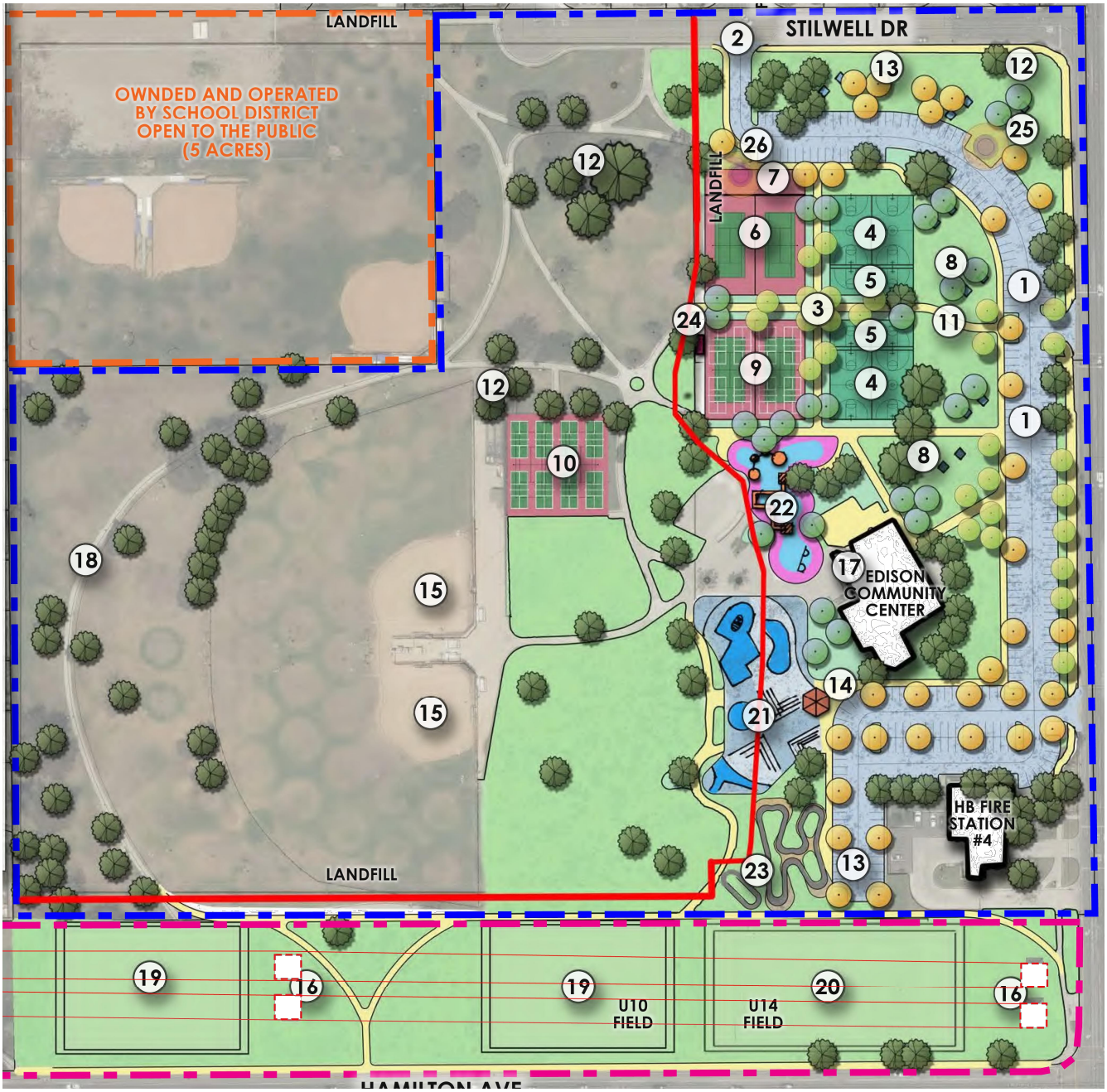
EDISON PARK PICKLEBALL COURTS
NOISE IMPACT STUDY
City of Huntington Beach, CA



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NOISE IMPACT STUDY
City of Huntington Beach, California

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

The purpose of this study is to evaluate the noise impacts from the proposed Pickleball Courts at Edison Park (hereinafter referred to as "project"), and provide recommendations, if necessary, to minimize any potential project noise impacts.

The following information is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- Identification of the applicable City of Huntington Beach noise standards
- Analysis of the existing noise environment
- Analysis of the project's operational noise impact to adjacent residential receptors
- Summary of recommendations to reduce noise level impacts.

1.2 Site Location and Project Description

The project site is located within Edison Park, near the northwest corner of Magnolia Street and Hamilton Avenue, in the City of Huntington Beach. The proposed project consists of converting the existing tennis courts into pickleball courts and installing new dual courts that will be striped for both tennis and pickleball. A total of 16 pickleball courts are included as part of the project.

The proposed pickleball and dual tennis/pickleball courts will be located near two tennis-only courts also being installed within Edison Park. It is possible that pickleball activity will occasionally occur at the tennis-only courts. Therefore, this study analyzes potential pickleball noise at the pickleball, tennis, and dual pickleball/tennis courts simultaneously for a conservative, worst-case assessment of impacts.

There are several noise sensitive receptors surrounding the project site, including:

Northern Receptors Existing residential homes located approximately 244 feet north of the tennis-only courts, approximately 25 feet north of the centerline of Stilwell Drive.

Western Receptors Existing residential homes located approximately 600 feet west of the proposed pickleball courts, just west of Edison Park's western property line.

Eastern Receptor Existing Edison High School located approximately 360 feet east of the proposed dual tennis/pickleball courts, approximately 50 feet east of the centerline of Magnolia Street.

A project site location map, including sensitive receptor locations, is provided in Exhibit A.

The site plan used for this analysis, provided by RJM DESIGN GROUP, is illustrated on Exhibit B.

1.3 Summary of Analysis Results

- The City of Huntington Beach Municipal Code, Section 8.40.050, establishes 55 dBA Leq and 75 dBA Lmax daytime (7:00 a.m. to 10:00 p.m.) exterior noise standards for residential properties and schools.

- Per the City's Municipal Code, Section 8.40.050, noise which consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof (which pickleball noise could be categorized as), the noise standards shall be reduced by five (5) db(A). As a result, the daytime residential noise standards would be reduced to 50 dBA Leq and 70 dBA Lmax.

- The proposed project is not expected to exceed the 55 dBA Leq standard or the reduced impact noise standard of 50 dBA Leq at the nearest adjacent residential properties.

- The proposed project is not expected to exceed the 75 dBA Lmax standard or the reduced impact noise standard of 70 dBA Lmax at the nearest adjacent residential properties.

- Due to the project's expected future noise levels falling below the City's noise level thresholds, no further design improvements or mitigation measures are being recommended.

- To ensure pickleball noise levels do not adversely impact the adjacent community, **pickleball court hours of operation should be limited from 7:00 a.m. to 10:00 p.m.**

2.0 Fundamentals of Noise

This section of the report provides basic information about noise and vibration and presents some of the terms used in the report.

2.1 Sound, Noise, and Acoustics

The sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. The sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases, as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (μPa). One μPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels and abbreviated as dB.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two (2) sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3dB increase.

If two (2) sounds differ by approximately 10 dB the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels[1]

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighing is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in the noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway), would result in a barely perceptible change in sound level.

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant, while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels. Following are the most commonly used noise descriptors along with brief definitions.

A-Weighted Sound Level

The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level

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.

[1] Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.

Community Noise Equivalent Level (CNEL)

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB)

A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A)

A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ)

The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room

Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n)

The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90, and L99, etc.

Noise

Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Percent Noise Levels

See L(n).

Sound Level (Noise Level)

The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter

An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL)

The dBA level which, if it lasted for one (1) second, would produce the same A-weighted sound energy as the actual event.

