

August 16, 2021 | Noise Study

NOISE TECHNICAL STUDY

for St. Anthony High School Athletics Project

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1. Project Description

The proposed project includes various field improvements to the 9.6-acre Athletic Complex at 4800 Clark Avenue, Long Beach, California (see Figure 1). St. Anthony High School is proposing the field improvements as part of the 20-year long-range development plan's first phase. The field improvements are summarized in Table 1. St. Anthony High School currently uses portable bleachers that seat up to 1,200 spectators. As shown in Table 1, one of the improvements would be to eliminate the use of the portable bleachers by adding permanent seating with the same 1,200 spectator capacity. At this time, details for parking have not been outlined, but it is known that St. Anthony has an agreement for off-site parking at a nearby park. Therefore, operational traffic trips would not change due to the field improvements. Figure 2 shows the site plan.

Construction would consist of five developmental phases over a 12 to 14-month period starting October of 2021. Phases include demolition, grading, site construction, building(s) construction, and final buildout and landscaping. Demolition, grading, and site construction would include the import and export of approximately 7,500 cubic yards of soil (2,500 export and 5,000 import).

1.1 EXISTING NOISE ENVIRONMENT

The project site is in a predominantly residential. The noise environment surrounding the proposed project site is influenced primarily by roadway traffic. During games and events at the existing sports field, crowd and PA speaker noise are the dominant noise sources. Existing noise during games and events at sports field was modeled using the SoundPLAN computer program. SoundPLAN uses industry-accepted propagation algorithms based on International Organization for Standardization and ÖAL-28 standards for outdoor sound propagation. The modeling calculations account for classical sound-wave divergence (spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption and ground effects. SoundPLAN also provides for other correction factors, including level increases due to reflections, source directivity, and source tonality. Noise during existing games was modeled to be up to 66 dBA Leq at residences to the east. Existing sports field noise contours are shown in Figure 3.

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Table 1 Field Improvements

Combined Football, Soccer, Lacrosse Field	
Synthetic turf field	PA system, elevated from back of grandstands
Permanent seating for 1,200 spectators (no increase in capacity from portable rental units)	Scoreboard
Press box with PA, scoreboard controls, camera platform	4-pole, 90- to 100-foot-tall LED lighting
	Stormwater system
400-Meter, 6-Lane, All-Weather Track	
Rubberized truck surface	Pole vault/high jump areas
Long/triple jump runways	Shotput/discus areas
Parking and Driveway Improvements	
Fencing	
Site Landscaping	
Team Building (locker rooms, restrooms, training, coaches, officials, multipurpose, storage, etc.)	

1.2 SENSITIVE RECEPTORS

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and outdoor recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. The project is in predominately residential area with single-family homes to the east, multi-family units to the west, and commercial uses to the northwest. To the south is the St. Cyprian Parish School and Church and the Bethany Lutheran School and Church. To the north is open lot followed by the Angelo M. Lacoboni Library.

1.3 APPLICABLE STANDARDS

1.3.1 City of Long Beach Municipal Code

1.3.1.1 EXTERIOR NOISE STANDARDS

Chapter 8.80, *Noise*, of the Long Beach Municipal Code provides regulations to control unnecessary, excessive, and annoying noise and vibration. This chapter contains exterior noise limits based on land use type. However, per Section 8.80.280, *Exemption – Entertainment Events*, the exterior noise standards do not apply to occasional outdoor gatherings, public dances, shows, and sporting and entertainment events, such as the proposed project. Therefore, to assess potential noise increases from the proposed project, the following is considered: A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. For periodic increases from implementation of the proposed project above existing conditions with existing games and events at the sports field, a threshold of 5 dBA is used.

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1.3.1.2 CONSTRUCTION NOISE

Under Section 8.80.202, *Construction Activity, Noise Regulations*, the City prohibits construction activities from 7 PM to 7:00 AM Mondays through Fridays (including federal holidays), and before 9:00 AM or after 6:00 PM on Saturdays that “produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity.” Construction is prohibited on Sundays unless a permit has been issued. The City of Long Beach does not have quantified construction noise and vibration standards. Therefore, the Federal Transit Administration (FTA) criteria of 80 dBA L_{eq} for construction noise is used and 0.20 inches/second peak particle velocity (in/sec PPV) is used for potential vibration damage.

2. Impact Analysis

2.1 CONSTRUCTION NOISE

The total duration for project construction would be approximately 12 to 14 months starting in October of 2021. Construction equipment is anticipated to include dump trucks, excavators, loaders, backhoes, dozers, rollers, concrete trucks, and cranes. Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment.

2.1.1 Construction Vehicle Noise

The transport of workers and materials to and from the construction site would incrementally increase noise levels along roadways in the vicinity of the project site. Individual construction vehicle pass-bys and haul truck trips may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, but these occurrences would generally be infrequent and short lived.

2.1.1.1 CONSTRUCTION EQUIPMENT NOISE

Each stage of construction involves different kinds of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest several pieces of equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction phase is determined by combining the L_{eq} contributions from each piece of equipment used at a given time, while accounting for the ongoing time variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment. Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since

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noise from construction equipment is intermittent and diminishes at a rate of at least 6 dB per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and/or shielding effects), the average noise levels at noise-sensitive receptors could vary considerably because mobile construction equipment would move around the site with different loads and power requirements.

Average noise levels at sensitive receptors were calculated from the acoustical center of each construction phase to the sensitive receptor property line. Table 2 summarizes the aggregate noise levels per phase at the nearest receptors. Aggregate construction noise levels were estimated using the Roadway Construction Noise Model (RCNM) with proposed equipment provided by the Lloyd Consulting Group. Modeling data can be found in Attachment A. As shown Table 2, noise levels would not exceed 80 dBA L_{eq} at the nearest noise-sensitive receptors. Therefore, construction impacts would be less than significant.

Table 2 Project Construction Noise

Construction Phase	Levels in dBA L_{eq}			
	RCNM Reference Noise Level	Single-Family Homes to west	School/Church to South	Single-Family Homes to East
<i>Distance in feet</i>	50	150	260	420
Demolition	83	73	68	64
<i>Distance in feet</i>	50	310	300	260
Grading	84	69	69	70
Site Construction	84	68	68	70
Final Buildout/Landscaping	77	61	62	63
<i>Distance in feet</i>	50	145	80	430
Building Construction	83	74	79	64
	Max Leq	74	79	64

Source: FHWA RCNM, 2006.

2.1.2 Construction Vibration

Potential vibration impacts associated with development projects are usually related to the use of heavy construction equipment during the demolition and grading phases of construction. Construction can generate varying degrees of ground vibration depending on the construction procedures and equipment. Construction equipment generates vibration that spreads through the ground and diminishes with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

For reference, a peak particle velocity of 0.2 in/sec PPV is used as the limit for non-engineered timber and masonry buildings (which would apply to the nearest residential structures) (FTA 2018). At a distance greater than 25 feet, construction-generated vibration levels at the buildings would be less than the 0.2 in/sec PPV.

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Vibration intensive equipment would be predominately used for constructing the bleachers, building construction (team locker rooms and restrooms), parking lot improvements with use of a roller, and grading. Table 3 shows vibration levels for typical construction equipment at a reference distance of 25 feet. Vibration levels at a distance greater than 25 feet would attenuate to less than 0.2 in/sec PPV. The nearest structures to the proposed building construction are single-family homes approximately 120 feet to the west. The nearest structure to the proposed parking lot improvements is the church/school building near the project southern property line and single-family homes to the west at approximately 100 feet. At this distance, construction vibration would attenuate to 0.026 in/sec PPV or less. Grading would occur throughout the sports field to install new synthetic turf. Grading would occur within approximately 25 feet of the nearest structure, which is the school/church building to the south near the property line. It is anticipated that the use of a smaller bulldozer and equipment will be used due to the need for shallow grading only. However, conservatively assuming the use of a large bulldozer, vibration levels would not exceed 0.2 in/sec at 25 feet. Therefore, impacts would be less than significant.

Table 3 Construction Vibration Levels

Construction Equipment	In/sec PPV
	RCNM Reference Noise Level at 25 feet
Vibratory Roller	0.21
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Source: FTA, 2018.	

2.1.3 Operational Vibration

There are no sources of substantial groundborne vibration associated with the project, such as rail or subways. The proposed project would not create or cause any significant vibration impacts due to project operations. This impact would be less than significant.

2.1.4 Operational Noise

2.1.4.1 TRAFFIC NOISE

As discussed above, the proposed project would not increase bleacher capacity. The project would replace the portable bleachers with permanent bleachers with the same 1,200 spectator capacity. No increase in traffic trips would occur, and therefore, no increase in traffic noise would occur. No impact would occur.

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2.1.4.2 RECREATIONAL NOISE

Implementation of the proposed project could generate periodic increases in noise levels above existing use of the sports field for games and events. As discussed above, one of the improvements would be to eliminate the use of the portable bleachers by adding permanent seating with the same 1,200 spectator capacity on the western side of the sports field. All games and events would end by 10:00 PM. A maximum of four PA speakers directed to the bleachers is proposed with estimated heights of 25 to 30 feet. Two speakers are proposed on the press box and two on poles at the back of bleachers.

The bleachers and PA noise were modeled in SoundPLAN based on the existing and proposed bleacher configuration and geometry. Speakers were modeled as individual point sources, and both sets of bleachers were modeled as area sources. SoundPLAN modeling outputs are included in Attachment A. Proposed project sports field noise contours are shown in Figure 4.

Future noise levels from a maximum-capacity games are predicted to increase hourly average noise levels by up to 3.9 dBA Leq at the closest residential property lines to the west where the existing ambient is modeled to be 58.9 dBA during existing games and up to 62.8 dBA with implementation of the proposed project.¹ As discussed above, per Section 8.80.280, *Exemption – Entertainment Events*, the exterior noise standards do not apply to occasional outdoor gatherings, public dances, shows, and sporting and entertainment events, such as the proposed project. Therefore, to assess potential noise increases from the proposed project, the following is considered: A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. For periodic increases from implementation of the proposed project above existing conditions with existing games and events at the sports field, a threshold of 5 dBA is used. Because noise increase would be up to 3.9 dBA with implementation of the proposed project and not exceed the threshold of 5 dBA, impacts from the proposed project would be less than significant.

3. References

Bies, Hansen, Howard, 2018. *Engineering Noise Control*. Fifth Edition.

