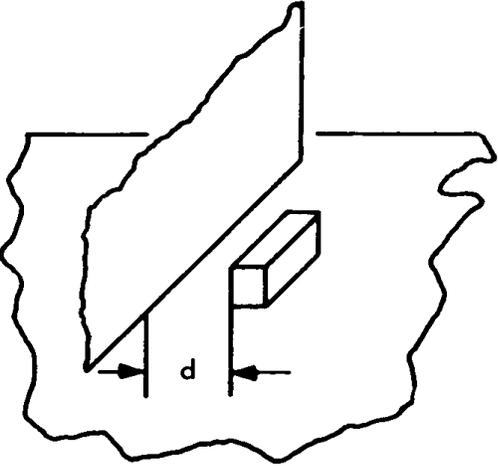
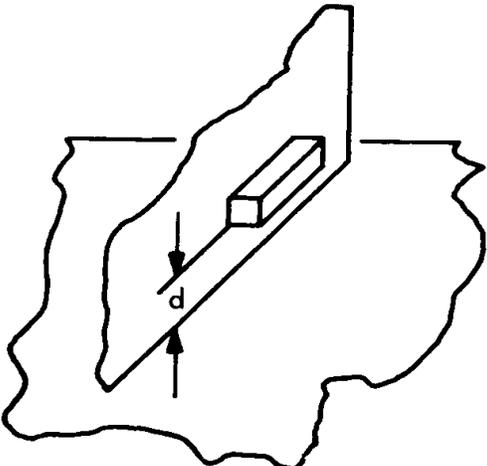
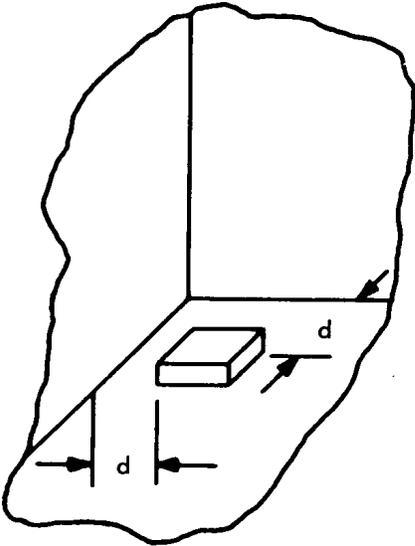
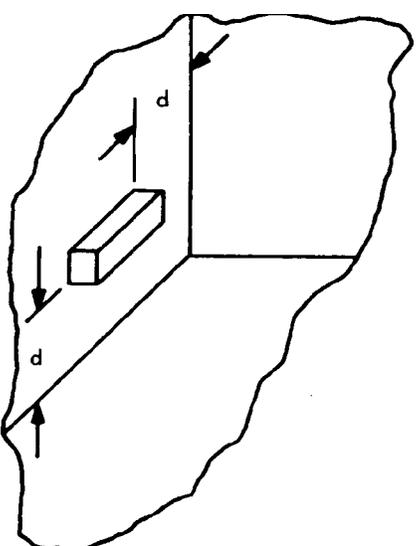
**3.5.2 Should, Recommended, or It Is Recommended.** "Should," "recommended," or "it is recommended" is used to indicate provisions which are not mandatory but which are desirable as good practice.

## Section 4. Procedure for Estimating A-Weighted Sound Pressure Levels

**4.1 Introduction.** ARI Standard 270 establishes a method of rating outdoor unitary equipment in terms of ARI Sound Rating Levels. The sound level of outdoor unitary equipment in various applications is dependent not only upon the ARI Sound Rating Level but also upon several significant factors related to the application of the equipment. These factors include equipment location, barrier shielding, sound path, and distance, as described in 4.1.1 through 4.1.4 and Table 1. Quantitative values for each of these factors are established to adjust the sound rating level. The summation of the sound rating levels and applied adjustments equal the estimated A-Weighted sound pressure level. The rating method in ARI Standard 270 incorporates an adjustment which is applied in the presence of tones. This method may result in slightly higher predicted sound levels than measured sound levels when following the procedures described in this standard.

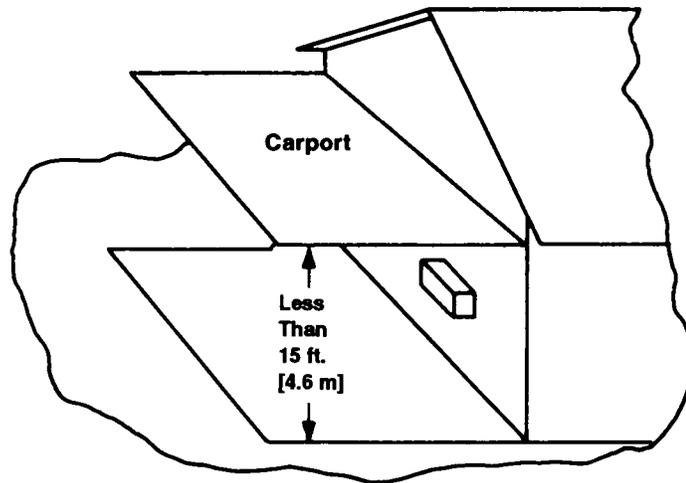
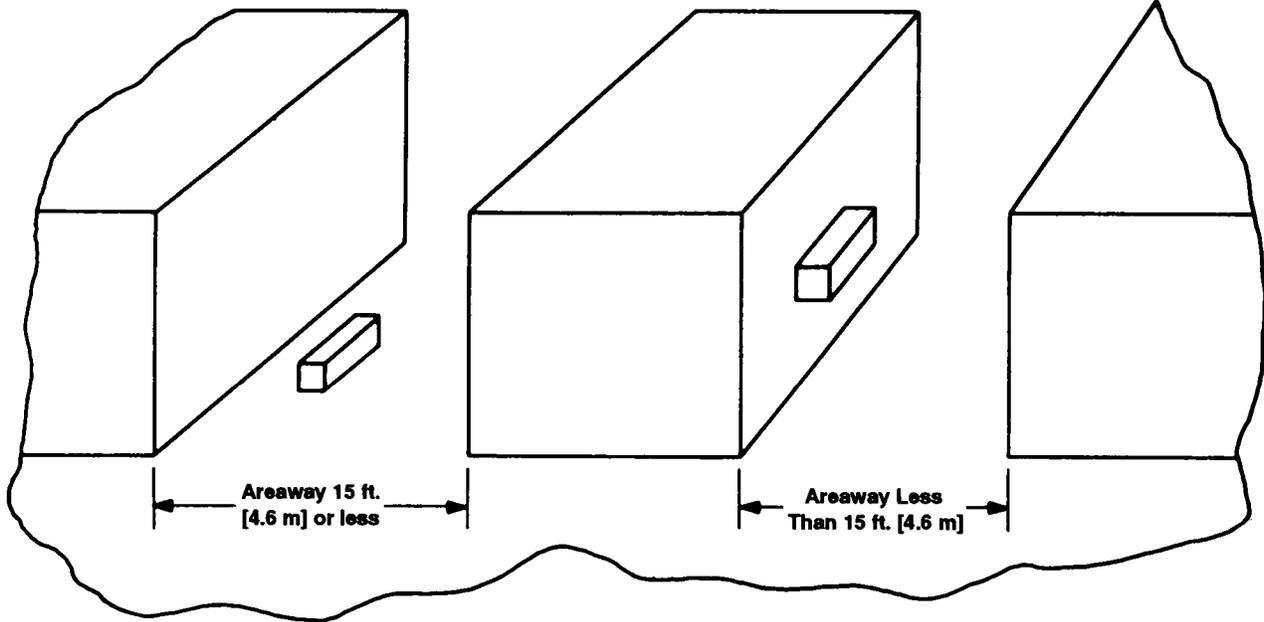
**4.1.1 Equipment Location Factor.** This factor takes into consideration the effect of walls and other reflective surfaces adjacent to the equipment. Factors for typical equipment locations are given in Item 1, Table 1, and described with sketches.