2.7 Sound Propagation

As sound propagates from a source it spreads geometrically. The sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use the hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground

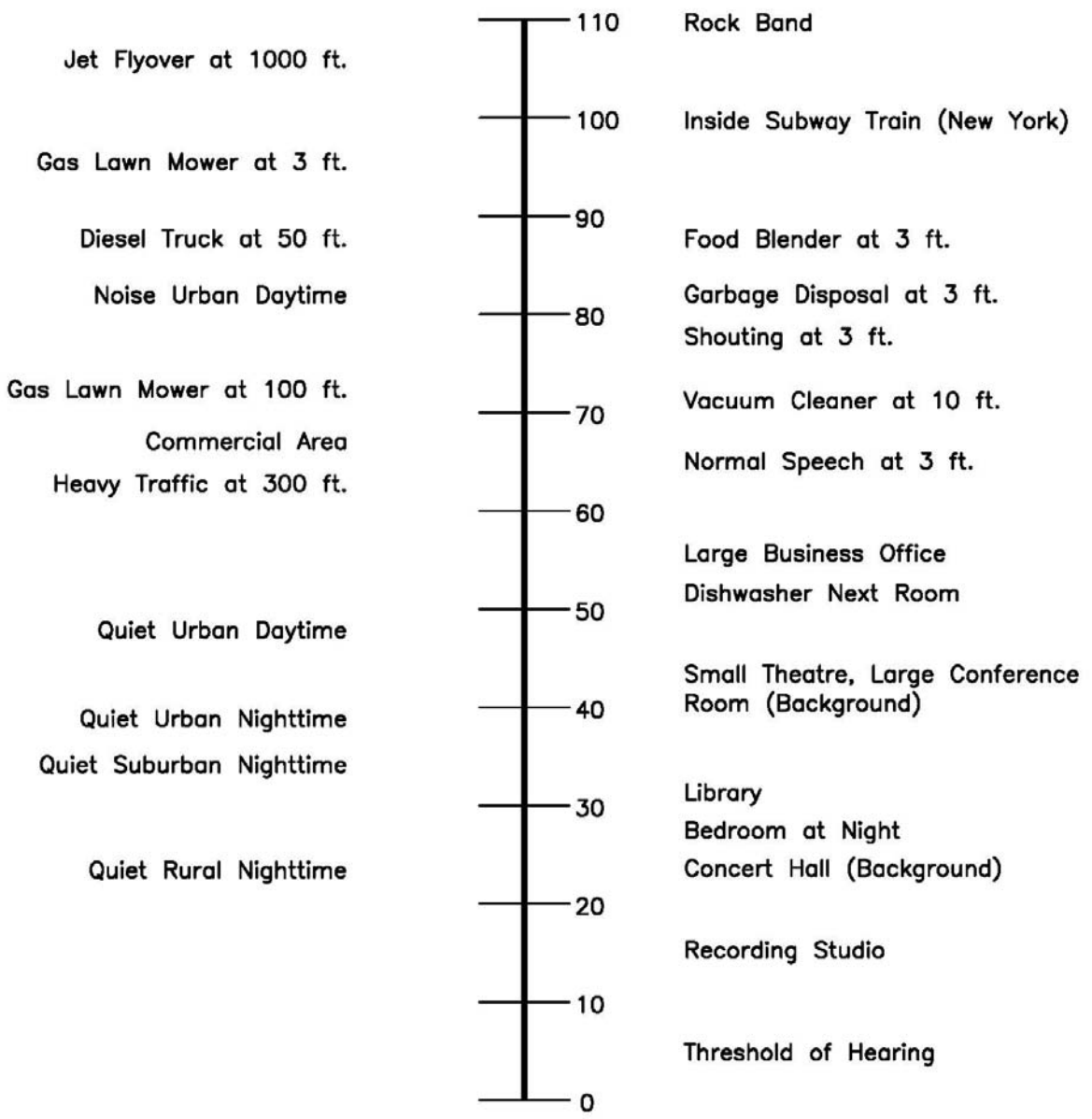
absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at an additional rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 6.0 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet and greater from a noise source. Wind, temperature, air humidity, and turbulence can further impact how far sound can travel.

Figure 1 shows typical sound levels from indoor and outdoor noise sources.

Figure 1[2]

TYPICAL SOUND LEVELS FROM
INDOOR AND OUTDOOR NOISE SOURCES



[2] Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.

3.0 Regulatory Setting

The proposed project is located in the City of Huntington Beach and the project must adhere to the applicable noise regulations established within the Huntington Beach Municipal Code.

3.1 City of Huntington Beach Municipal Code Noise Regulations

The City outlines their noise regulations and standards within the Huntington Beach Municipal Code, Chapter 8.40, Noise Control. The noise standards from the Municipal Code are provided in Appendix A.

Table 1 shows the City of Huntington Beach's daytime exterior noise standards for the land uses adjacent to the project site, as prescribed in Section 8.40.050 of the Municipal Code. It is assumed that the project will not operate during nighttime hours (10:00 p.m. to 7:00 a.m.). Therefore, potential noise impacts resulting from the project are compared to the City's daytime noise standards only.

Table 1
City of Huntington Beach Exterior Noise Standards

Noise Zone	Time Period[1]	Noise Standard (Leq)	Noise Standard (Lmax)
Low-Density Residential	7:00 a.m. to 10:00 p.m.	55 dBA	75 dBA
Schools	Hours of Operation		

[1]The project will not be open during nighttime hours (10:00 p.m. to 7:00 a.m.), therefore only the daytime noise standards are reported and analyzed in this report.

Municipal Code Section 8.40.050, Exterior Noise Standards, also includes a provision that states the following:

"*In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) dB(A).*"

Since pickleball activity does include impact noises (as well as speech and potentially music), the City should consider designing the project to meet these more stringent requirements. As a result, the daytime residential noise standards would be reduced to 50 dBA Leq and 70 dBA Lmax.

4.0 Study Method and Procedures

The following section describes the noise measurement procedures, measurement locations, and noise modeling procedures and assumptions used in the noise analysis.

4.1 Noise Measurement Procedures and Criteria

A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

RK conducted the sound level measurements in accordance with Caltrans technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4: Specification for Sound Level Meter, 1983)

Piccolo-II Type 2 integrating-averaging level meters were used to conduct long-term (24-hour) noise measurements at the project site and nearest residential properties.

The Leq, Lmin, Lmax, L2, L8, L25, and L50 statistical data were recorded over the measurement time period intervals and the information was utilized to define the noise characteristics for the project. The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed one and half feet above ground level for short-term and ten (10) feet above the ground for long-term noise measurements
- Sound level meters were calibrated before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Temperature and sky conditions were observed and documented

Appendix B includes photos, field sheets, and measured noise data.

4.2 Stationary Noise Modeling

On-site stationary noise sources were analyzed using SoundPLAN™ noise modeling software. SoundPLAN™ is a standards-based program that incorporates more than twenty national and international noise modeling guidelines. This project consists of stationary noise sources.

Projected noise levels from SoundPLAN™ are based on the following key parameters:

- Developing three-dimensional noise models of the project,
- Predicting the project noise levels at the selected community locations and
- Comparing the predicted noise with the existing community ambient noise levels at the receptor locations.

The sides of the buildings, walls, etc. were modeled as reflective surfaces and also as diffractive bodies. Most of the ground within the project site and adjacent areas are covered with field grass and vegetation and are modeled as a soft site (Ground Factor=1). The Effective Flow Resistivity for field grass is the SoundPLAN default. The elevation profile for the project site is derived from Google Earth, and receptors are placed at five feet above ground level.

Sound Power and Sound Pressure Level

Sound power level is the acoustic energy emitted by a source which produces a sound pressure level at some distance. While the sound power level of a source is fixed, the sound pressure level depends upon the distance from the source and the acoustic characteristics of the area in which it is located.

SoundPLAN requires that the source noise level be input using sound power level which must be back calculated based on a measured sound pressure level. The sound power level is calculated using SoundPLAN software by calibrating the source noise level to equal the sound pressure level at an equal distance from the source in which the referenced measurement was taken.