City of Long Beach Municipal Code. Available:

https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TTT8HESA_CH8.80_NO

¹ Maximum capacity games, 1,200 spectators plus participants and officials would happen infrequently and consist of home football contests in the fall and occasional play-off games. It is not anticipated other events would reach full capacity, such as soccer, track, and possible lacrosse games.

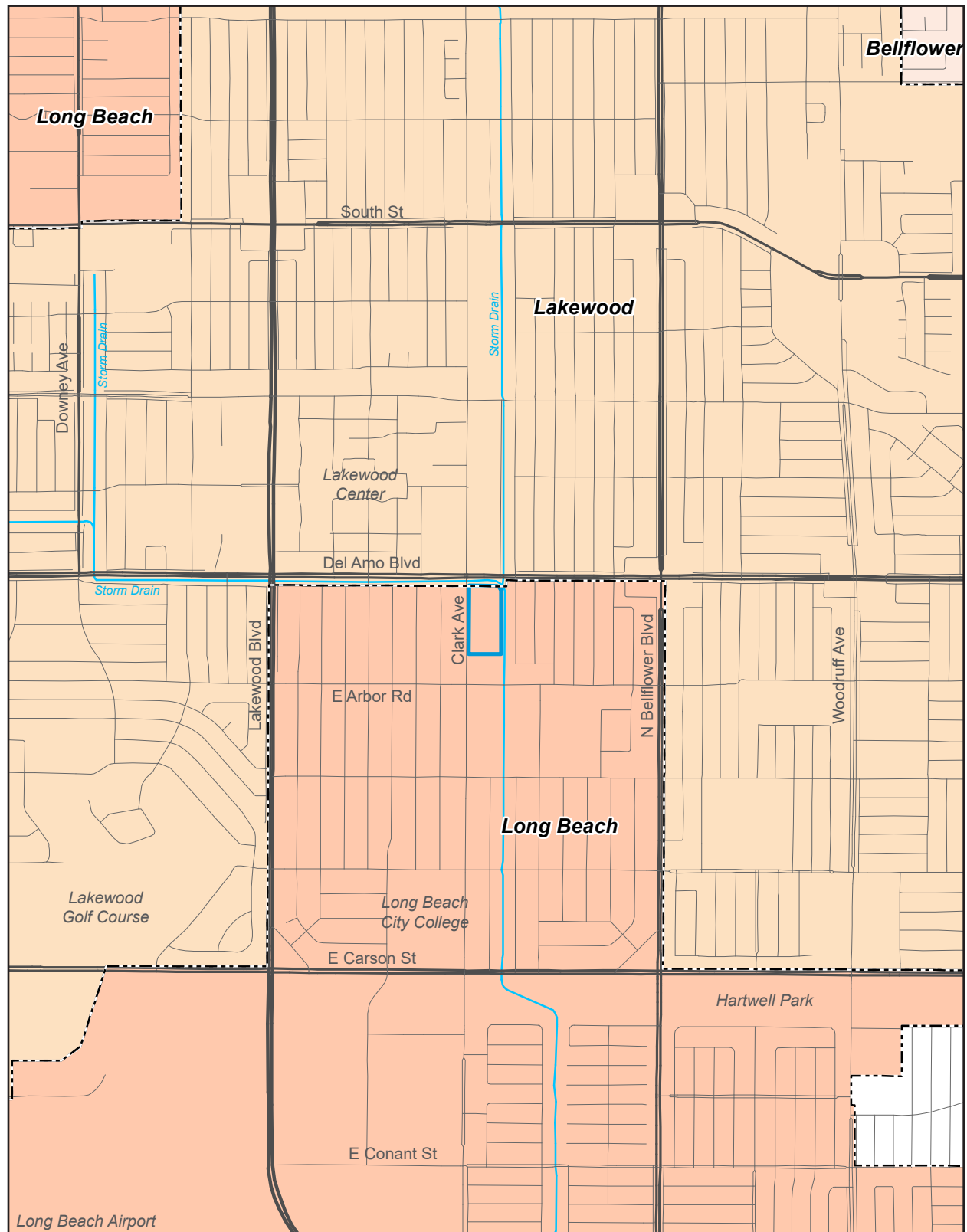
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Federal Transit Administration (FTA). 2018, September. *Transit Noise and Vibration Impact Assessment Manual*.
US Department of Transportation.

Harris, Cyril M. 1998. *Handbook of Acoustical Measurements and Noise Control*. 3rd edition. Woodbury, NY:
Acoustical Society of America.

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Public Health and Welfare with an Adequate Margin of Safety*.

Figure 1 - Project Area



— Project Boundary - - - City Boundary

Note: Unincorporated county areas are shown in white.

Source: ESRI, 2021

0 2,000
Scale (Feet)



Figure 2 - Site Plan

SURFACING KEY NOTES:

- 1. INSTALL SYNTHETIC TURF SYSTEM, SHOCK/DRAIN PAD AND PERMEABLE BASE PER DETAIL 1, SHEET C9.2.
- 2. INSTALL 6" X 12" CONCRETE CURB & NAILER AT TURF PERIMETER PER DETAIL 8, SHEET C9.2.
- 3. INSTALL NATURAL GRAY CONCRETE PAVING WITH LIGHT BROOM FINISH PER DETAIL 3, SHEET C9.2.
- 4. INSTALL GRAY VEHICULAR A.C. PAVEMENT PER DETAIL 2, SHEET C9.2.
- 5. INSTALL TRACK A.C. PAVEMENT PER DETAIL XX, SHEET XXX
- 6. INSTALL 6" X 6" CONCRETE EDGE BAND CURB PER DETAIL XX, SHEET XXX
- 7. INSTALL 6" VERTICAL CONCRETE CURB PER DETAIL XX, SHEET XXX
- 8. INSTALL 6" FLUSH CONCRETE CURB PER DETAIL XX, SHEET XXX
- 9. INSTALL 6" X 12" CONCRETE CURB AT TRACK PERIMETER PER DETAIL XX, SHEET XXX
- 10. INSTALL 6" VERTICAL CURB & GUTTER PER DETAIL 11, SHEET C9.2.
- 11. INSTALL 6" X 48" PRE-CAST CONCRETE WHEEL STOP PER DETAIL XX, SHEET X
- 12. INSTALL 6" SLOTTED DRAIN PER DETAIL 9 & 10, SHEET C9.1.
- 13. INSTALL 8' TALL TUBULAR STEEL FENCING PER DETAIL 6, SHEET C9.3.
- 14. INSTALL 6' TALL TUBULAR STEEL FENCING PER DETAIL 6, SHEET C9.3.
- 15. INSTALL 42" TUBULAR STEEL FENCE PER DETAIL 6, SHEET C9.4.
- 16. INSTALL 20" WIDE TUBULAR STEEL GATE PER DETAIL 10, SHEET C9.3.
- 17. INSTALL BIORETENTION BASIN PER DETAIL XX, SHEET XXX
- 18. INSTALL NATURAL SOD PER PLANTING PLAN
- 19. INSTALL LONG JUMP SAND CATCHERS PER DETAIL 6, SHEET C9.4.
- 20. INSTALL SHOT PUT RING & TOE BOARD PER DETAILS 3, SHEET C9.4.
- 21. INSTALL DISCUS RING PER DETAILS 2, SHEET C9.4.

SURFACING LEGEND

PERMEABLE & SYNTHETIC TURF SYSTEM.