**Table 1. Application Factors for Estimating A-Weighted Sound Pressure Levels**

1. Equipment Location Factor	Factor Value
a. Equipment on ground or roof or in side of building wall with <i>no</i> adjacent reflective surface within 10 ft. [3 m] (d greater than 10 ft. [3 m])	0 dB
b. Equipment on ground or roof or in side of building wall with a <i>single</i> adjacent reflective surface within 10 ft. [3 m] (d less than 10 ft. [3 m])	3 dB
 <p data-bbox="289 1035 565 1094">On Ground or Roof Single Reflective Surface</p>	 <p data-bbox="959 1003 1235 1062">In Side of Building Single Reflective Surface</p>
c. Equipment on ground or roof or in side of building wall within 10 ft. [3 m] of <i>two</i> adjacent walls forming an inside corner (d less than 10 ft. [3 m] to both surfaces)	6 dB
 <p data-bbox="240 1843 618 1902">On Ground or Roof Two Adjacent Reflecting Surfaces</p>	 <p data-bbox="911 1843 1284 1902">In Side of Building Two Adjacent Reflecting Surfaces</p>

**Table 1. Application Factors for Estimating A-Weighted Sound Pressure Levels (Continued)**

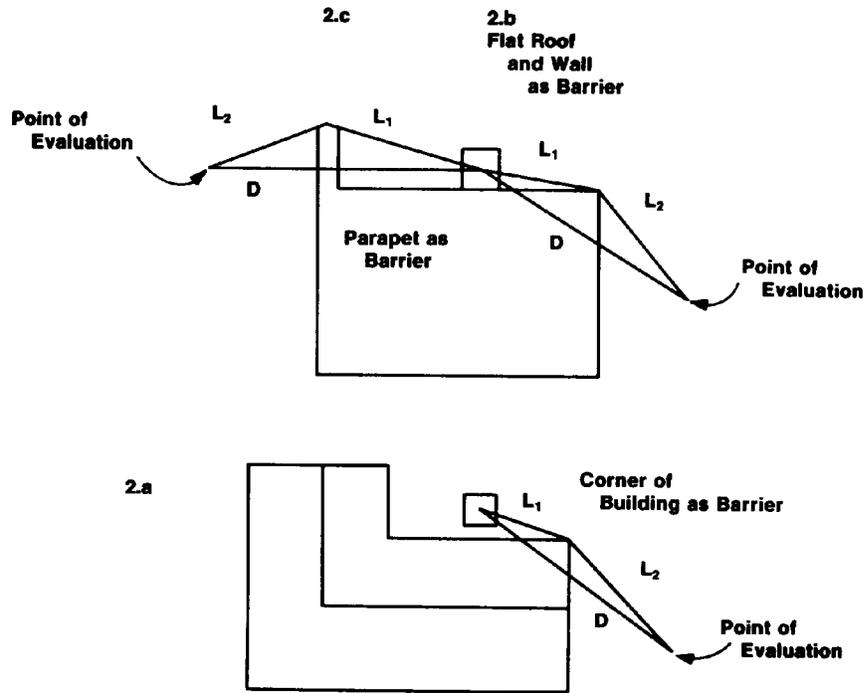
1. Equipment Location Factor (continued)	Factor Value
d. Equipment on ground or roof or in side of building wall and between two opposite reflecting surface less than 15 ft. [4.6 m] apart	6 dB



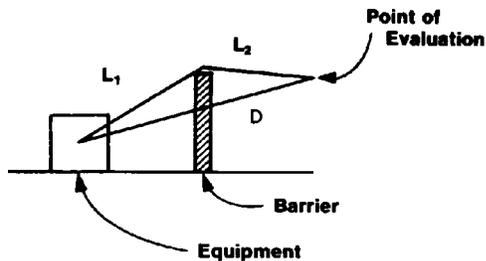
**Table 1. Application Factors for Estimating A-Weighted Sound Pressure Levels (Continued)**

2. Barrier Shielding Factor (see sketches below). Sound reduction benefits can be gained when a solid structure obstructs the sound path. These structures could be:

- a. Corner of building
- b. Corner of flat roof and wall
- c. Parapet around flat roof
- d. Heavy continuous wall



$L = L_1 + L_2 - D$ , where:



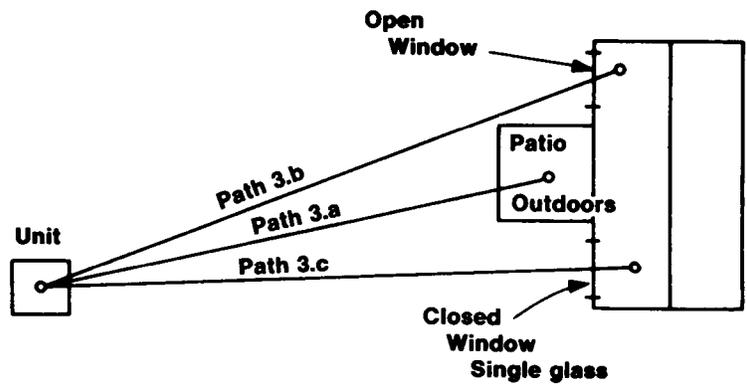
$L_1 + L_2 =$  Distance from equipment point of evaluation around barrier (Use minimum  $L_1 + L_2$  value.)

D = Direct distance from equipment to point of evaluation with no barrier. Determine D by layout sketch.

L ft. [m]	Factor Value
0.5 [0.15]	4 dB
1 [0.3]	7 dB
2 [0.6]	10 dB
3 [0.9]	12 dB
6 [1.8]	15 dB
12 [3.7]	17 dB

**Table 1. Application Factors for Estimating A-Weighted Sound Pressure Levels (Continued)**

3. Sound Path Factor	Factor Value
a. To a point of evaluation outdoors	0 dB
b. To room through open window(s) or open door(s)	10 dB
c. To room through closed single glass window(s) or door	17 dB
d. To room through closed double glass window(s) or solid wall (not illustrated)	23 dB



**4.1.2 Barrier Shielding Factor.** This factor accounts for the sound reduction benefit of any solid structure that obstructs the line of sight (or sound) from the equipment location to the point of evaluation. Such a barrier may be the corner of a building, the edge of a roof, or a heavy wall of masonry, etc., built for the specific purpose of shielding noise from a unit to an area of concern. See Item 2, Table 1, for sketches and the normal barrier factors.

**4.1.3 Sound Path Factor.** This factor adjusts for the path of sound from the unit to the point of evaluation, which may be to the outdoors only, to a room through open windows, to a room through closed windows, or through a wall. See Item 3, Table 1.

**4.1.4 Distance Factor.** The direct distance, D, from the equipment location to the point of evaluation is a very significant application factor in determining the estimated A-Weighted sound pressure levels resulting from the operation of outdoor equipment in any installation. The distance factor is obtained from Table 2.

**Table 2. Distance Factor**

ft.	[m]	Factor Value (dB)
4	1.2	9.5
5	1.5	11.5
6	1.8	13.0
7	2.1	14.5
8	2.4	15.5
9	2.7	16.5
10	3.0	17.5
15	4.6	21.0
20	6.1	23.5
25	7.6	25.5
30	9.1	27.0
40	12.2	29.5
50	15.2	31.0
60	18.3	33.0
70	21.3	34.5
80	24.4	35.5
90	27.4	36.5
100	30.5	37.5
125	38.1	39.5
150	45.7	41.0
175	53.3	42.5
200	61.0	43.5
400	122.0	49.5

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**4.2 Procedure for Estimating Sound Pressure Levels - Single Unit Installation.** The basic procedure for estimating A-Weighted sound pressure levels at a given point of evaluation consists of combining the sum of the application and evaluation factors with the Sound Rating Level for the equipment:

Sound Rating Level from ARI 270	_____
+ Equipment Location Factor	_____
– Barrier Shielding Factor	_____
– Sound Path Factor	_____
– Distance Factor	_____
Estimated A-Weighted Sound Pressure Level _____ <b>dB*</b>	

**4.3 Procedure for Estimating Sound Levels-Multiple Unit Installation.** Estimated sound levels for multiple unit installations at any point of interest can be determined by combining the effects of each unit at the point of interest. The procedure for multi-unit installations follows that used for single units except for the additional procedure used to combine numbers.

**4.3.1** The combined level for all units is determined as follows:

1. Determine the numerical difference between the largest and next largest levels.
2. Using Table 3, find the proper value and add it to the larger number. This combines the two largest numbers.
3. Determine the numerical difference between this combined number and the third largest level. Again, using Table 3, find the proper value and add it to the combined number.
4. Continue this combining procedure until the value to be added from Table 3 becomes 0.0 or until all numbers have been combined.
5. The resulting single number represents the effect of all units at the point of evaluation. (See Example 4.5.4)

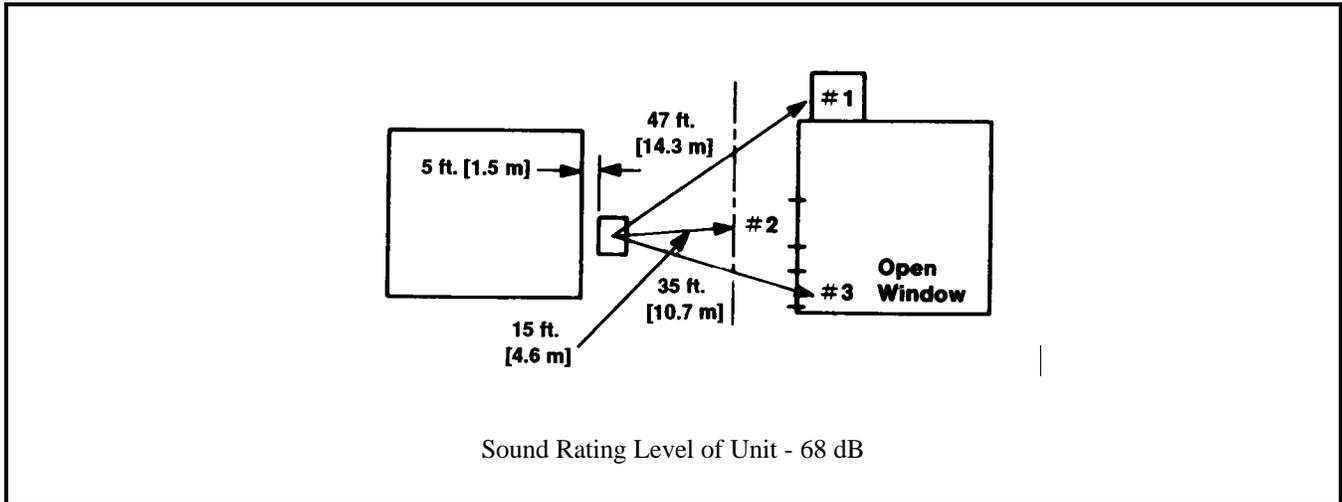
\* Rounded to the nearest whole dB value.