4.2.1 Reference Noise Levels

The noise sources associated with the project can be broken down into two categories:

- **'Impact noise'**, a short impulsive noise from the impact of the ball against the paddle and/or ground during active play.

- **'Other noise'**, includes speech, yelling and other noise created by patrons of the proposed project.

To evaluate the anticipated noise levels generated by the project, RK obtained reference noise level data from the existing Bonita Canyon Pickleball Courts in the City of Newport Beach. The referenced noise levels were measured on April 10, 2023.

The site used for existing reference noise level measurements consists of four pickleball courts enclosed by fencing retrofitted with noise-reducing lining. To be conservative, this study analyzes potential noise impacts using referenced noise measurements taken inside of the retrofitted fencing for an unmitigated, worst-case scenario.

Table 2 indicates the referenced noise levels for on-site stationary noise sources. Referenced noise level field sheets and calculations are provided in Appendix C.

Table 2
Bonita Canyon Pickleball Courts Referenced Noise Levels

Source	Noise Levels (dBA)	
	L_{eq}	L_{max}
Bonita Canyon Pickleball Courts	71.4[1]	85.7[1]

[1] Worst-case measured noise level. See Appendix C for field sheets.

The referenced noise levels shown in Table 2 are indicative of the noise levels generated by the proposed pickleball courts at the noise source location. To estimate noise level impacts at the surrounding residential receptor locations, the above referenced noise levels are input into the SoundPLAN model as area sources and projected from the source to the receptor locations. The model projections take into account the noise attenuation effects from distance, local topography, ground effects, and physical barriers to arrive at the predicted noise levels at the receptor locations described in Section 6.0.

It should be noted that the proposed project consists of 16 pickleball courts, however the referenced noise levels used in this study were measured at a location where only four courts were active. Therefore, to account for the sound generated by all 16 proposed courts, the model employs one area source with the referenced noise levels per set or four courts (i.e., 71.4 dBA Leq per four courts and 85.7 dBA Lmax per four courts).

Furthermore, the proposed pickleball and dual tennis/pickleball courts will be located near two tennis-only courts that are also being installed within Edison Park. It is possible that pickleball activity will occasionally occur at the tennis-only courts. Therefore, this study assesses potential pickleball noise at the pickleball, tennis, and dual pickleball/tennis courts simultaneously for a conservative, worst-case assessment of impacts.

5.0 Existing Noise Environment

The existing noise environment for the project site and surrounding areas has been established based on noise measurement data collected by RK.

5.1 24-Hour Noise Measurement Results

In order to establish the ambient noise environment at the nearest residential uses, RK conducted two (2) 24-hour noise level measurements.

Noise levels were measured on May 17, 2023 using Piccolo-II Type 2 integrating-averaging sound level meters. The information was utilized to establish the noise characteristics of the existing ambient environment.

The noise monitoring locations were selected based on the proximity and location to adjacent sensitive receptors. Exhibit C graphically illustrates the location of the long-term measurements.

- Noise Monitoring Location 1 (L-1) was taken within Edison Park, approximately 60 feet south of the centerline of Stilwell Drive and approximately 475 feet west of the centerline of Magnolia Street.

- Noise Monitoring Location 2 (L-2) was taken within Edison Park, approximately 350 feet north of the centerline of Hamilton Avenue and approximately 1,260 feet west of the centerline of Magnolia Street.

24-hour noise monitoring locations represent the existing ambient noise levels near the adjacent noise sensitive land uses near the project site. Ambient noise is consistent with a typical passive park setting, and includes rustling leaves, chirping birds, traffic noise propagating from nearby roadways, as well as perceptible noise from activity at the park's other features (playground, tennis courts, etc.) and noise from the residential properties.

Appendix B includes photographs, field sheets, and measured ambient noise data.

24-hour noise measurements are summarized in Tables 3 and 4 below.

Table 3
24-Hour Noise Measurement Results, (L-1)[1]

Time	Leq (dBA)	Time	Leq (dBA)
12:00 AM	43.9	12:00 PM	54.4
1:00 AM	42.3	1:00 PM	53.0
2:00 AM	41.6	2:00 PM	53.6
3:00 AM	38.3	3:00 PM	55.1
4:00 AM	40.7	4:00 PM	54.9
5:00 AM	45.7	5:00 PM	54.6
6:00 AM	48.8	6:00 PM	54.0
7:00 AM	51.0	7:00 PM	53.5
8:00 AM	51.6	8:00 PM	51.8
9:00 AM	55.2	9:00 PM	48.4
10:00 AM	49.4	10:00 PM	56.6
11:00 AM	51.6	11:00 PM	44.9
24-Hour CNEL			**56.6**

[1] L-1 was recorded on 05/17/2023.

Table 4
24-Hour Noise Measurement Results, (L-2)[1]

Time	Leq (dBA)	Time	Leq (dBA)
12:00 AM	51.2	12:00 PM	53.6
1:00 AM	45.5	1:00 PM	53.6
2:00 AM	45.4	2:00 PM	55.1
3:00 AM	40.7	3:00 PM	56.5
4:00 AM	43.7	4:00 PM	56.7
5:00 AM	47.6	5:00 PM	57.2
6:00 AM	50.5	6:00 PM	58.7
7:00 AM	53.8	7:00 PM	56.7
8:00 AM	52.6	8:00 PM	58.1
9:00 AM	52.4	9:00 PM	50.9
10:00 AM	52.2	10:00 PM	50.1
11:00 AM	56.3	11:00 PM	51.6
24-Hour CNEL			**57.8**

[1] L-2 was recorded on 05/17/2023.

As shown in the tables above, existing daytime ambient noise levels occasionally exceed the City's 55 dBA Leq noise level standard for residential land uses and schools.

6.0 Operational Noise Impacts

This assessment analyzes the anticipated noise levels generated by the project. The main sources of noise generated by the project would include on-site operational activities. Noise level impacts are compared to the City of Huntington Beach Leq and Lmax noise standards.

The project must demonstrate that noise levels generated by the project site would not be in excess of standards established in the Huntington Beach, California Municipal Code. The Municipal Code has a provision that penalizes "impact" noises (such as those generated by pickleball activity). For informational purposes, this report compares noise impacts to both the base noise standards and the impact noise standards.

Appendix D includes SoundPLAN results sheets.

6.1 Pickleball Courts Noise Impacts

The noise generated by pickleball can vary depending on several factors such as the number of players and the type of ball and paddles used. Typically, the sound of a pickleball hitting a paddle is a sharp, distinct sound and is often described as a "pop" or a "whack," and it can be particularly loud if a player hits the ball with a lot of force.

In addition to the sound of the ball hitting the paddle, there may also be additional noise generated by the movement of players on the court. This can include the sound of shoes scuffing on the court surface or the sound of players calling out to each other during the game.

On-site stationary noise impacts from the pickleball courts are assessed at the property lines of the nearest northern, western, and eastern receptors. It is assumed that the project will not operate during nighttime hours (10:00 p.m. to 7:00 a.m.). Therefore, potential noise impacts resulting from the project are compared to the City's daytime noise standards only.

Table 5 below shows the results of the daytime Leq noise impact analysis. The SoundPLAN analysis results and receiver locations are graphically illustrated in Exhibits D and E.

The project is not expected to exceed the City of Huntington Beach daytime exterior noise standard of 55 dBA Leq or the 50 dBA Leq standard for impact noise.

It should be noted that although the noise generated by the pickleball courts is not expected to exceed the City's noise ordinance, this does not mean that it will not be

audible from the exterior areas of the surrounding residential properties and the sound may still be perceived as an annoyance.

Table 5
Daytime Noise Impact Analysis – Leq (dBA)

Receptor	Receiver	Daytime Exterior Noise Level (dBA)		
		Project Noise Contribution (Leq)	Huntington Beach Noise Level Criteria[1] (Leq)	Noise Level Exceeds Standard (?)
Northern Receptors	1	43.6	55.0 / 50.0	No / No
	2	45.6		No / No
	3	46.9		No / No
Western Receptors	4	38.5		No / No
	5	42.4		No / No
	6	38.0		No / No
Eastern Receptor	7	43.9		No / No

[1] Huntington Beach daytime residential/schools noise standard / Huntington Beach daytime residential/schools "impact" noise standard.