NATURAL GRASS

NATURAL GRAY CONCRETE W/ LIGHT BRC
CONTROL
JOINT

TRACK ASPHALT PAVEMENT

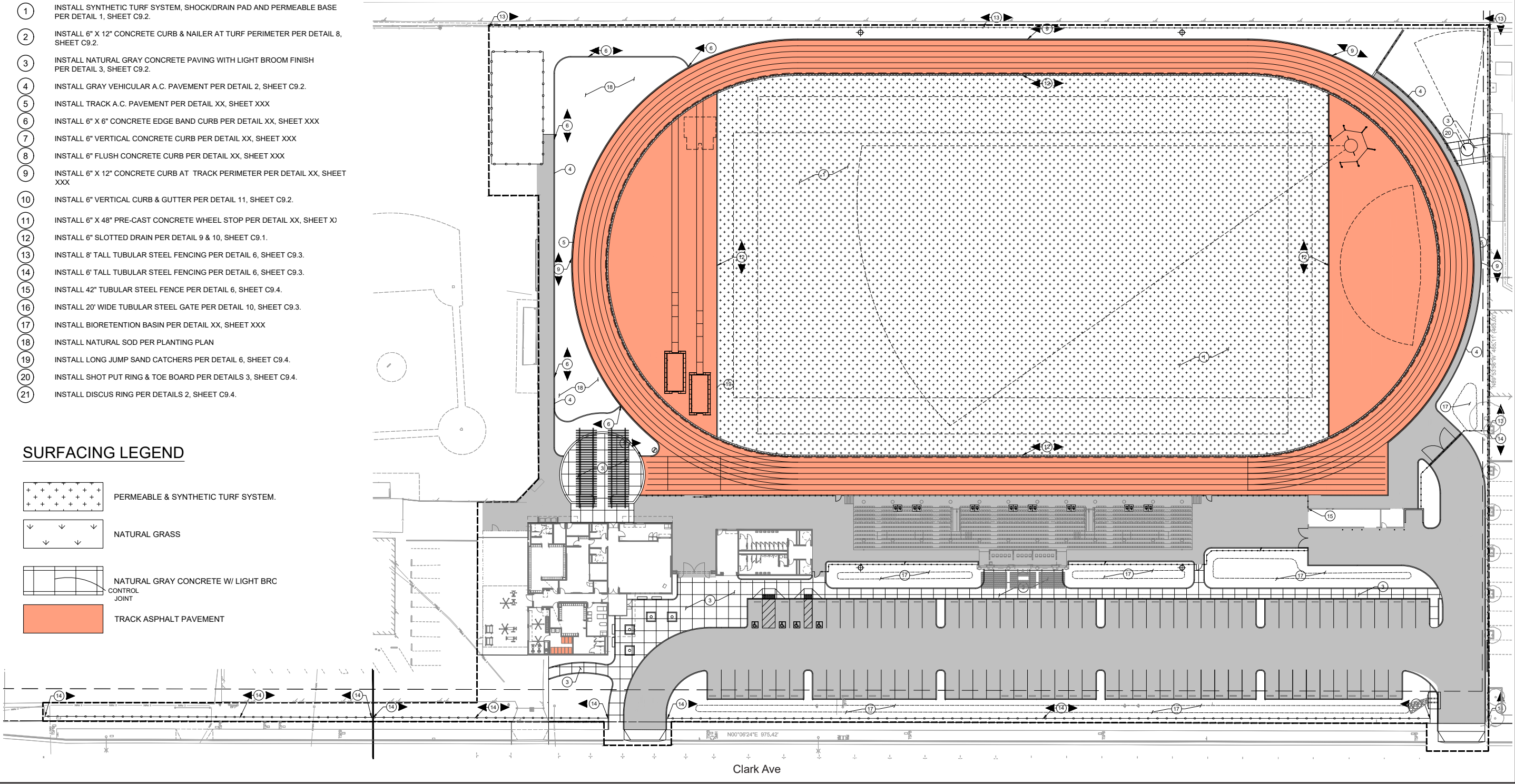
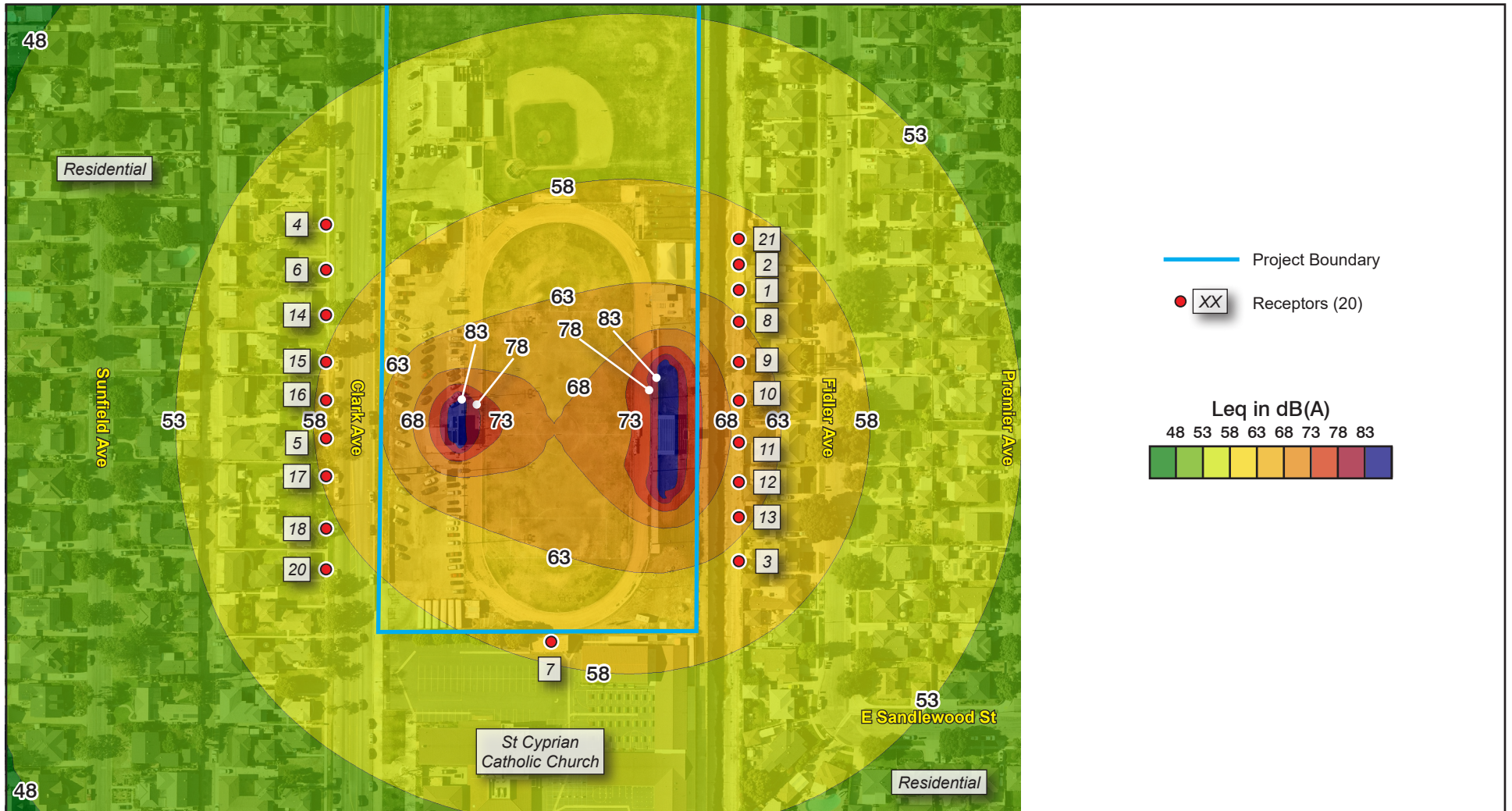


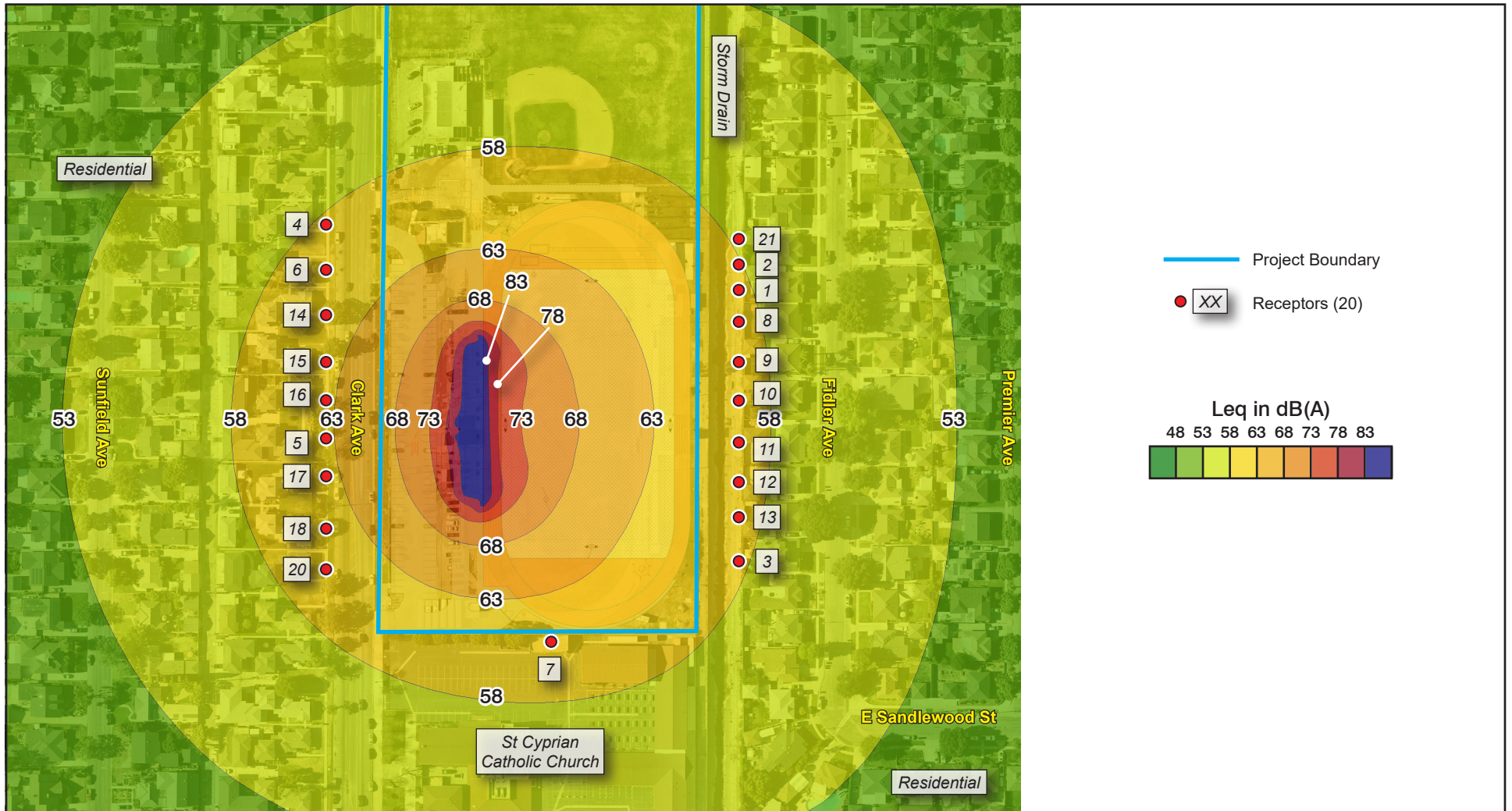
Figure 3 - Existing Sports Field Noise Contours



0 200
Scale (Feet)



Figure 4 - Proposed Project Sports Field Noise Contours



ATTACHMENT A

Noise Background

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

NOISE DESCRIPTORS

The following are brief definitions of terminology:

- » **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- » **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- » **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μ Pa).
- » **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- » **Equivalent Continuous Noise Level (Leq); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the Leq metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- » **Statistical Sound Level (Ln).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L50 level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L10 level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L90 is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”
- » **Day-Night Sound Level (Ldn or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- » **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and Ldn values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the Ldn value). As a matter of practice, Ldn and CNEL values are interchangeable and are treated as equivalent in this assessment.

- » **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

CHARACTERISTICS OF SOUND

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. The table below presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies, David A. and Colin H. Hansen. 2009. *Engineering Noise Control: Theory and Practice*. 4th ed. New York: Spon Press.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are “felt” more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people’s judgments of the “noisiness” of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- » Ambient (background) sound level
- » General nature of the existing conditions (e.g., quiet rural or busy urban)
- » Difference between the magnitude of the sound event level and the ambient condition
- » Duration of the sound event
- » Number of event occurrences and their repetitiveness
- » Time of day that the event occurs

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2 , L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These “n” values are typically used to demonstrate compliance for stationary noise sources with many cities’ noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or “penalty”) of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as “spreading loss.” For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective (“hard site”) surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in

outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, the table below shows typical noise levels from familiar sources.

Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2009, November. Technical Noise Supplement ("TeNS"). Prepared by ICF International.

LOCAL REGULATIONS AND STANDARDS

CHAPTER 8.80 - NOISE

8.80.010 - Policy.