<b>Table 3. Values Used for Combining Numbers for Multi-Unit Installations</b>	
Difference Between Numbers (dB)	Value to be Added to Larger Number (dB)
0.0 to 0.5	3.0
1.0 to 1.5	2.5
2.0 to 3.0	2.0
3.5 to 5.0	1.5
5.5 to 7.0	1.0
greater than 7.0	0.0

**4.4 Points of Evaluation.** The calculation procedures described in 4.2 and 4.3 should be made for each area of concern to evaluate the installation from an acoustic standpoint (see 4.5, Examples). Measured A-Weighted sound pressure levels shall be within  $\pm 5$  dB of estimated levels when background levels are at least 5 dB below measured values. This estimation error accounts for the effect of the tone adjustment applied during the rating procedure of ARI Standard 270, as well as inaccuracies in the estimation procedure itself. To obtain the background level, readings shall be made with the unit not operating. The effects of environmental conditions on estimated sound levels are not included in this procedure.

4.5 Examples.

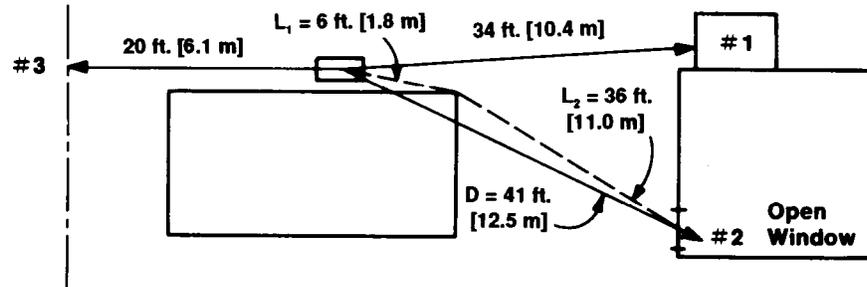
4.5.1 Installation with No Barriers and One Reflective Surface.



Line	Distance from equipment to evaluation point	Evaluation Points		
		1	2	3
1	Unit Sound Rating Level (ARI Standard 270)	68	68	68
2	Equipment Location Factor (Table 1, Item 1)	3	3	3
3	Add Lines 1 and 2	71	71	71
4	Barrier Shielding Factor (Table 1, Item 2)	0	0	0
5	Sound Path Factor (Table 1, Item 3)	0	0	10
6	Distance Factor (Table 2)	31	21	28
7	Add Lines 4, 5 and 6	31	21	38
8	Estimated A-Weighted Sound Pressure Level (Subtract Line 7 from Line 3)	40	50	33

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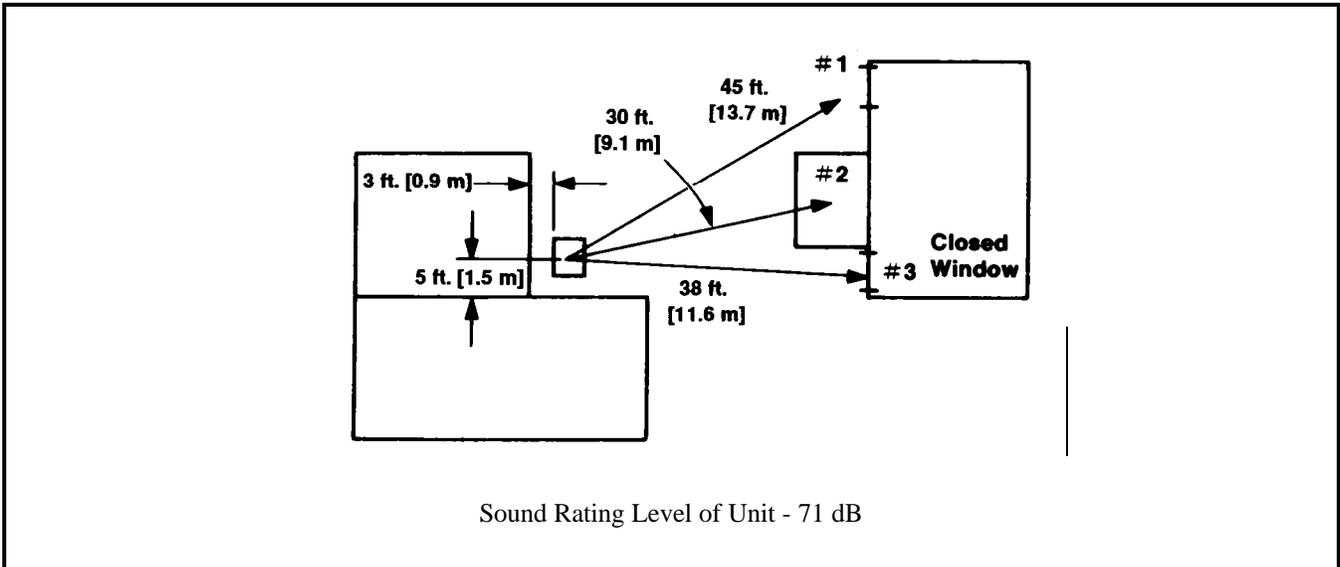
4.5.2 Installation with Barriers.