Table 6 shows the results of the daytime Lmax noise impact analysis. The SoundPLAN analysis results and receiver locations are graphically illustrated in Exhibits F and G.

The project is not expected to exceed the City of Huntington Beach daytime exterior noise standard of 75 dBA Lmax or the 70 dBA Lmax standard for impact noise.

Table 6
Daytime Noise Impact Analysis – Lmax (dBA)

Receptor	Receiver	Daytime Exterior Noise Level (dBA)		
		Project Noise Contribution (Leq)	Huntington Beach Noise Level Criteria[1] (Leq)	Noise Level Exceeds Standard (?)
Northern Receptors	1	57.9	75.0 / 70.0	No / No
	2	59.9		No / No
	3	61.2		No / No
Western Receptors	4	52.8		No / No
	5	56.7		No / No
	6	52.3		No / No
Eastern Receptor	7	58.2		No / No

[1] Huntington Beach daytime residential/schools noise standard / Huntington Beach daytime residential/schools "impact" noise standard.

As shown in the tables above, the project is expected to generate maximum noise levels of 46.9 dBA Leq and 61.2 dBA Lmax at the nearest adjacent residential properties. This falls below the City's exterior noise standards of 55 dBA Leq and 75 dBA Lmax, and below the reduced impact noise standards of 50 dBA Leq and 70 dBA Lmax. Therefore, based on its current design, the project does not require any further design improvements or mitigation measures to meet the City of Huntington Beach Municipal Code requirements.

To ensure pickleball noise levels do not adversely impact the adjacent community, **pickleball court hours of operation should be limited to 7:00 a.m. to 10:00 p.m. only.**

Exhibits

Exhibit A

Location Map

Legend:

▬ ▬ = Proposed Court Boundaries

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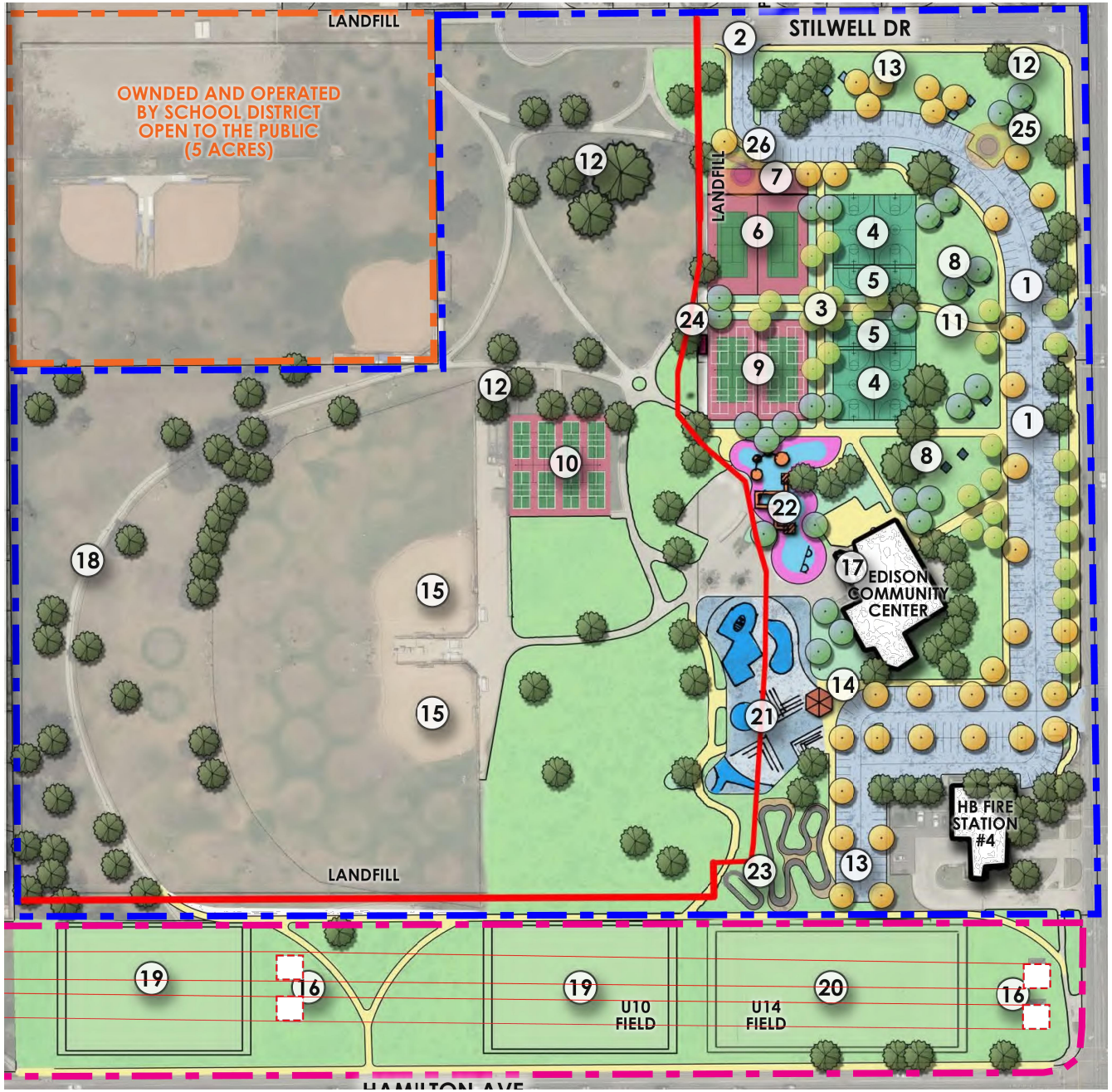
Exhibit B

Site Plan



RK engineering group, inc.

Exhibit C

Noise Monitoring Locations

Legend:

▬ = Proposed Court Boundaries

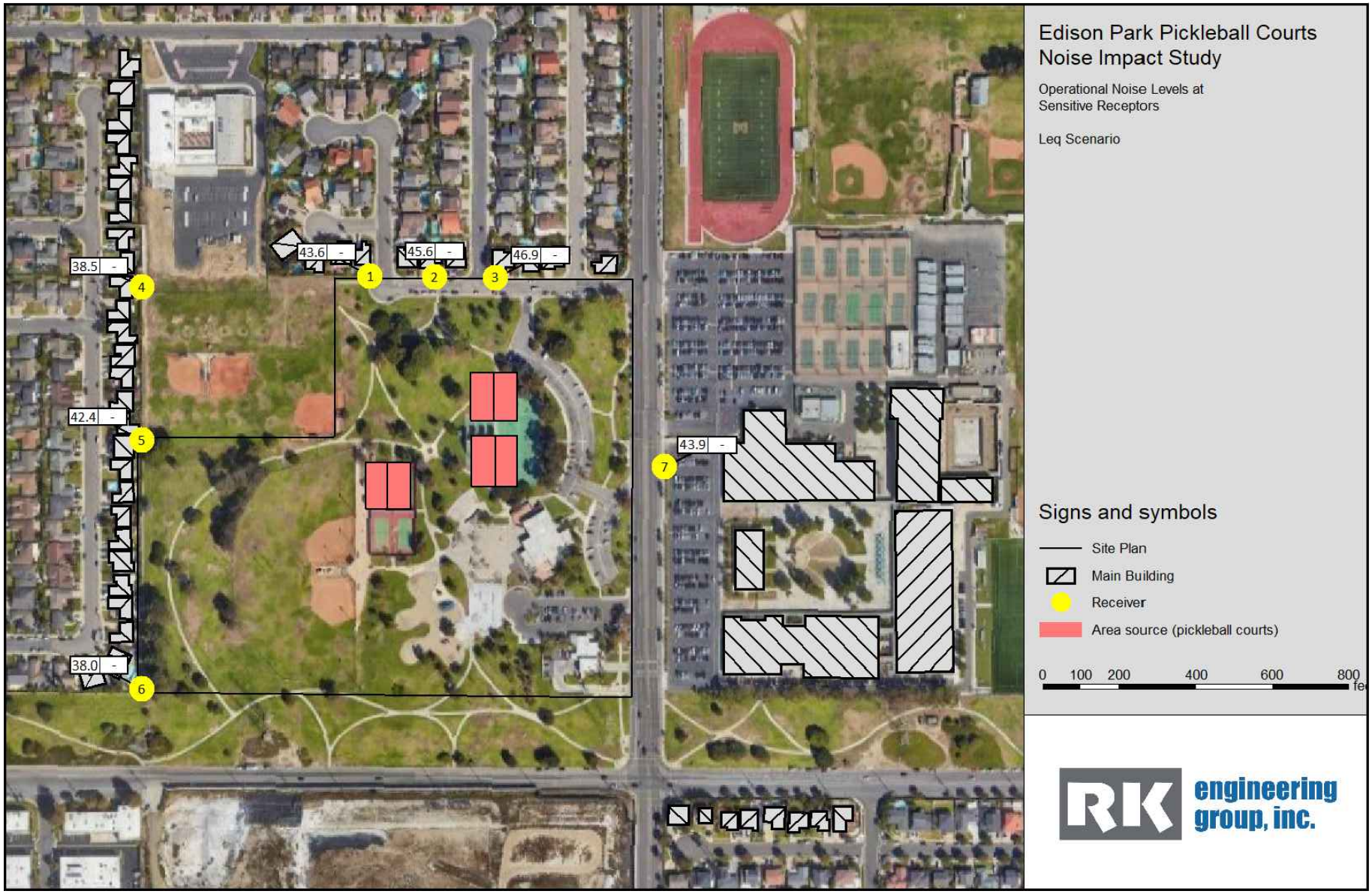
① = Noise Monitoring Location

N

RK engineering group, inc.

Exhibit D

Operational Daytime Noise Levels (dBA) - Leq



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Daytime Noise Contours - Leq