- A. In order to control unnecessary, excessive and annoying noise and vibration in the City, it is declared to be the policy of the City to prohibit such noise and vibration generated from or by all sources as specified in this Chapter. It shall be the policy of the City to maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the City where noise levels are above acceptable values.
- B. It is determined that certain noise levels and vibrations are detrimental to the public health, welfare and safety, and are contrary to the public interest. Therefore, the City Council does ordain and declare that creating, maintaining, causing or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this Chapter is a public nuisance and shall be punishable as such.
- C. The City Council in adopting this Chapter is aware of the areas of noise control which are preempted by other jurisdictions. Enforcement of these regulations is understood by the City Council to be restricted, in addition to other limitations, by the following:
 - 1. It is not the intent of this Chapter to control aircraft noise at the Long Beach Airport. Federal law controls noise levels of aircraft in flight; and where federal preemption does not apply to aircraft on the ground, the appropriate provisions of the California Noise Law (Title 4, California Administrative Code, Subchapter 6) would be applicable to deal with this subject matter.
 - 2. Local noise control of motor vehicles or motorboats operating on public rights-of-way is preempted by State or federal laws and regulations.
 - 3. Noise in occupational environments is controlled by the California Department of Industrial Relations, whose Division of Industrial Safety enforces the 1973 California Occupational Safety and Health Act (CALOSHA).

(Ord. C-5371 § 1 (part), 1977: prior code § 4430)

8.80.020 - Definitions.

All terminology used in this Chapter, if not defined in this Section, shall have the same meaning as defined by applicable publications of the American National Standards Institute (ANSI), or its successor body.

- 1. "A-weighted sound level" means the sound pressure level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dB(A) or dBA.
- 2. "Agricultural property" means a parcel of real property which is not developed for any use other than agricultural purposes. Its size shall be construed to be a minimum of ten (10) contiguous acres.
- 3. "Ambient noise level" means the composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- 4. "Commercial area" means any area occupied by businesses which sell, rent, trade, or store goods, or which provide a service.
- 5. "Commercial purpose" means the use, operation or maintenance of any sound amplifying equipment for the purpose of advertising any business, goods, or services, or for the purpose of attracting the attention of the public, or soliciting patronage of customers to any performance, show, entertainment, exhibition,

or event, or for the purpose of demonstrating such sound equipment.

6. "Construction" means any site preparation, assembly, erection, substantial repair, alteration, or similar action, but excluding demolition.
7. "Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.
8. "Decibel (dB)" means a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) micropascals (twenty (20) micronewtons per square meter).
9. "Demolition" means any dismantling, intentional destruction or removal of structures, utilities, public or private right-of-way surfaces or similar property.
10. "Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage which demands immediate action.
11. "Emergency work" means any work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency.
12. "Fixed noise source" means a stationary device which creates sound while fixed or motionless, including, but not limited to, residential, agricultural, industrial, and commercial machinery and equipment, pumps, fans, compressors, air conditioners, and refrigeration equipment.
13. "Gross vehicle weight rating (GVWR)" means the value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors are separable, the gross combination weight rating, which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle shall be used.
14. "Impulsive sound" means sound of short duration, usually less than one (1) second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and the discharge of firearms.
15. "Industrial area" means any area occupied by land uses whose primary operation involves manufacturing, assembling, processing, or otherwise treating raw materials, semifinished products, or finished products, for packaging and distribution to either wholesale or retail markets.
16. "Intrusive noise" means that noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency and time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.
17. "Licensed" means the issuance of a formal license or a permit by a City authority; or, where no permits or licenses are issued, the sanctioning of the activity by the City as noted in the public record.
18. "Mobile noise source" means any noise source other than a fixed noise source.
19. "Motor carrier vehicle engaged in interstate commerce" means any vehicle for which regulations apply pursuant to Section 18 of the Federal Noise Control Act of 1972 (P. L. 92-574), as amended, pertaining to motor carriers engaged in interstate commerce.
20. "Motor vehicle" includes any and all self-propelled vehicles as defined in the California Motor Vehicle Code, including all on-highway type motor vehicles subject to registration under said code, and all off-highway type motor vehicles subject to identification under said code.
21. "Motorboat" means any vessel which operates on water and which is propelled by a motor, including, but not limited to, boats, barges, amphibious craft, waterski-towing devices and hovercrafts.
22. "Muffler or sound dissipative device" means a device for abating the sound of escaping gases of an

internal combustion engine.

23. "Noise" means any sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans.
24. "Noise control office" means the City agency designated by the City Manager having the lead responsibility and authority to enforce this Chapter and to grant variances.
25. "Noise control officer" means the City official appointed by the City Manager to direct the noise control office.
26. "Noise disturbance" means any sound which (a) endangers or injures the safety or health of humans or animals, or (b) annoys or disturbs a reasonable person of normal sensitivities, or (c) endangers or injures personal or real property.
27. "Noise sensitive zone" means any area designated pursuant to Section 8.80.030 for the purpose of insuring exceptional quiet.
28. "Noise source" means a disturbance-causing operation which originates from a single unit or noise generating mechanism which operates simultaneously. Example of a single noise source is the combination of motor, pump, and compressor; oil drilling rig; or a power plant with several boilers.
29. "Noise zone" means defined areas or regions of a generally consistent land use community wherein the ambient noise levels are generally similar (within a range of five (5) decibels). Typically, most sites within any given noise zone will be of comparable proximity to major noise sources.
30. "Noncommercial purpose" means the use, operation or maintenance of any sound equipment for other than a commercial purpose, including, but not limited to, philanthropic, political, patriotic and charitable purposes.
31. "Person" means any individual, association, partnership or corporation, and includes any officer, employee, department, agency or instrumentality of a State or any political subdivision of a State.
32. "Powered model vehicle" means any self-propelled airborne, waterborne, or land-borne plane, vessel or vehicle which is not designed to carry persons, including, but not limited to, any model airplane, boat, car or rocket.
33. "Public right-of-way" means any street, avenue, boulevard, highway, sidewalk or alley or similar place which is owned or controlled by a governmental entity.
34. "Public space" means any real property or structures thereon which are owned or controlled by a governmental entity.
35. "Pure tone" means any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this Chapter, a pure tone shall exist if the one-third ($1/3$) octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two (2) contiguous one-third ($1/3$) octave bands by five (5) decibels for center frequencies of five hundred (500) hertz and above and by eight (8) decibels for center frequencies between one hundred sixty (160) and four hundred (400) hertz and by fifteen (15) decibels for center frequencies less than or equal to one hundred twenty-five (125) hertz.
36. "Real property boundary" means an imaginary line along the ground surface, and its vertical extension, which separates the real property owned by one (1) person from that owned by another person, but not including intra-building real property divisions.
37. "Residential area" means any area wherein the dominant land use is devoted to maintenance, preservation, or propagation of residential dwelling units.

38. "RMS sound pressure" means the square root of the time averaged square of the sound pressure, denoted
39. "Sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.
40. "Sound amplifying equipment" means any machine or device for the amplification of the human voice, or music, or any other sound, excluding standard automobiles when used and heard only by the occupants of the vehicle in which the device is installed and, as used in this Chapter, warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.
41. "Sound level" means the weighted sound pressure level obtained by the use of a sound level meter and frequency weighting network, such as A, B or C, as specified in American National Standards Institute specifications for sound level meters (ANSI S1.4-1971 or the latest approved revision thereof). If the frequency weighting employed is not indicated, the A-weighting shall apply.
42. "Sound level meter" means an instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement of sound levels, which satisfies the requirements pertinent for type S2A meters in American National Standards Institute specifications for sound level meters, S1.4-1971, or the most recent revision thereof.
43. "Sound pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given point in space, as produced by sound energy.
44. "Sound pressure level" means twenty (20) times the logarithm to the base ten of the ratio of the RMS sound pressure to the reference pressure of twenty (20) micropascals ($20 \times 10^{-6} \text{ N/M}^2$). The sound pressure level is denoted L_p or SPL and is expressed in decibels.
45. "Sound truck" means any motor vehicle or any other vehicle, regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any sound amplifying equipment.
46. "Vibration" means mechanical motion of the earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. For purposes of this Chapter, the magnitude of the vibration shall be stated as the acceleration in "g" units (1 g is equal to 32.2 ft/sec^2 , $9.81 \text{ meters/sec}^2$).
47. "Weekday" means any day, Monday through Friday, which is not a federal holiday.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.1)

8.80.030 - Administration and enforcement.

The noise control program established by this Chapter shall be administered by the noise control office as designated by the City Manager. An official within the noise control office shall be appointed as the Noise Control Officer and shall be a person with sufficient knowledge of environmental acoustics to enforce noise regulations.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.2 (a))

8.80.040 - Noise control office—Powers.

In order to implement and enforce this Chapter and for the general purpose of noise abatement and control, the noise control office shall have, in addition to any other authority vested in it, the power to:

- A. Studies. Conduct, or cause to be conducted, studies, research, and monitoring related to noise, including joint investigation with public or private agencies, and make application for and accept grants;
- B. Education.
 - 1. Conduct programs of public education regarding:
 - a. The cause and effect of noise and general methods of abatement and control of noise, and
 - b. The actions prohibited by this Chapter and the procedures for reporting violations, and
 - 2. Encourage the participation of public interest groups in related public information efforts,
 - 3. Provide for training of field inspectors and other technical personnel concerned with noise abatement (in conformance with standards for technical qualifications as established by the State Office of Noise Control).
- C. Coordination and Cooperation.
 - 1. Coordinate the noise control activities of all municipal departments,
 - 2. Cooperate where practicable with all appropriate State and federal agencies,
 - 3. Cooperate or combine where practicable with appropriate County and municipal agencies,
 - 4. Advise on the availability of low noise emission products for replacement or retrofit of existing or planned City owned or operated equipment,
 - 5. Enter into contract with the approval of the City Manager for the provision of technical and enforcement services;
- D. Actions of Other Departments. Request any other department or agency responsible for a proposed or final standard, regulation or similar action to consult on the advisability of revising the action, if there is reason to believe that the action is not consistent with this Chapter;
- E. Public and Private Projects. On all public and private projects which are likely to cause sound in violation of this Chapter and which are subject to mandatory review or approval by other departments or agencies, or which under the environmental review process are judged to be likely to violate these regulations:
 - 1. Review to determine compliance with the intent and provisions of this Chapter,
 - 2. Recommend sound analysis which identify existing and projected noise sources and associated sound levels,
 - 3. Recommend usage of adequate measures to avoid violation of any provision of this Chapter;
- F. Inspections. Upon presentation of proper credentials, enter and/or inspect any private property, place, report, or records at any time when granted permission by the owner, or by some other person with apparent authority to act for the owner. When permission is refused or cannot be obtained, a search or inspection warrant may be obtained from a court of competent jurisdiction upon showing of probable cause to believe that a violation of this Chapter may exist. Such inspection may include administration of any necessary tests;
- G. Product Performance Standard Recommendations. Develop and recommend (to the City Council or other City agency) provision regulating the use and operation of any product, including the description of maximum sound emission levels of such product, but not in such a manner as to conflict with federal or State new product regulations;
- H. Noise Sensitive Zone Recommendation and Enforcement. Prepare recommendations to be approved by the City Council, for the designation of noise sensitive zones which contain noise sensitive activities and to enforce the provisions of Sections 8.80.150 through 8.80.180 on City Council designated noise

sensitive zones;

- I. Noise Zone Definition. Prepare recommendations, based upon noise survey data and analytical studies, to be approved by the City Council, for the designation of zones of similar ambient environmental noise within regions of generally consistent land use. These zones shall be identified in terms of their day and nighttime ambient noise levels by the classifications given in Section 8.80.160, Table A;
- J. Zoning Changes. Prior to the approval of any zoning change:
 - 1. Review the noise impact of the zoning change by identifying existing and projected noise sources and the associated sound levels,
 - 2. Require usage of adequate measures on noise sources identified in subdivision 1 of this subsection which will be in violation of any provision of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.2 (b))

8.80.050 - Noise Control Officer—Duties.