Sound Rating Level of Unit - 70 dB  
 $L = L_1 + L_2 - D$

Line	Distance from equipment to evaluation point	Evaluation Points		
		1	2	3
1	1. 34 ft. [10.4 m] 2. 41 ft. [12.5 m] 3. 20 ft. [6.1 m]			
1	Unit Sound Rating Level (ARI Standard 270)	70	70	70
2	Equipment Location Factor (Table 1, Item 1)	3	3	3
3	Add Lines 1 and 2	73	73	73
4	Barrier Shielding Factor (Table 1, Item 2)	0	7	0
5	Sound Path Factor (Table 1, Item 3)	0	10	0
6	Distance Factor (Table 2)	28	29.5	23.5
7	Add Lines 4, 5 and 6	28	46.5	23.5
8	Estimated A-Weighted Sound Pressure Level (Subtract Line 7 from Line 3)	45	26.5	49.5
9	Estimated A-Weighted Sound Pressure Level Rounded to Nearest Whole Number	45	27	50

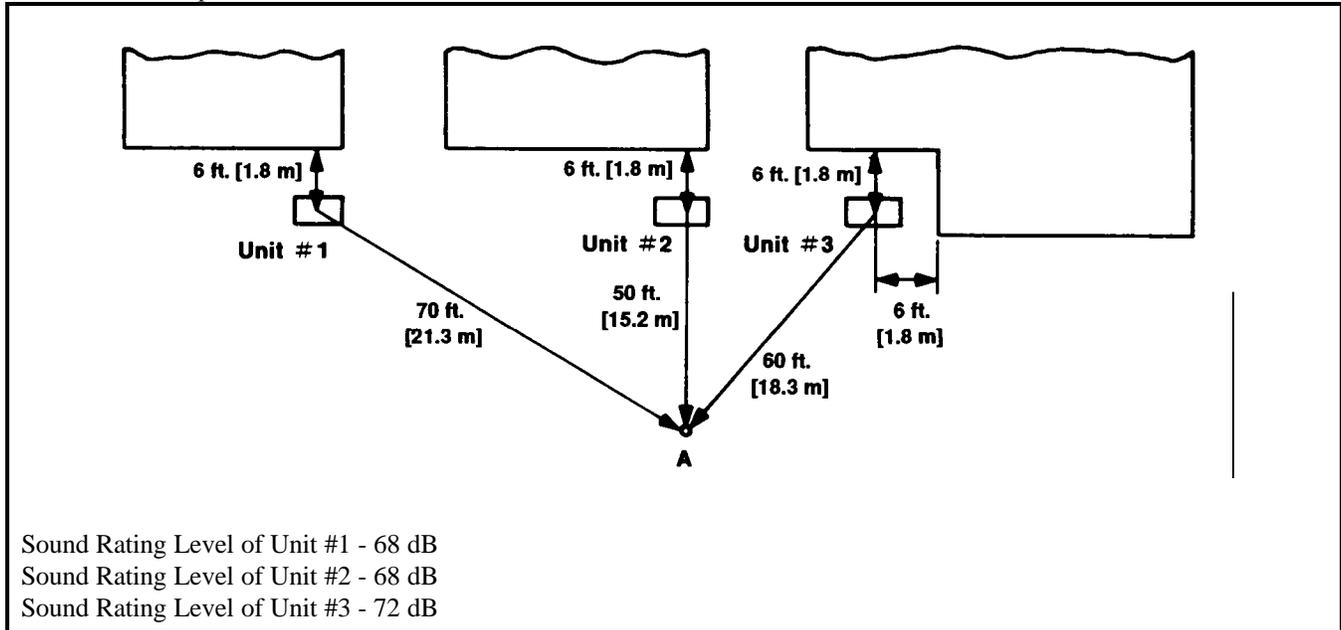
**4.5.3 Installation with Two Reflective Surfaces.**



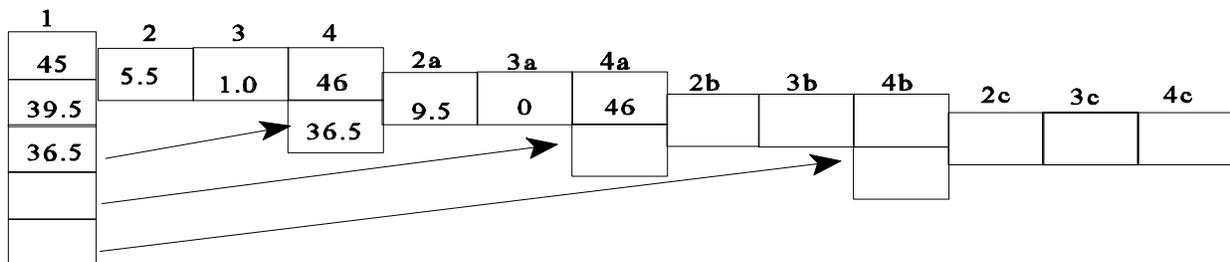
Line	Distance from equipment to evaluation point	Evaluation Points		
		1	2	3
	1. 45 ft.[13.7 m] 2. 30 ft. [9.1 m] 3. 38 ft. [11.6 m]			
1	Unit Sound Rating Level (ARI Standard 270)	71	71	71
2	Equipment Location Factor (Table 1, Item 1)	6	6	6
3	Add Lines 1 and 2	77	77	77
4	Barrier Shielding Factor (Table 1, Item 2)	0	0	0
5	Sound Path Factor (Table 1, Item 3)	0	0	17
6	Distance Factor (Table 2)	30.5	27	29
7	Add Lines 4, 5 and 6	30.5	27	46
8	Estimated A-Weighted Sound Pressure Level (Subtract Line 7 from Line 3)	46.5	50	31
9	Estimated A-Weighted Sound Pressure Level Rounded to Nearest Whole Number	47	50	31

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4.5.4 Multiple Units.