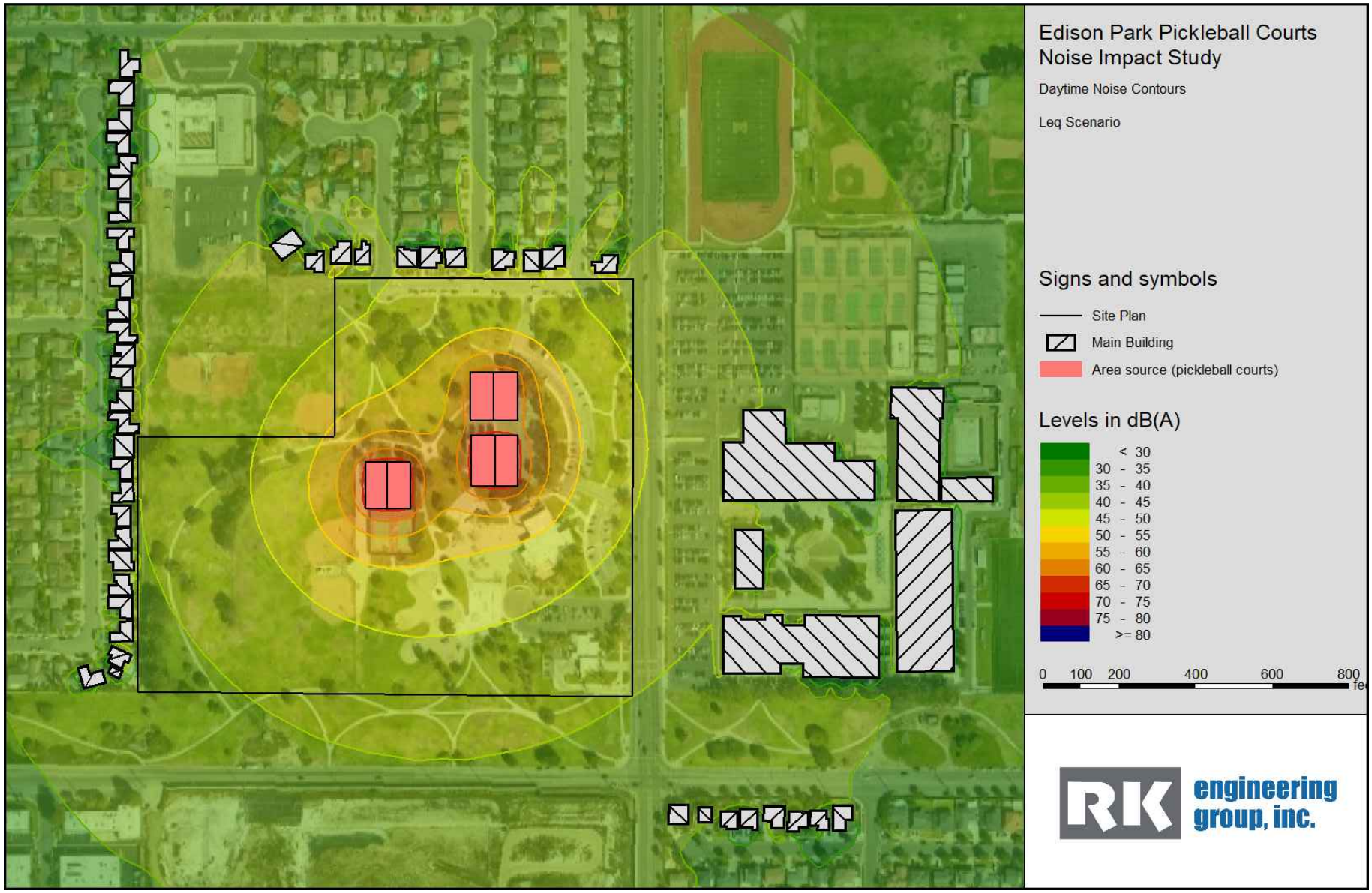


Exhibit F

Operational Daytime Noise Levels (dBA) - Lmax

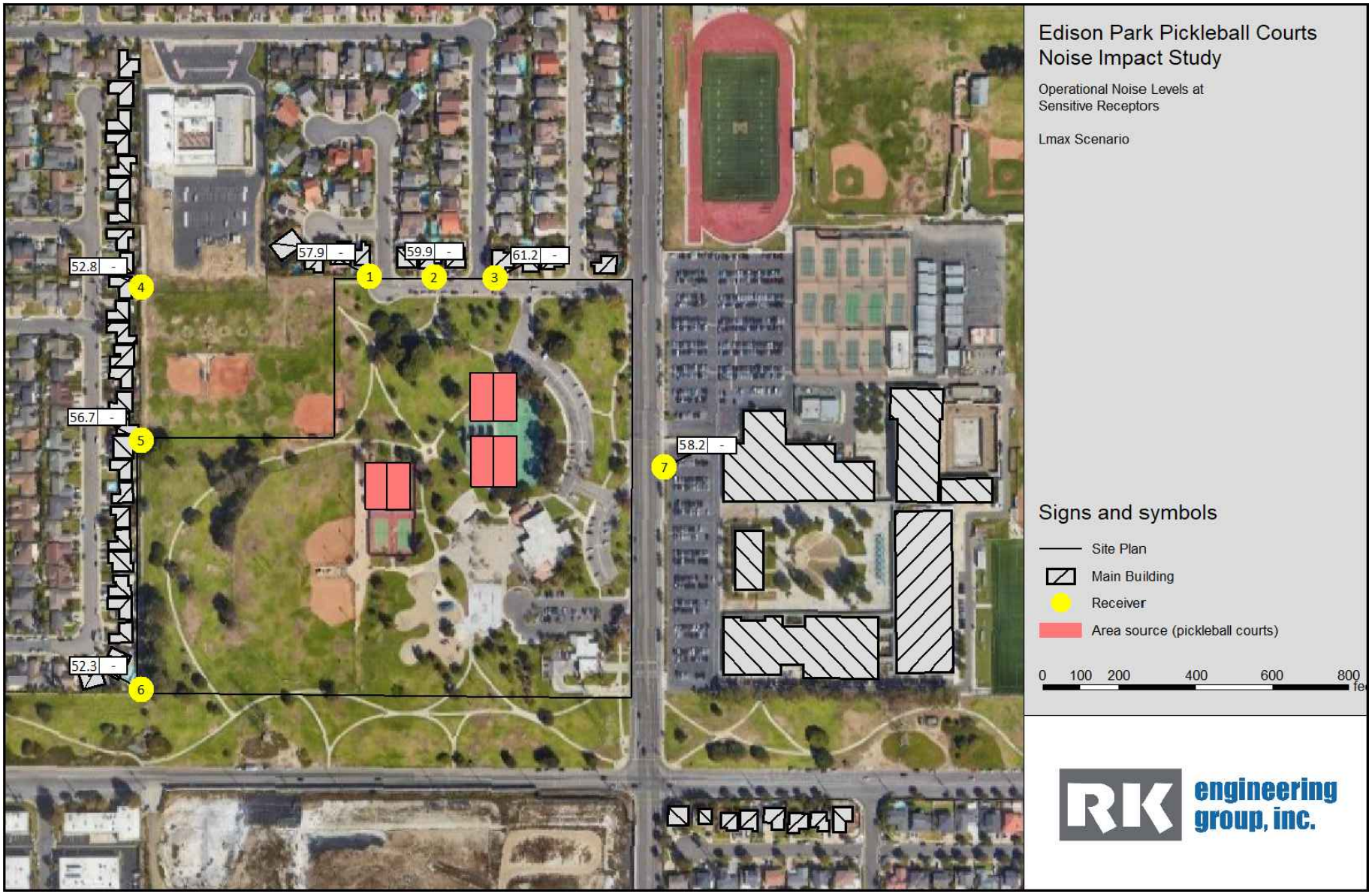
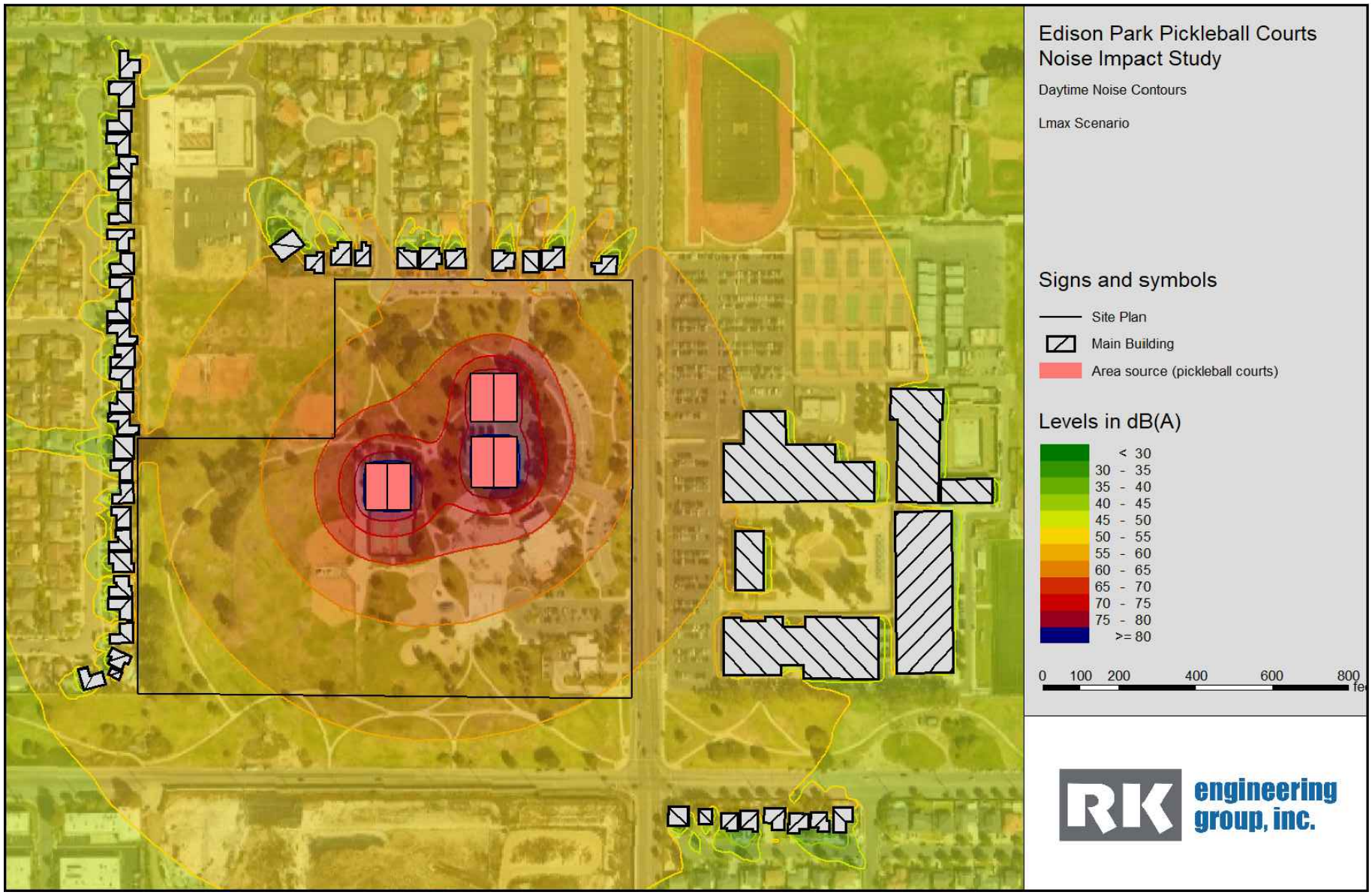


Exhibit G

Daytime Noise Contours - Lmax



Appendices

Appendix A

City of Huntington Beach, California
Municipal Code Chapter 8.40 – Noise Control

Chapter 8.40 NOISE CONTROL

Note

Sections:

Note

* **Note:** §§ 8.40.140, 8.40.160 and 8.40.170 repealed by Ord. 3940-7/12.

8.40.010 Declaration of Policy

A. In order to control unnecessary, excessive and annoying sounds emanating from incorporated areas of the City, it is hereby declared to be the policy of the City to prohibit such sounds generated from all sources as specified in this chapter.

B. It is determined that certain noise levels are detrimental to the public health, welfare and safety and contrary to public interest; therefore, the City Council does ordain and declare that creating, maintaining, causing or allowing to create, maintain or cause any noise 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. (2379-7/79)

8.40.020 Definitions

The following words, phrases and terms as used in this chapter shall have the meaning as indicated below:

"**Ambient noise level**" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"**A-weighted decibel (dBA)**" means the overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear as represented by the A-weighted network. The reference pressure is 20 micropascals.

"**Commercial property**" means a parcel of real property which is developed and used either in part or in whole for commercial purposes including, but not limited to, retail and wholesale businesses and professional offices.

"**Cumulative period**" means an additive period or time composed of individual time segments which may be continuous or interrupted.

"**Decibel (dB)**" means a unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is 10 times the logarithm to the base 10 of this ratio.

"**Domestic power tool**" means a mechanically-powered saw, sander, drill, grinder, lawn or garden tool, snow blower, leaf blower or similar device that is used in residential areas for work that is typically done by or for residential occupants.

"**Emergency machinery, vehicle or work**" means any machinery, vehicle or work used, employed or performed in an effort to protect, provide or restore safe conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

"**Equivalent continuous sound level (Leq)**" means the value of an equivalent, steady sound level which, in a stated time period, has the same 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 at a location over the specified duration.

"**Fixed noise source**" means a stationary device or point source which creates sounds while fixed or motionless, including, but not limited to, industrial and commercial machinery and equipment, pumps, fans, compressors, generators, air conditioners and refrigeration equipment, or an area source such as a special event on a property. That is, all sources that are non-mobile transportation sources (e.g., vehicle traffic on public roads and aircraft).