In order to effectively implement and enforce this Chapter, the Noise Control Officer shall, within a reasonable time:

- A. Investigate and Pursue Violations. Investigate and pursue possible violations of this Chapter;
- B. Delegation of Authority. Delegate functions, where appropriate under this Chapter, to personnel within the noise control office and to other departments, subject to the approval of the City Manager;
- C. Community Noise Element.
 - 1. Assist in the preparation or revision thereof of the City noise element of the general plan as required by Government Code Section 65302 (g), following guidelines set forth by the State Office of Noise Control,
 - 2. Assist in or review the total transportation planning of the City, including planning for new roads and highways, bus routes, airports, and other systems for public transportation, to insure that proper consideration is taken with regard to the impact of sound levels and that the policies set forth in the noise element are adhered to,
 - 3. Provide ongoing assistance to local agencies in determining possible mitigating measures for current or future noise problems;
- D. Airport Noise Exposure. Assist the department of aeronautics in developing a plan for noise compatible land use in the vicinity of the Long Beach Airport and maintain consistency with the provisions and policies of the noise element of the general plan;
- E. State and Federal Laws and Regulations.
 - 1. Prepare and publish with the approval of the City Council a list of those products manufactured to meet specified noise emission limits under federal, State or community law for which tampering enforcement will be conducted, and
 - 2. Make recommendations for modification or amendments to this Chapter to insure consistency with all State and federal laws and regulations;
- F. Administer Grants, Funds and Gifts. Administer noise program grants, funds and gifts from public and private sources, including the State and federal governments;
- G. Monitoring Responsibilities. Notwithstanding the preemption by federal and State agencies of the enforcement powers over certain activities, such as those at the Long Beach Airport and at the Long

Beach Marine Stadium, the Noise Control Officer shall monitor noise generated by such preempted activities and report any violations of State or federal regulations to the appropriate enforcement agencies and to the City Council.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.2 (c))

8.80.060 - City departments—Policy conformance.

All departments shall, to the fullest extent consistent with their authorities under other ordinances administered by them, carry out their programs in such a manner as to further the policies stated in Section 8.80.010.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (a))

8.80.070 - City departments—Cooperation.

All departments shall cooperate with the noise control office to the fullest extent in enforcing the noise regulations of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (b))

8.80.080 - City departments—Legal compliance.

All departments engaged in any activities which result or may result in the emission of noise, shall comply with federal and State laws and regulations, as well as the provisions of this Chapter, respecting the control and abatement of noise to the same extent that any person is subject to such laws and regulations.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (c))

8.80.090 - City departments—Project approval.

Each department whose duty it is to review and approve new projects or changes to existing projects that result, or may result, in the emission of noise shall consult with the noise control office prior to any such approval.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (d))

8.80.100 - City departments—Review of actions.

If at any time the Noise Control Officer has reason to believe that a standard, regulation, or action or proposed standard, regulation or action of any department respecting noise does not conform to the intent of Section 8.80.010, he may request such department to review and report to him on the advisability of revising such standard or regulation to conform.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (e))

8.80.110 - City departments—Contract compliance.

Any written agreement, purchase order, or instrument whereby the City is committed to the expenditure of funds in return for work, labor, services, supplies, equipment, materials, or any combination of the foregoing, shall not be entered into unless such agreement, purchase order, or instrument contains provisions requiring that any equipment or activities which are subject to the provisions of this Chapter will be operated, constructed, conducted, or manufactured without causing violation of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (f))

8.80.120 - City departments—Low noise emission product use.

Any product which has been certified by the Administrator of the United States Environmental Protection Agency pursuant to Section 15 of the Noise Control Act of 1972 as a low noise emission product and which is determined to be suitable for use as a substitute shall be used in preference to any other product where economically feasible.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.3 (g))

8.80.130 - Disturbing noises prohibited.

- A. Notwithstanding any other provision of this Chapter, and in addition thereto, it is unlawful for any person to willfully make or continue, or cause to be made or continued, a loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.
- B. The standards which shall be considered in determining whether a violation of the provisions of this Section exist shall include, but not be limited to the following:
 - 1. The sound level of the objectionable noise;
 - 2. The sound level of the ambient noise;
 - 3. The proximity of the noise to residential sleeping facilities;
 - 4. The nature and zoning of the area within which the noise emanates;
 - 5. The density of the inhabitation of the area within which the noise emanates;
 - 6. The time of day or night the noise occurs;
 - 7. The duration of the noise and its tonal, informational or musical content;
 - 8. Whether the noise is continuous, recurrent, or intermittent;
 - 9. Whether the noise is produced by a commercial or noncommercial activity.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.4)

8.80.140 - Noise measurement procedure.

The measurement procedure presented in this Section assumes that personnel performing the noise measurements have been trained in the use of the instruments and in interpretation of measured data. Upon receipt of a complaint from a citizen, the Noise Control Officer, or his agent, equipped with sound level measurement equipment satisfying the requirements specified in Section 8.80.020, shall investigate the complaint. The investigation shall consist of a measurement and the gathering of data to adequately define the noise problem as specified in the California Office of Noise Control Model Enforcement Manual, and shall include the following:

- A. Nonacoustic Data.
 - 1. Type of noise source;
 - 2. Location of noise source relative to complainant's property;
 - 3. Time period during which noise source is considered by complainant to be intrusive;
 - 4. Total duration of noise produced by noise source;
 - 5. Date and time of noise measurement survey.

- B. Procedure. Utilizing the A weighting scale of the sound level meter and the slow meter response, the noise level shall be measured at a position or positions along the complainant's property line closest to the noise source or at the boundary line where the noise level is at a maximum. In general, the microphone shall be located five feet above the ground; ten feet (10') or more from the nearest reflective surface, where possible. However, in those cases where elevation is deemed appropriate, the latter shall be utilized. If the noise complaint is related to interior noise, noise measurements shall be made at a point at least four feet (4') from the wall, ceiling or floor nearest the windows in the normal seasonal configuration. Calibration of the instrument being used shall be performed immediately prior to and following the recording of any noise data utilizing the acoustic calibrator.

(Ord. C-5371 § 1 (part), 1977; prior code § 4430.5)

8.80.150 - Exterior noise limits—Sound levels by receiving land use district.

- A. The noise standards for the various land use districts identified by the noise control office as presented in Table A in Section 8.80.160 shall, unless otherwise specifically indicated, apply to all such property within a designated district.
- B. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:
1. The noise standard for that land use district as specified in Table A in Section 8.80.160 for a cumulative period of more than thirty (30) minutes in any hour; or
 2. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or
 3. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or
 4. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or
 5. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.
- C. If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Subsection B of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- D. If the measurement location is on a boundary between two (2) different districts, the noise level limit applicable shall be the arithmetic mean of the two (2) districts.
- E. If possible, the ambient noise shall be measured at the same location along the property line utilized in Subsection B of this Section, with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the offending noise from the source is inaudible. If the difference between the noise levels with noise source operating and not operating is six (6) decibels or greater, then the noise measurement of the alleged source can be considered valid with a small correction applied to account for the contribution of the ambient noise. The correction is to be applied in accordance with data shown in Table B in Section 8.80.160.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.6 (a))

8.80.160 - Exterior noise limits—Correction for character of sound.

In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth in Table A shall be reduced by five (5) decibels.