Line	Distance from equipment to evaluation point 1. 70 ft. [21.3 m] 2. 50 ft. [15.2 m] 3. 60 ft. [18.3 m]	Units		
		1	2	3
1	Sound Rating Level of Units (ARI Standard 270)	68	68	72
2	Equipment Location Factor (Table 1, Item 1)	3	3	6
3	Add Lines 1 and 2	71	71	78
4	Barrier Shielding Factor (Table 1, Item 2)	0	0	0
5	Sound Path Factor (Table 1, Item 3)	0	0	0
6	Distance Factor (Table 2)	34.5	31.5	33
7	Add Lines 4, 5 and 6	34.5	31.5	33
8	Estimated A-Weighted Sound Pressure Level (Subtract Line 7 from Line 3)	36.5	39.5	45
9	Estimated A-Weighted Sound Pressure Level Rounded to Nearest Whole Number	37	40	45



10	Estimated Combined A-Weighted Sound Pressure Level at Point A	46
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**4.5.5 Calculation Procedure for Multiple Units.**

1. Calculate estimated A-Weighted sound pressure level for each unit.
2. List estimated level for each unit in Column 1, starting with the largest number first and second largest next, etc.
3. Enter in Column 2, the difference of values between the two largest.
4. Enter in Column 3, the value to be added to the largest value from Table 3.
5. Enter in Column 4, the new value.
6. If there are more than two units, repeat above procedure 3 through 5, starting in Column 2a. Continue until a single value exists. Note that the third entry in Column 1 is transferred to Column 4 as indicated by the arrow, the fourth to Column 4a, etc.

**Section 5. Recommended Practices**

**5.1 Unit Selection.** Sizing should be adequate to handle the heat gains established by use of ASHRAE GRP158 Cooling and Heating Load Calculation Manual or equivalent. More than slight oversizing should be avoided, as this will result in excessive cycling (the end results being both poor thermal control and objectionable acoustical behavior).

**5.2 Location.** Outdoor units should be placed on sites chosen to minimize sound heard by building occupants and/or neighbors. This is accomplished by choosing a location that results in the lowest equipment location factor, the highest barrier shielding factor, and the greatest distance to sound sensitive areas. (See Section 4 and Table 1).

**5.2.1 Barrier Shielding.** Section 4.1.2 and Table 1 address the sound reduction which would be estimated when barriers exist between a sound source and a point of observation. Using these data, advantage should be taken of any possible barriers offered by existing structures. If a barrier is to be constructed specifically for this purpose, more accurate results can be obtained if the noise emanating from the installed equipment is measured before the barrier design is finalized.

Measurements should be made on both the "A" and "C" scales of a standard sound level meter. The difference between these two readings may be used with Table 4 to obtain a better estimate of sound reduction than would be possible without such measurements. As an example, if the C-Weighted level is 60 dB and the A-Weighted level is 55 dB, a barrier (for which L = 2 for the location under consideration) would be expected to provide a reduction of 13 dB instead of 10 dB as indicated in Table 1, with a resultant A-weighted sound pressure level of 42 dB.

**5.2.2 Orientation.** Many items of equipment have a directional pattern of sound radiation. In the absence of such data, it can be assumed that sound will be radiated most strongly in directions normal to the surfaces through which air enters and leaves the equipment. Where permitted by other installation details, the directions of maximum sound radiation from the equipment should be oriented towards the least sensitive locations on the site.

**5.2.3 Multiple Unit Locations.** When the sound level for a combination of units exceeds the desired value at the point of evaluation, changes in unit location or sound path should be made to the individual unit that produced the highest single contribution to the sound level. This may not be the unit with the highest sound rating level. When reduction in the combined sound level is required in cases where several units produce equal individual sound levels (they differ by less than 2 dB), changes must be considered for each of these in order to make an overall improvement. Recalculating the combined sound level assuming several possible changes will quickly indicate the most desirable modifications.

**5.3 Installation.**

**5.3.1 Mounting.** Equipment should be mounted on a substantial foundation. Precast concrete slabs may be used for smaller units, in which case, care should be taken to assure a firm, distributed support for the slab. Equipment intended for mounting in a wall or on a roof should be installed in accordance with the manufacturer's recommendations. It should be ascertained that the building structure at the point of attachment is sufficiently strong and rigid to accept the added load. Equipment which is not intended for mounting to the building structure should not be rigidly attached to a wall or other structure of substantial size which may radiate sound.

Table 4. Expected Reduction with Barrier								
L (Path Line Difference Defined in Table 1)	Measurement Without Barrier in Place (C-Weighted Sound Power Level minus A-Weighted Sound Power Level)							
	0 - 2	3 - 4	5 - 6	7 - 8	9 - 10	11 - 12	13 - 14	15 - 16
0.5	8	8	7	6	5	4	3	1
1	12	11	10	9	8	6	5	3
2	15	14	13	12	11	10	8	6
3	17	16	15	14	12	11	10	8
6	20	19	18	17	16	14	13	11
12	23	22	21	20	18	17	16	14

**5.3.2 Isolation.** Equipment mounted to the building structure should employ a system to isolate vibrations from that structure. An isolation system is desirable in all other cases except possibly the unit mounted to a small foundation slab provided solely for this purpose. (In this case, the manufacturer's recommendations regarding attachment should be followed.) In many cases the manufacturer may have designed isolation into the equipment, or may provide such isolation as an available accessory, or may provide specific recommendations for achieving such isolation. In the absence of such direction, isolators should be chosen in accordance with good practice. (The ASHRAE Handbook, HVAC Applications Volume, Chapter 43 is a reference for further discussion of isolation).

**5.3.3 Connections.** Ductwork, piping, and electrical conduit all provide potential short circuits to an isolation mount by making rigid connections between the equipment and the building structure. Providing flexible connections in each of these will prove effective in reducing sound transmission. Where flexible connections are not provided, it is desirable to resiliently support electrical service lines and refrigerant piping from the building structure. As a minimum requirement, direct firm contact between such components and the basic building structure should be avoided. Sealing of space between refrigerant lines and the holes provided through walls or roofs should be done with flexible material.

**5.3.4 Start-Up.** When placed in operation, the equipment should:

1. Be adjusted to operate on a recommended cycle for expected conditions (i.e., not cycling excessively).
2. Be properly charged, for efficient operation and cycling.
3. Have all shipping retainers or tie-downs removed, as specified in installation instructions.
4. Have all cabinet elements, access panels, etc., properly and securely fastened in place.
5. Be provided with electrical power within the nameplate specifications and tolerances.

Many of these conditions are necessary for proper thermal performance, but all can also affect sound generated by equipment.