"**Grading**" means any excavating or filling of earth material, or any combination thereof, conducted to prepare said site for construction or the placement of the improvements thereon.

"**Impact noise**" means the noise produced by the collision of one mass in motion with a second mass which may be either in motion or at rest.

"**Impulsive noise**" means sound of short duration, usually less than one second, with an abrupt onset and rapid decay.

"**Industrial property**" means a parcel of real property which is developed and used in part or in whole for manufacturing purposes including research and development uses.

"**Leaf blower**" means any machine, however powered, used to blow leaves, dirt and other debris off sidewalks, driveways, lawns and other surfaces.

“**Maximum sound level (Lmax)**” means the highest RMS sound level measured during the measurement period.

“**Mobile noise source**” means any noise source other than a fixed noise source.

“**Motorboat**” means any vessel which operates on water and which is propelled by a motor, including, but not limited to, boats, barges, amphibious craft, water ski towing devices and hover craft.

“**Noise level**” means the “A” weighted sound pressure level in decibels obtained by using a sound level meter at slow response with a reference pressure of 20 micropascals (micronewtons per square meter). The unit of measurement shall be designated as dBA.

“**Parcel**” means an area of real property with a separate or distinct number or other designation shown on a plat recorded in the office of the County Recorder. Contiguous parcels owned by the same individual or entity shall be considered one parcel for purposes of this chapter.

“**Person**” means a person, firm, association, co-partnership, joint venture, corporation or any entity, public or private in nature.

“**Predominant tone noise**” means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

“**Residential property**” means a parcel of real property which is developed and used either in part or in whole for residential purposes, other than transient uses such as hotels or motels.

“**Root-mean-square sound level (RMS)**” means the square root of the average of the square of the sound pressure over the measurement period.

“**Simple tone noise**” means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished. In case of dispute, a simple tone noise shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by five dB for center frequencies of 500 Hz and above and by eight dB for center frequencies between 160 and 400 Hz and by 15 dB for center frequencies less than or equal to 125 Hz.

“**Sound amplifying equipment**” means any machine or device used for the amplification of the human voice, music, or any other sound, excluding standard automobile stereos when used and heard only by the occupants of the vehicle and, as used in this chapter, warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used for traffic safety purposes.

“**Sound pressure level**” of a sound, in decibels, means 20 times the logarithm to the base of 10 of the ratio of the pressure of the sound to the reference pressure of 20 micropascals.

“**Vibration decibel (VdB)**” means a measure of vibration expressed on a logarithmic scale with the reference velocity of one micro-inch per second (1x10-6 in/sec).

"**Vibration-sensitive use**" means residential, hotels, motels, schools, hospitals and medical offices with vibration-sensitive equipment, churches, cultural land uses, commercial, office and government uses. Outdoor areas with no buildings and industrial and manufacturing uses are not considered vibration sensitive. (2379-7/79, 4222-9/21)

8.40.030 Noise Level Measurement Criteria

Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter which meets at least American National Standards Institute (ANSI) Type 2 standards. While the exterior noise standards in Section 8.40.050 are applied to the property line of the receiving use, the location for measuring noise levels may be at any legally accessible vantage point where a reasonable person would conclude the noise may exceed this chapter's noise standards. All noise level measurements shall be performed in accordance with the procedures established by the City and shall be at a height of at least four feet, at least four feet away from reflective surfaces, and for a duration of at least 15 minutes, where feasible. The measurement shall be made using the A-weighting network (dBA) with "slow" meter response. Impulsive or impact noises shall be measured using "fast" meter response. The purpose of the measurement is to determine if the alleged noise violation exceeds the standards established in Section 8.40.050. If for any reason the alleged offending noise cannot be turned off, shut down or temporarily removed from the area, then the ambient noise shall be estimated by performing a representative measurement in the same general area of the source but at a sufficient distance such that the noise source is inaudible. (2379-7/79, 3940-7/12, 4222-9/21)

8.40.050 Exterior Noise Standards

A. The following exterior noise standards shall apply to the applicable land use. It is unlawful for any person at any location within the incorporated area of the City to create any noise due to a fixed noise source (or any mobile source not pre-empted by State or Federal laws), or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured at the property line of any residential, hotel, motel, public institutional, recreational, or commercial property, either within or outside the City, to exceed the applicable noise standards:

Exterior Noise Standards

Land Use	Leq Noise Level dBA	Lmax Noise Level dBA	Time Period
Low-Density Residential	55	75	7 a.m.–10 p.m.
	50	70	10 p.m.–7 a.m.
Medium-, High-Density Residential, Hotels, Motels	60	80	7 a.m.–10 p.m.
	50	70	10 p.m.–7 a.m.
Schools	55	75	Hours of Operation
Hospitals, Churches, Cultural, Museum, Library, Public Park, Recreational	60	80	Hours of Operation
Commercial/Office	65	85	Hours of Operation

B. The above standard does not apply to the establishment of multifamily residence private balconies and patios. Multifamily developments with balconies or patios that do not meet noise standards are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

C. The above daytime (7:00 a.m.–10:00 p.m.) standards for hotels, motels and commercial uses shall apply only to active outdoor use areas such as a pool or outdoor courtyard.

D. In the event the alleged offensive noise consists entirely of impact or impulsive noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five dBA.

E. If the alleged offense affects a property outside the City's jurisdiction, the exterior noise standards shall be enforced at the City boundary.

F. In the event the measured ambient noise level exceeds any of the noise limit categories above, the noise limit shall be increased to reflect said ambient noise level.

G. In the event that the noise source and the affected property are within different land use categories, the noise standards of the affected property shall apply. (2379-8/79, 2788-9/85, 3940-7/12, 4222-9/21)

8.40.090 Special Provisions

The following activities shall be exempt from the provisions of this chapter:

A. School bands, school athletics and school entertainment events, provided such events are conducted on school property or authorized by special permit from the City.

B. Activities lawfully permitted in public parks, public playgrounds and public or private school grounds.

C. Any mechanical device, apparatus or equipment used, related to or connected with emergency City work, including City contractors.

D. Noise sources associated with construction, repair, remodeling, or grading of any real property, provided that: (1) the City has issued a building, grading or similar permit for such activities; (2) said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m., Monday through Saturday, or at any time on Sunday or a Federal holiday; and (3) the average construction noise levels do not exceed 80 dBA Leq at nearby noise-sensitive land uses. If outdoor construction activities are permitted by the City after 7:00 p.m. or before 7:00 a.m., the average construction Noise Levels at nearby noise-sensitive land uses shall be limited to 50 dBA Leq.

E. Mobile noise sources associated with pest control through pesticide application, provided that the application is made in accordance with restricted material permits issued by or regulations enforced by the Agricultural Commissioner.

F. Noise sources associated with the maintenance of real property and use of domestic power tools provided said activities take place between the hours of 8:00 a.m. and 7:00 p.m. Monday through Saturday or between the hours of 9:00 a.m. and 6:00 p.m. on Sunday or a Federal holiday. Noise from typical and occasional property maintenance and the use of domestic power tools which does not require a building permit shall not be subject to the noise limits in subsection D of this section.

G. Leaf blower noise shall be governed by Section 8.40.095.

H. Any activity or equipment to the extent that design regulation thereof has been pre-empted by State or Federal laws.

I. Noise sources associated with temporary public or private events located on private or public property, provided that a permit has been obtained from the City.

J. Noise generated outdoors by business operations which are temporarily prohibited from occurring indoors due to City-declared emergency conditions. This applies only to City-approved businesses whose operations would typically occur indoors. Noise generated by sound amplifying equipment such as stereos or megaphones is not exempt. (2379-7/79, 3131-4/92, 3940-7/12, 4222-9/21)

8.40.095 Leaf Blowers

A. **Unlawful to Propel Debris Beyond Parcel Boundary.** It is unlawful for any person to use or operate any leaf blower in such a manner as to blow, dispel or make airborne, dust, leaves, grass cuttings, paper, trash or any other type of unattached debris or material, beyond the parcel boundaries of the parcel being cleaned, unless the consent of the adjoining owner or person in possession is obtained. It is unlawful for any person to use or operate any leaf blower within the City in such a way as to blow leaves, dirt and other debris onto the public rights-of-way or private property and to allow such debris to remain there in excess of 30 minutes.