Table A
EXTERIOR NOISE LIMITS

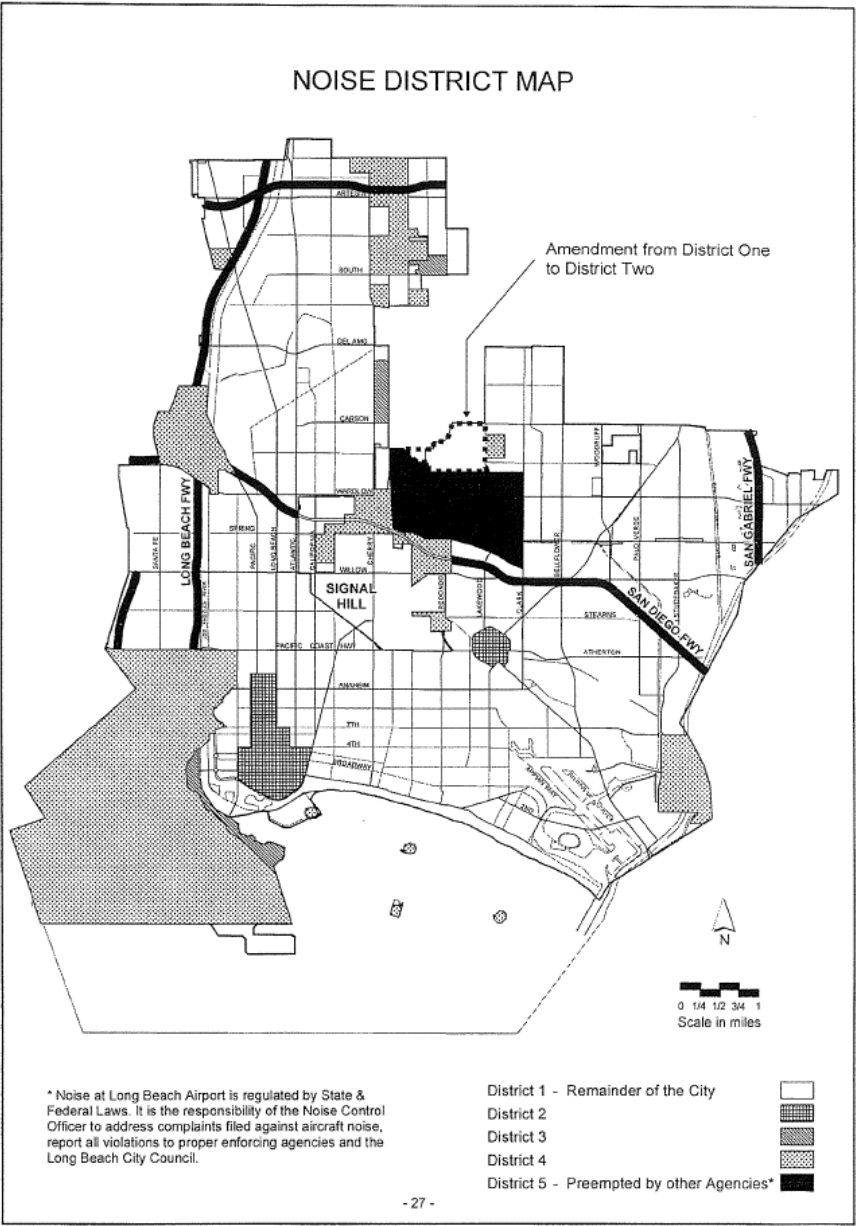
Receiving Land Use District*	Time Period	Noise Level** (dBA)
District One	Night:	
	10:00 p.m.—7:00 a.m.	45
	Day:	
	7:00 a.m.—10:00 p.m.	50
District Two	Night:	
	10:00 p.m.—7:00 a.m.	55
	Day:	
	7:00 a.m.—10:00 p.m.	60
District Three	Any time	65
District Four	Any time	70
District Five	Regulated by other agencies and laws	
*District One:	Predominantly residential with other land use types also present	
District Two:	Predominantly commercial with other land use types also present	
Districts Three and Four:	Predominantly industrial with other land types use also present	

District Five:	Airport, freeways and waterways regulated by other agencies	
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** Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

Table B
BACKGROUND NOISE CORRECTION

Difference between total noise and background noise alone (decibels)	Amount to be subtracted from
6—8	1
9—10	.5



(ORD-09-0030, § 1(exh. A), 2009; Ord. C-7959 § 1 (exh. A), 2004; Ord. C-5371 § 1 (part), 1977: prior code § 4430.6(b))

8.80.170 - Interior noise limits—Maximum sound levels.

- A. The interior noise standards for various land use districts as presented in Table C shall apply, unless otherwise specifically indicated, within structures located in designated zones with windows in their normal seasonal configuration.

TABLE C

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 p.m.—7:00 a.m.	35
		7:00 a.m.—10:00 p.m.	45

All	School	7:00 a.m.—10:00 p.m. (While school is in session)	45
Hospital, designated quiet zones and noise sensitive zones		Any time	40

- B. No person shall operate, or cause to be operated, any source of sound indoors at any location within the incorporated limits of the City or allow the creation of any indoor noise which causes the noise level when measured inside the receiving dwelling unit to exceed:
1. The noise standard for that land use district as specified in Table C for a cumulative period of more than five (5) minutes in any hour; or
 2. The noise standard plus five decibels (5 dB) for a cumulative period of more than one (1) minute in any hour; or
 3. The noise standard plus ten decibels (10 dB) or the maximum measured ambient, for any period of time.
- C. If the measured indoor ambient level exceeds that permissible within any of the first two (2) noise limit categories in this Section, the allowable noise exposure standard shall be increased in five decibel (5 dB) increments in each category as appropriate to reflect the indoor ambient noise level. In the event the indoor ambient noise level exceeds the third noise limit category, the maximum allowable indoor noise level under said category shall be increased to reflect the maximum indoor ambient noise level.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.7(a))

8.80.180 - Interior noise limits—Correction for character of sound.

In the event the alleged offensive noise contains a steady audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying information content, the standard limits set forth in Table C in Section 8.80.170 shall be reduced by five decibels (5 dB).

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.7(b))

8.80.190 - Noise disturbances—Prohibited.

No person shall unnecessarily make, continue or cause to be made or continued, any noise disturbance.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.8(a))

8.80.200 - Noise disturbances—Acts specified.

The following acts, and the causing or permitting thereof, are declared to be in violation of this Chapter:

- A. Radios, television sets, musical instruments and similar devices. Operating, playing or permitting the operation or playing of any radio, television set, phonograph, drum, musical instrument, or similar device

which produces or reproduces sound:

1. Between the hours of ten p.m. and seven a.m. the following day in such a manner as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Sections 8.80.150 or 8.80.170 except for activities for which a variance has been issued by the noise control office,
 2. In such a manner as to exceed the levels set forth in Table A in Section 8.80.160, measured at a distance of at least fifty feet (50') (fifteen (15) meters) from such device operating on a public right-of-way or public space;
- B. Loudspeakers (amplified sound). Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device between the hours of ten p.m. and seven a.m. the following day, such that the sound therefrom creates a noise disturbance across a residential real property line, or at any time violates the provisions of Sections 8.80.150 or 8.80.170, except for any noncommercial public speaking, public assembly or other activity for which a variance has been issued by the noise control office;
- C. Street sales. Offering for sale, selling anything or advertising by shouting or outcry within any residential or commercial area or noise sensitive zone of the City except by variance issued by the noise control office. The provisions of this subsection shall not be construed to prohibit the selling by outcry of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses or other similar licensed public entertainment events;
- D. Animals and birds. Owning, possessing or harboring any animal or bird which frequently or for continued duration howls, barks, meows, squawks, or makes other sounds which create a noise disturbance across a residential or commercial real property line or within a noise sensitive zone. This provision shall not apply to public zoos;
- E. Loading and unloading. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ten p.m. and seven a.m. the following day in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of Sections 8.80.150 and 8.80.170;
- F. Repealed;
- G. Vibration. Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (150') (forty-six (46) meters) from the source if on a public space or public right-of-way. For the purposes of this subsection, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be .001 g's in the frequency range 0—30 hertz and .003 g's in the frequency range between thirty and one hundred hertz;
- H. Explosives, firearms and similar devices. Using or firing explosives, firearms, firecrackers or similar devices such that the sound therefrom creates a noise disturbance across a real property line, or within a noise sensitive zone, public space or public right-of-way, without first obtaining a variance issued by the noise control office or other appropriate regulatory agency;
- I. Powered model vehicles. Operating or permitting the operation of powered model vehicles:
1. Between the hours of seven p.m. and seven a.m. the following day so as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Sections 8.80.150 or 8.80.170,

2. In such a manner as to exceed the levels set forth in Table A in Section 8.80.160 measured at a distance of one hundred feet (100') (thirty (30) meters) from any point on the path of a vehicle operating on public space or way;
- J. Stationary nonemergency signaling devices.
1. Sounding or permitting the sounding of any electronically amplified signal from any stationary bell, chime, siren, whistle, or similar device, intended primarily for nonemergency purposes, from any place, for more than ten (10) seconds in any hourly period,
 2. Houses of religious worship and chimes in the civic center shall be exempt from the operation of this provision,
 3. Sound sources covered by this provision and not exempted under Subsection 8.80.200.J.2 of this Section may be exempted by a variance issued by the noise control office;
- K. Emergency signaling devices.
1. The intentional sounding or permitting the sounding outdoors of any fire, burglar or civil defense alarm, siren, whistle or similar stationary emergency signaling device, except for emergency purposes or for testing, as provided in Subsection 8.80.200.K.2 of this Section,
 2. a. Testing of a stationary emergency signaling device shall not occur before seven a.m. or after seven p.m. Any such testing shall only use the minimum cycle test time. In no case shall such test time exceed ten (10) seconds,
b. Testing of the complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device shall not occur more than once in each calendar month. Such testing shall not occur before seven a.m. or after ten p.m. The time limit specified in Subsection 8.80.200.K.2.a of this Section shall not apply to such complete system testing,
 3. Sounding or permitting the sounding of any exterior burglar or fire alarm unless such alarm is automatically terminated within fifteen (15) minutes of activation;
- L. Noise sensitive zones.
1. Creating or causing the creation of any sound within any noise sensitive zone, so as to exceed the specified land use noise standards set forth in Sections 8.80.150 and 8.80.170, or
 2. Creating or causing the creation of any sound within or adjacent to any noise sensitive zone containing a hospital, nursing home, school, court or other designated use so as to interfere with the functions of such activity or annoy the patients or participants of such activity;
- M. Domestic power tools.
1. Operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between ten p.m. and seven a.m. the following day so as to create a noise disturbance across a residential or commercial real property line,
 2. Any motor, machinery, pump, etc., shall be sufficiently enclosed or muffled and maintained so as not to create a noise disturbance,
 3. Operating leaf blowers, consisting of portable power equipment used in any landscape maintenance, construction, property repair or property maintenance for the purpose of blowing, dispersing or redistributing dust, dirt, leaves, grass clippings, cuttings, or trimmings from plants, trees or other debris is unlawful if operated within any residential area or in any nonresidential area within four hundred feet (400') of any residential area in the City between the hours after eight p.m.

and before eight a.m. Monday through Friday, after five p.m. and before nine a.m. on Saturdays, and after five p.m. and before eleven a.m. on Sundays and legal holidays. Notwithstanding the provisions of Section 8.80.380, violations of this Subsection 8.80.200.M.3 shall be infractions except as specifically provided in this Section. The first violation in any one (1) year period shall be subject to a fine of fifty dollars (\$50.00); a second violation in any one (1) year period shall be subject to a fine of seventy-five dollars (\$75.00); a third violation in any one (1) year period shall be subject to a fine of one hundred dollars (\$100.00). A fourth or subsequent violation of this Subsection in any one (1) year period may be filed as a misdemeanor. Notwithstanding the provisions of any other Section in this Chapter, the provisions of this subsection may be enforced by a Police Officer;

- N. Air-conditioning or air refrigerating equipment. Operating or permitting the operation of any air-conditioning or air refrigerating equipment in such a manner as to exceed any of the following sound levels measured as specified in the American Society of Heating, Refrigeration and Air Conditioning Engineers Code of Recommended Practices:

Measurement Location	Units Installed Before 1-1-80 dB (A)	Units Installed On Or After 1-1-80 dB (A)
Any point on neighboring property line, five feet above grade level, no closer than three feet from any wall	60	55
Center of neighboring patio five feet above grade level, no closer than three feet from any wall	55	50
Outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from any other surface	55	50

In case of conflict, the interior noise standards as specified in Section 8.80.170 shall nonetheless apply;

- O. Places of public entertainment. Operating or permitting to be operated any loudspeaker or other source of sound in any place of public entertainment that exceeds the levels shown in Table D at any point normally occupied by a customer, without a conspicuous and legible sign stating

"WARNING, SOUND LEVELS WITHIN MAY CAUSE PERMANENT HEARING IMPAIRMENT."