## Section 6. Voluntary Conformance

**6.1 Conformance.** While conformance with this standard is completely voluntary, applications and installations represented as being in accordance with this standard shall conform with all the provisions thereof.

## APPENDIX A. REFERENCES - NORMATIVE

**A1** Listed here are all standards, handbooks, and other publications essential to the formation and implementation of the standard. All references in this appendix are considered part of the standard.

**A1.1** ANSI Standard S1.4-1983, *Specification for Sound Level Meters*, 1983, American National Standards Institute, 11 West 42nd Street, New York, NY 10036, U.S.A.

**A1.2** ARI Standard 210/240-94, *Unitary Air Conditioning & Air-Source Heat Pump Equipment*, 1994, Air-Conditioning & Refrigeration Institute, 4301 North Fairfax Drive, Suite 425, Arlington, VA 22203, U.S.A.

**A1.3** ARI Standard 270-95, *Sound Rating of Outdoor Unitary Equipment*, 1995, Air-Conditioning & Refrigeration Institute, 4301 North Fairfax Drive, Suite 425, Arlington, VA 22203, U.S.A.

**A1.4** ASHRAE *Terminology of Heating, Ventilation, Air Conditioning and Refrigeration*, American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle N.E., Atlanta, GA 30329, U.S.A.

## APPENDIX B. REFERENCES - INFORMATIVE

**B1** Listed here are standards, handbooks and other publications which may provide useful information and background but are not considered essential. References in this appendix are not considered part of the standard.

**B1.1** ASHRAE GRP158, *Cooling and Heating Load Calculation Manual*, Second Edition, American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle N.E., Atlanta, GA 30329, U.S.A.

**B1.2** ASHRAE Handbook, *Applications Volume*, 1996, American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle N.E., Atlanta, GA 30329, U.S.A.

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**TAB**

TYPE TO BE USED ON THE COVER

TAB

**275-97**

	3 ft. [0.9 m]
40	
	45 ft. [13.7 m]
37	
	38 ft. [11.6 m]
5.0	
1.5	
	30 ft. [9.1 m]
46.5	
	70 ft. [21.3 m]
37.0	
Areaway 15 ft. [4.6 m] or less	50 ft. [15.2 m]
	60 ft. [18.3 m]
Areaway Less Than 15 ft. [4.6 m]	
	6 ft. [1.8 m]
Less Than 15 ft. [4.6 m]	6 ft. [1.8 m]
	6 ft. [1.8 m]
5 ft. [1.5 m]	
	6 ft. [1.8 m]
47 ft. [14.3 m]	
15 ft. [4.6 m]	
35 ft. [10.7 m]	
$L_1 = 6$ ft. [1.8 m]	
20 ft. [6.1 m]	
$D = 41$ ft. [12.5 m]	
34 ft. [10.4 m]	
$L_2 = 36$ ft. [11.0 m]	

ter, but is an additional remedy. The imposition of a penalty does not relieve a person of the duty to abate the nuisance. (Ord. 458 § 1, 1987)

## CITY OF MEDINA

**Chapter 8.06****NOISE**

## Sections:

- 8.06.010 Portions of King County Code adopted by reference.
- 8.06.030 Limitations on construction and development activity.
- 8.06.040 RCW 88.12.085 adopted by reference.
- 8.06.050 Excessive noise prohibited.

**8.06.010 Portions of King County Code adopted by reference.**

A. Noise Control Provisions Adopted. The provisions of King County Code Chapters 12.86 through 12.100 governing excessive noise and noise control are hereby adopted by reference. All future amendments, alterations and additions to said Chapters 12.86 through 12.100 of the King County Code are also adopted by reference. At least one copy of Chapters 12.86 through 12.100 of the King County Code is on file with the city clerk.

B. Amendments. The following amendments are adopted:

1. Section 12.87.030 is amended to state that “administrator” means the city manager or his designated representative.

2. Section 12.87.070(B) is amended to read as follows:

“Residential district” includes areas designated in the Medina Municipal Code as R-16, R-20, R-30 and SR-30.

3. Section 12.87.070(C) is amended to read as follows:

“Commercial district” includes zones designated in the Medina Municipal Code as NA.

4. Section 12.96.010(D) is amended to read as follows:

No variance shall be granted pursuant to this section until the administrator or Hearing Examiner has considered the relative interests of the applicant, other owners or possessors of property likely to be affected by the noise, and the general public. A technical or economic variance may be granted only after a public hearing on due notice. The administrator or Hearing Ex-

aminer may grant a variance, if he finds that:

1. The noise occurring or proposed to occur does not endanger public health or safety; and
2. The applicant demonstrates the criteria required for temporary, technical or economic variance under Section 12.96.020.

5. Section 12.96.020(B) is amended to read as follows:

Technical variance. A technical variance may be granted by the Hearing Examiner on the grounds that there is no practical means known or available for the adequate prevention, abatement or control of the noise involved. Any technical variance shall be subject to the holder's taking of any alternative measures that the Hearing Examiner may prescribe. The duration of each technical variance shall be until such practical means for prevention, abatement or control become known or available. The holder of a technical variance as required by the Hearing Examiner, shall make reports to the administrator detailing actions taken to develop a means of noise control or to reduce the noise involved and must relate these actions to pertinent current technology.

6. Section 12.96.020(C) is amended to read as follows:

Economic variance. An economic variance may be granted by the Hearing Examiner on the ground that compliance with the particular requirement or requirements from which the variance is sought will require the taking of measures that, because of their extent or cost, must be spread over a period of time. The duration of an economic variance shall be for a period not to exceed such reasonable time as is required in the view of the Hearing Examiner for the taking of the necessary measures. An economic variance shall contain a timetable for the taking of action in an expeditious manner and shall be conditioned on adherence to the timetable.

7. Section 12.99.010 is amended to read as follows:

Enforcement. Violation of the provisions of Chapter 12.86 through 12.100 shall constitute a civil infraction punishable by a fine not to exceed \$500. Each day the violation occurs shall constitute a separate violation. In addition to seeking impositions of the fines provided herein for any violation, such violations may be enjoined or abated as a nuisance under the provisions of Medina Municipal Code Chapter 8.04.