Table D
MAXIMUM LEVELS ALLOWED IN PLACES
OF PUBLIC ENTERTAINMENT

Duration Per Day Continuous Hours	Noise Level dB (A)
-----------------------------------	--------------------

8	85
6	86
4	88
3	89
2	91
1 ½	92
1	94
½	97
¼ or less	100

P. Tampering. The following acts or the causing thereof are prohibited:

1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any noise control device or element of design or noise label of any product identified under Subsection 8.80.040.G and Subsection 8.80.050.C. The Noise Control Officer may, by regulation, list those acts which constitute violation of this provision,
2. The use of a product, identified under Subsection 8.80.040.G and Subsection 8.80.050.C, which has had a noise control device or element of design or noise label removed or rendered inoperative with knowledge that such action has occurred.

(Ord. C-7745 § 1, 2001; Ord. C-7175 § 1, 1994; Ord. C-6474 § 2, 1988; Ord. C-6036 § 1, 1984; Ord. C-5371 § 1 (part), 1977; prior code § 4430.8(b))

8.80.202 - Construction activity—Noise regulations.

The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.

- A. Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. and seven a.m. the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.
- B. Saturdays. No person shall operate or permit the operation of any tools or equipment used for

construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of seven p.m. on Friday and nine a.m. on Saturday and after six p.m. on Saturday, except for emergency work authorized by the Building Official.

- C. Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.
- D. Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.
- E. Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between nine a.m. and six p.m., and it shall designate the specific dates when it is allowed.
- F. Enforcement. Notwithstanding the provisions of Sections 8.80.370 and 8.80.380, this Section may be enforced by a Police Officer.

Any person who violates any provision of this Section is guilty of a misdemeanor and shall be fined in an amount not to exceed five hundred dollars (\$500.00), or be imprisoned for a period not to exceed one hundred eighty (180) days, or by both such fine and imprisonment. Each day that a violation occurs shall constitute a separate offense and shall be punishable as such.

Whenever an employee is prosecuted for a violation of this noise control ordinance, the court shall, at the request of the employee, take appropriate action to make the landowner, construction company owner, contractor, subcontractor or employer a codefendant.

(Ord. C-6488 § 1, 1988; Ord. C-6474 § 1, 1988)

8.80.210 - Refuse collection vehicles.

No person shall collect refuse with a refuse collection vehicle between the hours of seven p.m. and seven a.m. the following day in a residential area or noise sensitive zone.

(Ord. C-5371 § 1 (part), 1981: prior code § 4430.9(a))

8.80.220 - Motor vehicle horns.

It is unlawful for any person within the City to sound a vehicular horn within any residential zone except as a warning signal, as provided in the Vehicle Code of the State.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(b))

8.80.230 - Recreational motorized vehicles operating off the public right-of-way.

No person shall operate or cause to be operated any recreational motorized vehicle off a public right-of-way in such a manner that the sound level emitted therefrom violates the provisions of Sections 8.80.150 and 8.80.170. This Section shall apply to all recreational motorized vehicles, whether or not duly licensed and registered, including, but not limited to, commercial or noncommercial racing vehicles, motorcycles, go-carts, amphibious craft, campers, and dune buggies, but not including motorboats.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(c))

8.80.240 - Vehicle, motorboat or aircraft repair and testing.

- A. Repairing, rebuilding, modifying or testing any motor vehicle, motorboat or aircraft in such a manner as to create a noise disturbance across a residential real property line, or at any time to violate the provisions of Sections 8.80.150 or 8.80.170 shall not be permitted except where said activities are directly related to officially sanctioned events.
- B. This provision shall not apply to aircraft within the airport property or within any other aviation-related property abutting it.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.9(d))

8.80.250 - Exemption—Emergencies.

The provisions of this Chapter shall not apply to:

- A. The emission of sound for the purpose of alerting persons to the existence of an emergency; or
- B. The emission of sound in the performance of emergency work.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(a))

8.80.260 - Exemption—Oil and gas wells.

The provisions of this Chapter shall not apply to:

- A. Normal well servicing, remedial or maintenance work performed within an existing well which does not involve drilling or redrilling and which is restricted to the hours between seven a.m. and seven p.m., exclusive of weekends and holidays, in residential areas;
- B. Any drilling or redrilling work which is done in full compliance with Subsection 8.80.040.E and Sections 8.80.060 through 8.80.120, and with the soundproofing and all other requirements of Section 12.32.030.

(Ord. C-5576 § 1, 1980; Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(b))

8.80.270 - Exemption—Warning devices.

Warning devices necessary for the protection of public safety as, for example, police, fire and ambulance sirens and train horns shall be exempted from the provisions of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(c))

8.80.280 - Exemption—Entertainment events.

The provisions of this Chapter shall not apply to occasional outdoor or indoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a permit or license or other entitlement issued by the City relative to the staging of said events.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (d))

8.80.290 - Exemption—From exterior noise standards.

The provisions of Section 8.80.150 shall not apply to activities covered by the following Sections:

- A. Section 8.80.200 C, street sales;
- B. Section 8.80.200 D, animals and birds;
- C. Section 8.80.200 J, stationary nonemergency signaling devices;
- D. Section 8.80.200 K, emergency signaling devices;
- E. Section 8.80.200 M, domestic power tools;
- F. Section 8.80.200 N, air conditioning or air refrigerating equipment; and
- G. Section 8.80.210, refuse collection vehicles.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (e))

8.80.300 - Abatement of nonconforming industrial noise sources.

- A. Intent. It is the intent of this Section to recognize that the eventual abatement, as expeditiously and as fairly as possible, of existing noise sources that are not in conformity with the provisions of this Chapter is as important as the prohibition of new noise sources that would violate the provisions of this Chapter. It is the intent of this Section that any abatement of nonconforming industrial noise sources shall be effected so as to avoid any undue hardship.
- B. Abatement. All existing nonconforming industrial noise sources shall be granted an amortization period of ten (10) years from the effective date of this Chapter to bring their existing facilities into compliance with this Chapter; provided, that:
 - 1. They are located in industrial districts delineated in the City zoning ordinance or are located in accordance with a valid special use permit at the time of adoption of this Chapter;
 - 2. They are not changed to another industrial use during the amortization period;
 - 3. They are not altered so as to increase or intensify their noise generation;
 - 4. If they are structurally expanded during the amortization period, the new portion must immediately meet the standards of this Chapter;
 - 5. If they should be rebuilt after damage or destruction of more than fifty percent (50%) of the preexisting value, they must be rebuilt in such a manner as to immediately meet the standards of this Chapter.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (f))

8.80.310 - Exemption—Federal or State preempted activities.

The provisions of this Chapter shall not apply to any other activity to the extent regulation thereof has been preempted by State or federal law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10(g))

8.80.320 - Conflicting regulations.

- A. These regulations are not intended to abrogate or impair the provisions of any other section of this Code which is not in conflict with the provisions of this Chapter. However, where these regulations are more restrictive than those of other laws, regulations or covenants, these regulations shall control.
- B. Upon written request, the noise control office is authorized to issue official interpretations of this Chapter without public hearing.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (h))

8.80.330 - Exemption—Public health, welfare and safety activities.

The provisions of this Chapter shall not apply to construction maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public and to protect the public health, welfare and safety, including, but not limited to, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, vacuuming catchbasins, repairing of damaged poles, removal of abandoned vehicles, repairing of water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, sidewalks, etc.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.10 (i))

8.80.340 - Variance—Exemption from regulations.

- A. The Noise Control Officer is authorized to grant variances for exemption from any provision of this Chapter, subject to limitations as to area, noise levels, time limits, and other terms and conditions as the Noise Control Officer determines are appropriate to protect public health, safety and welfare from the noise emanating therefrom. This Section shall in no way affect the obligation to obtain any permit or license required by law for such activities.
- B. Any person seeking a variance shall file an application with the noise control office. The application shall contain information which demonstrates that bringing the source of sound or activity for which the variance is sought into compliance with this Chapter would create an unreasonable hardship on the applicant, on the community, or on other persons. The application shall be accompanied by a fee in the amount set by resolution of the City Council. A separate application shall be filed for each noise source; provided, however, that several fixed sources on a single property may be combined into one (1) application. Notice of an application for a variance shall be published according to rules established by the noise control office; all residents whom the Noise Control Officer determines may be adversely affected by the noise shall be notified. Any individual who claims to be adversely affected by the issuance of the variance may file a statement with the noise control office containing any information to support his claim. If at any time the Noise Control Officer finds that a sufficient controversy exists regarding an application, a public hearing will be held.
- C. In determining whether to grant or deny the application, the Noise Control Officer shall balance the hardship on the applicant, the community, or other persons by not granting the variance against the adverse impact on the health, safety and welfare of persons affected, the adverse impact on property affected, and any other adverse impact by granting the variance. Applicants for variances and persons contesting variances may be

required to submit such information as the noise control office may reasonably require. In granting or denying an application, the Noise Control Officer shall keep a public record of the decision and the reasons for denying or granting the variance.

- D. A variance shall be granted by written notice to the applicant containing all necessary conditions, including a time limit on the permitted activity. The variance shall not become effective until all conditions are agreed to by the applicant. Noncompliance with any condition of the variance shall terminate the variance.
- E. The term of a variance may not exceed three hundred sixty-five (365) days from the date of issuance. An application for extension of time limits specified in a variance or for modification of other substantial conditions shall be treated as an application for a new variance.
- F. The Noise Control Officer will issue guidelines defining the procedures to be followed in applying for a variance and the criteria to be considered in deciding whether to grant a variance.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(a))

8.80.350 - Variance—Time to comply.