8. Section 12.99.020 is amended to read as follows:

Appeals. Any person aggrieved by a final order of the administrator, may appeal to the Medina Hearing Examiner pursuant to MMC 2.78.070 of the Medina Municipal Code. Appeal of a final order by the Hearing Examiner shall be pursuant to MMC 2.78.100.

(Ord. 846 § 2, 2009; Ord. 547 §§ 1, 2, 1991)

#### **8.06.030 Limitations on construction and development activity.**

A. General. It is a violation of this chapter to engage in any commercial construction and development activity or to operate any heavy equipment before the hours of 7:00 a.m. and after 7:00 p.m. Monday through Friday and before the hours of 8:00 a.m. and after 5:00 p.m. on Saturday. No construction and development activity or use of heavy equipment may occur on Sundays or holidays that are holidays observed by the city.

B. Exception. The city manager or designee may grant written permission to engage in a construction and development activity or to operate heavy equipment after the hours of 7:00 p.m. and before 7:00 a.m. on Monday through Friday and after the hours of 5:00 p.m. and before 8:00 a.m. on Saturday, on Sundays or holidays that are observed by the city if this will not unreasonably interfere with any residential use. (Ord. 800 § 1, 2007; Ord. 509 § 3, 1990)

#### **8.06.040 RCW 88.12.085 adopted by reference.**

RCW 88.12.085 requiring effective mufflers or underwater exhaust systems for vessels and Chapter 352-67 WAC relating to vessel sound level

measurement procedures are adopted by reference.  
(Ord. 587 § 1, 1994)

### **8.06.050 Excessive noise prohibited.**

A. Production at any time of any of the following sounds or noises, which by reason of their intensity, frequency, duration, volume, pitch or any other reason, disturb the peace, quiet, repose or comfort of any person or persons is prohibited:

1. The sounding of any horn, siren or other signaling device except as a warning of danger, or as specifically permitted or required by law;

2. The use of a musical instrument, whistle, radio, sound amplifier or other device capable of producing or reproducing sound;

3. Any other unreasonably loud, disturbing, continuous, irritating or unnecessary noise, whether emanating from a human, animal or mechanical source.

B. Violation – Penalty. Violation of the provisions of this section shall constitute a civil infraction punishable by a fine not to exceed \$100.00; provided, that any second or subsequent infraction occurring within a period of 365 days from the date of a prior infraction shall be punishable by a fine not to exceed \$500.00. (Ord. 587 §§ 2, 3, 1994)

## **Chapter 8.12**

### **HOME SECURITY ALARMS**

Sections:

- 8.12.010 Purpose.
- 8.12.020 Definitions.
- 8.12.030 Alarm system registration.
- 8.12.040 Fees, corrective action.
- 8.12.050 Administrative decisions – Notice.
- 8.12.060 Appeal from administrative decision Finality.
- 8.12.070 Payment of civil penalties required.
- 8.12.080 Automatic dialing device – Certain interconnections prohibited.
- 8.12.090 Automatic reset required.

#### **8.12.010 Purpose.**

It is the intent of this chapter to reduce the number of false alarms occurring within the city and the resultant waste of city resources by providing for corrective administrative action including fees. Home security alarm systems are encouraged as a valuable tool for homeowners, police and fire personnel in preventing loss of life and property. But repeated false alarms are wasteful of police and fire department time and resources. The prevalence of false alarms can also endanger the lives of police personnel by creating an expectation that an alarm will be false. For these reasons, testing and proper maintenance of home security systems is required by this chapter. Following one false alarm, to which the police and/or fire department responded within a six-month period, fines will be imposed by the city as established herein. (Ord. 653 § 2, 2000; Ord. 576 § 1, 1993)

#### **8.12.020 Definitions.**

In this chapter, unless a different meaning plainly is required, the definitions contained in this section shall apply:

A. “Alarm business” means the business by any individual, partnership, corporation or other entity of selling, leasing, maintaining, servicing, repairing, altering, replacing, moving or installing any alarm system or causing to be sold, leased, maintained, serviced, repaired, altered, replaced, moved or installed any alarm system in or on any building, structure or facility.

B. “Alarm system” means any assembly of equipment, mechanical or electrical, arranged to signal the occurrence of an unauthorized or illegal entry or other activity requiring urgent attention and to which police are expected to respond.



## Section 20.935.030 Performance Standards.

A. Environmental Noise. Unless otherwise exempted by WAC 173-60-050, no development or use may create noise impacts, measured at the property line of the receiving property that exceed the maximum environmental noise levels established by WAC 173-60-050 listed in Table 20.935.030-1 below:

**Table 20.935.030-1****Maximum Permissible Noise Levels**

Noise Source	Receiving Property		
	Residential	Commercial	Industrial
Residential	55 dBA <sup>1</sup>	57 dBA	60 dBA
Commercial	57	60	65
Industrial	60	65	70

<sup>1</sup> Applicable to Home Occupation related activities only.

1. The above maximum noise levels shall be reduced by 10 dBAs between the hours of 10 p.m. and 7:00 a.m. for the receiving property. Also, at any hour of the day or night the applicable noise limitations above may be exceeded for any receiving property by no more than 5 dBA for a total of 15 minutes in any one-hour period, or 10 dBA for a total of 5 minutes in any one-hour period, or 15 dBA for a total of 1.5 minutes in any one-hour period.

2. Where potential noise impacts to adjacent uses from a proposed land use or development activity are identified, measures to mitigate such impacts may be imposed upon the land use or activity through the applicable review process, and may include: construction of a sound wall or fence; reorientation of buildings, parking and loading areas; and/or placement of berms and landscaping.

3. Sound walls shall meet the design standards of VMC 20.912.080 Fences and Walls.

4. Outdoor construction activity, including construction staging, shall occur no earlier than 7 a.m. and no later than 8 p.m., seven days a week.

5. Due to the negative effect excessive levels of environmental noise have upon the public health, safety and welfare, the noise standards set out in Table 20.935-1 are intended to apply to all uses in existence on the date of adoption of this ordinance and no right to maintain a use not in conformance with those standards shall exist.