Within ninety (90) days following the effective date of this Chapter, the owner of any commercial or industrial source of sound may apply to the noise control office for a time variance to comply with the provisions of this Chapter. The Noise Control Officer shall have the authority, consistent with these Sections 8.80.340 through 8.80.360, to grant a time variance (not to exceed one hundred eighty (180) days from the effective date of this Chapter). The same procedures and considerations by the Noise Control Officer as provided in Section 8.80.340 shall likewise apply.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(b))

8.80.360 - Variance—Appeal to decision.

Within ten (10) days after notice by the Noise Control Officer or denial or conditional approval of a variance, or within ten (10) days after the effective date of the revocation of a variance by the Noise Control Officer, the affected person may appeal to the City Council, in writing. The City Council, after notice and a public hearing, may sustain, reverse or modify the decision of the Noise Control Officer; such order may be made subject to specified conditions.

- A. Filing Fee. The appeal shall be filed in triplicate with the City Clerk at the City Hall, 333 West Ocean Boulevard, Long Beach, California, along with the payment of a fee in the amount set by resolution of the City Council. A copy of the appeal shall also be served on the Noise Control Officer.
- B. Contents of Appeal. An appeal to review a denial or conditional approval of a variance shall contain the application, a copy of the Noise Control Officer's action setting forth the reasons for the denial or the conditions of the approval, and the reasons for appeal. An appeal to review a variance revocation shall include a copy of the variance, the Noise Control Officer's revocation notice, and his reasons for revocation, and the reasons for appeal.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.11(c))

8.80.370 - Violation—Presumed.

Any noise exceeding the level limit which can be attributed to a specific facility in a designated noise district as specified in Sections 8.80.150 through 8.80.180, or the prohibited actions specified in Sections 8.80.190 and 8.80.200 shall be presumed to be a violation of the provisions of these regulations. Enforcement of noise control regulations shall be

undertaken only upon receipt of a written sworn complaint made by a person who resides or owns property within the noise district into which the alleged noise intrudes.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(a))

8.80.380 - Violation—Penalty.

Any person found in violation of any of the provisions of this Chapter upon a documented determination and the failure to comply with an abatement order or other notice issued by the Noise Control Officer and subsequently convicted in a court of competent jurisdiction for such violation will be deemed guilty of a misdemeanor and shall be fined in an amount not to exceed five hundred dollars (\$500.00), or be imprisoned for a period not to exceed one hundred eighty (180) days, or by both such fine and imprisonment. Each day (after the Noise Control Officer has made a documented determination and has issued an abatement order) that a violation is permitted to continue shall constitute a separate offense and shall be punishable as such.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(b))

8.80.390 - Violation—Abatement order.

- A. Except as provided in Subsection 8.80.390.B, in lieu of issuing a notice of violation as provided in Section 8.80.400, the Noise Control Officer may issue an order requiring the abatement of a sound source alleged to be in violation within a reasonable time period and according to guidelines adopted by the noise control office.
- B. An abatement order shall not be issued for any violation when the Noise Control Officer or other enforcement agency has reason to believe that there will not be compliance with an abatement order.
- C. No further action shall be taken in the event that the cause of the violation has been removed and the condition abated or fully corrected within the time period specified in the written notice.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(c))

8.80.400 - Violation—Notice.

Except where a person is acting in good faith to comply with an abatement order issued pursuant to Subsection 8.80.390.A, violation of any provision of this Chapter shall be cause for a notice of violation to be issued by the Noise Control Officer or other responsible enforcement official according to procedures which the noise control office may prescribe. Thereafter, the City may resort to any other appropriate legal action as provided by law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(d))

8.80.410 - Violation—Additional remedies.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provision of this Chapter, which operation or maintenance causes or creates sound levels or vibration exceeding the allowable limits as specified in this Chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction. Additionally, no provision of this Chapter shall be construed to impair any common law or statutory cause of action, or legal remedy therefrom, of any person for injury or damage arising from any violation of this Chapter or from other law.

(Ord. C-5371 § 1 (part), 1977: prior code § 4430.12(e))

CONSTRUCTION NOISE MODELING

Construction will be approx 9 months with the following phases:

dBa Leq at 50 feet

Demolition: October - November 2021	83
End dump trucks excavators loaders backhoes dozers Export hauling of 1500 cubic yards of demolished material	
Grading operations: November 2021- January 2022	84
End dump & transfer trucks loaders graders dozers rollers backhoes Export hauling of 1000 cut soil & organics	
Site Construction: January 2021- May 2022	84
End dump, transfer & delivery trucks concrete trucks loaders graders rollers backhoes telescoping crane for sports lights Import of 5000 cubic yards of base rock & paving materials	
Buildings Construction: January 2022-July 2022	83
Delivery trucks concrete trucks graders backhoes Delivery of materials, synthetic turf & supplies	
Final buildout and landscaping June 2021-August 2022	77
End dump & delivery trucks concrete trucks backhoes Delivery of materials and landscape supplies	

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/05/2021

Case Description: LCG-01

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Building Construction	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Flat Bed Truck	No	40		74.3	50.0	0.0
Concrete Mixer Truck	No	40		78.8	50.0	0.0
Grader	No	40	85.0		50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

[illegible]

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/05/2021

Case Description: LCG-01

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Demolition	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage	Actual Lmax	Receptor Lmax	Estimated Distance	Shielding
		(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40	80.7	50.0	0.0	
Front End Loader	No	40	79.1	50.0	0.0	
Backhoe	No	40	77.6	50.0	0.0	
Dozer	No	40	81.7	50.0	0.0	
Dump Truck	No	40	76.5	50.0	0.0	

Results

[illegible]

Report date: 08/05/2021
Case Description: LCG-01

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Final Buildout and Landscaping	Residential	60.0	55.0	50.0

		Spec	Actual	Receptor	Estimated	
	Impact	Usage	Lmax	Lmax	Distance	Shielding
Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
Dump Truck	No	40		76.5	50.0	0.0
Flat Bed Truck	No	40		74.3	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

[illegible]

Report date: 08/05/2021
Case Description: LCG-01

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Grading	Residential	60.0	55.0	50.0

Description	Impact Device	Spec Usage	Actual Lmax	Receptor Lmax	Estimated Distance	Shielding
		(%)	(dBA)	(dBA)	(feet)	(dBA)
Dump Truck	No	40		76.5	50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Grader	No	40	85.0		50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

[illegible]

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/05/2021

Case Description: LCG-01

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Site Construction	Residential	60.0	55.0	50.0

Description	Equipment					
	Impact Device	Usage (%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dump Truck	No	40		76.5	50.0	0.0
Concrete Mixer Truck	No	40		78.8	50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Grader	No	40	85.0		50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Crane	No	16		80.6	50.0	0.0

[illegible]

LCG-01 Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	RCNM			
	Reference Noise Level	SF Homes to west	School/Church to South	SF Homes to East
<i>Distance in feet</i>	50	150	260	420
Demolition	83	73	68	64
<i>Distance in feet</i>	50	310	300	260
Grading	84	69	69	70
Site Construction	84	68	68	70
Final Buildout/Landscaping	77	61	62	63
<i>Distance in feet</i>	50	145	80	430
Building Construction	83	74	79	64

Attenuation calculated through Inverse Square Law: $L_p(R2) = L_p(R1) - 20\log(R2/R1)$

SOUNDPLAN MODELING OUTPUTS

Existing Receiver	Usage	Fl	Dir	dB(A)	Lr,lim	dB(,Lr,lim	dB(,Ldn	dB(A)	Leq,d	dB(,Leq,n	dB(,
R1	SCR	G						68	61.5	61.5	
R2	SCR	G						66.8	60.4	60.4	
R3	SCR	G						68.2	61.8	61.8	
R4	SCR	G						61.8	55.3	55.3	
R5	SCR	G						65.4	59	59	
R6	SCR	G						63	56.6	56.6	
R7 - Church	SCR	G						65.6	59.2	59.2	
R8	SCR	G						69.5	63.1	63.1	
R9	SCR	G						71.1	64.7	64.7	
R10	SCR	G						72.5	66.1	66.1	
R11	SCR	G						72.7	66.3	66.3	
R12	SCR	G						72.1	65.6	65.6	
R13	SCR	G						70.2	63.7	63.7	
R14	SCR	G						63.8	57.4	57.4	
R15	SCR	G						64.7	58.3	58.3	
R16	SCR	G						65.3	58.9	58.9	
R17	SCR	G						64.7	58.3	58.3	
R18	SCR	G						63.8	57.4	57.4	
R20	SCR	G						63.1	56.7	56.7	
R21	SCR	G						65.6	59.2	59.2	

Future Receiver	Usage	Fl	Dir	dB(A)	Lr,lim	dB(	Lr,lim	dB(	Ldn	dB(A)	Leq,d	dB(	Leq,n	dB(
R1	SCR	G								64.8	58.3		58.3	
R2	SCR	G								64.4	58		58	
R3	SCR	G								64.7	58.3		58.3	
R4	SCR	G								64.7	58.3		58.3	
R5	SCR	G								69.3	62.8		62.8	
R6	SCR	G								66.4	60		60	
R7 - Church	SCR	G								67.2	60.7		60.7	
R8	SCR	G								65	58.6		58.6	
R9	SCR	G								65.2	58.8		58.8	
R10	SCR	G								65.4	59		59	
R11	SCR	G								65.4	59		59	
R12	SCR	G								65.3	58.9		58.9	
R13	SCR	G								65.1	58.6		58.6	
R14	SCR	G								67.5	61.1		61.1	
R15	SCR	G								68.6	62.1		62.1	
R16	SCR	G								69.2	62.8		62.8	
R17	SCR	G								68.5	62.1		62.1	
R18	SCR	G								67.6	61.2		61.2	
R20	SCR	G								66.6	60.2		60.2	
R21	SCR	G								64.1	57.6		57.6	

Receiver	Existing Leq,d dB(A)	Future	Dif
R1	61.5	58.3	-3.2
R2	60.4	58	-2.4
R3	61.8	58.3	-3.5
R4	55.3	58.3	3
R5	59	62.8	3.8
R6	56.6	60	3.4
R7 - Church	59.2	60.7	1.5
R8	63.1	58.6	-4.5
R9	64.7	58.8	-5.9
R10	66.1	59	-7.1
R11	66.3	59	-7.3
R12	65.6	58.9	-6.7
R13	63.7	58.6	-5.1
R14	57.4	61.1	3.7
R15	58.3	62.1	3.8
R16	58.9	62.8	3.9
R17	58.3	62.1	3.8
R18	57.4	61.2	3.8
R20	56.7	60.2	3.5
R21	59.2	57.6	-1.6
MAX	66.3	62.8	3.9