B. **Special Prohibitions.** It is unlawful for any person to operate a leaf blower within a residential zone or within 100 feet of a residential zone of the City of Huntington Beach, except under the following conditions:

1. **Time Restriction.** Noise sources associated with the maintenance of real property provided said activities take place between the hours of 8:00 a.m. and 7:00 p.m. Monday through Saturday or between the hours of 9:00 a.m. and 6:00 p.m. on Sunday or a Federal holiday.

2. **Distance Restriction.** Leaf blowers shall not be operated within a horizontal distance of 10 feet of any operable window, door, or mechanical air intake opening or duct.

3. **Duration of Use Restriction.** Leaf blowers shall not be operated for more than 15 minutes per hour, per day, on parcels less than one-half acre and no more than 30 minutes per hour on parcels greater than one-half acre up to one acre. Leaf blowers shall not be operated for more than two hours on parcels of one acre or more.

4. **Number Restriction.** No person shall operate more than one leaf blower per parcel on one-half acre, no more than two leaf blowers on parcels greater than one-half acre and no more than three leaf blowers on parcels greater than one acre or more.

5. The maximum decibel level of 70 dBA as measured 10 feet from the leaf blower shall not be exceeded. (3131-4/92, 4222-9/21)

8.40.100 Schools, Hospitals and Churches—Special Provisions

It is unlawful for any person to create any noise which causes the noise level at any school, hospital or church while same is in use, to exceed the noise limits specified for exterior noise standards in Section 8.40.050, or which noise level unreasonably interferes with the use of such institutions, including, unreasonably disturbs or annoys persons at a school, hospital or church, provided conspicuous signs are displayed in three separate locations within one-tenth of a mile of the institution indicating the presence of a school, hospital or church. (2379-7/79, 4222-9/21)

8.40.111 Prohibited Noises

A. It is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

B. In determining whether a violation of the provisions of this section exists, the City will determine:

1. The level of the noise;

2. The level and intensity of background noise, if any;

3. The proximity of the noise to residences;

4. The zoning where the noise emanates;

5. The density of the area within which the noise emanates;

6. The time the noise occurs;

7. The duration of the noise and its tonal content; and

8. Whether the noise is recurrent, intermittent or constant. (3216-12/93, 4222-9/21)

8.40.112 Loud Noises

It is unlawful for any person to:

A. Use, operate, or permit to be operated any radio, receiving set or device, television set, musical instrument, phonograph, digital music player, CD, DVD, tape player, juke box, or other sound-amplifying device for producing or reproducing sound in such a manner as to disturb the peace, quiet, and comfort of other persons.

B. Make or allow to be made any noise which continues for more than a five-minute period between the hours of 10:00 p.m. and 7:00 a.m. if such noise is audible for 50 feet or more from the source of the noise.

C. Maintain, manage, or control any business or residential property in violation of subsection A or B of this section.

D. When within 200 feet of residences, load, unload, open, close or other handling of boxes, crates, containers, building materials, refuse handling or similar objects, between the hours of 10:00 p.m. and 7:00 a.m. in such a manner as to cause a noise disturbance across a noise-sensitive property line. This includes, but is not limited to, noise disturbances related to commercial delivery operations, vehicle idling, vehicle queuing, vehicle backup alarms, and vehicle refrigeration equipment.

E. Repair, rebuild, modify, or test any motor vehicle, motorcycle, or motorboat in such a manner as to cause a noise disturbance across a noise-sensitive property line.

F. Operate, play or permit the operation of any sound amplifying equipment in any place of public entertainment at a sound level greater than 90 dBA as read by the slow response on a sound level meter at any point that is normally occupied by customers, unless a conspicuous and legible sign is located immediately outside or near the public entrance stating, “Warning: Sound Levels Within May Cause Permanent Hearing Impairment.”

G. Sound or permit the sounding of any amplified signal from such as a bell, chime, siren, whistle, vehicle horn or similar device, intended primarily for non-emergency purposes which causes a noise disturbance across a noise-sensitive property line. Devices used in conjunction with school and place of worship shall be exempt from this provision.

H. Operate or permit the operation of any motorboat in such a manner to cause a noise disturbance across a noise-sensitive property line.

I. Operate or cause to be operated any motor vehicle or motorcycle not equipped with a muffler or other sound dissipative device in good working order and in constant operation. No person shall remove or render inoperative, or cause to be removed or rendered inoperative, other than for purposes of maintenance, repair, or replacement, any muffler or sound dissipative device on a motor vehicle or motorcycle.

J. Own, maintain, control, or operate any premises or property where noise continues after being informed, anytime within the preceding 30 days by the Police Department or Community Development Department that a violation of this chapter has been committed on said premises.

K. Violations of this section are hereby declared a nuisance per se. (3514-12/01, 4222-9/21)

8.40.113 Vibration

Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any operational ground vibration on any property which exceeds 72 VdB at nearby vibration-sensitive land uses. The vibration limit at vibration-sensitive uses with high sensitivity such as operations conducting medical research and imaging shall be 65 VdB. (4222-9/21)

8.40.120 Manner of Enforcement

A. The Director of Community Development ("Director") or Police Chief and his or her duly authorized representatives are directed to enforce the provisions of this chapter. The Director or Police Chief and their duly authorized representatives are authorized pursuant to Penal Code Section 836.5 to arrest any person without a warrant when they have reasonable cause to believe that such person has violated a provision of this chapter in their presence.

B. If the Director or Police Chief and their duly authorized representatives conduct noise monitoring tests or other noise measurement readings for purposes of enforcement, and the noise level is found to exceed the noise levels in this chapter, the property owner or the operator of the noise source shall be required to pay the City's cost of the noise monitoring tests or readings. (2379-7/79, 2533-2/82, 3216-12/93, 3940-7/12, 4222-9/21)

8.40.130 Permit Process

A. An application for a temporary permit to deviate from this chapter ("noise deviation permit") shall be submitted to the Director with all prescribed information and fees. In part, the application shall set forth: (1) all facts regarding the request for deviation; (2) all actions the applicant took to comply with the provisions of this chapter; (3) the reasons why compliance with this chapter cannot be achieved; (4) any proposed methods to minimize noise during the temporary activity; and (5) any such additional information the Director may require.

B. Within 10 days after receipt of a complete application, the City will notify all property owners within 300 feet of the proposed application.

C. A separate application shall be filed for each noise source; provided, however, that several mobile sources under common ownership, or several fixed sources on a single property may be combined into one application.

D. In all cases, the Director shall process the application in compliance with the California Environmental Quality Act.

E. The Director may approve, conditionally approve or deny the noise deviation permit no sooner than 20 days after notification was provided to property owners within 300 feet of the proposed noise source of the application. In acting upon the application, the Director shall weigh the factors set forth at subsection A above, and those set forth in Section 8.40.111 of this chapter.

F. The Director's decision on the permit shall be served by mail upon the applicant and all property owners within 300 feet of the proposed noise source. The Director's decision shall be effective 11 days after the mailing of the decision unless an appeal is filed.

G. An applicant for a permit shall remain subject to this chapter until a permit is granted, and all rights to a hearing and appeal are exhausted. (2379-7/79, 3940-7/12, 4222-9/21)

8.40.150 Appeals

Appeal Process. A person desiring to appeal the Director's decision on a noise deviation permit shall file a written notice of appeal with the director within 10 days after the Director's decision. Notice of appeal shall be accompanied by a fee as set forth in the City's current fee resolution and shall follow the hearing requirements in Chapter 248 of the Huntington Beach Zoning and Subdivision Ordinance. (3940-7/12, 4222-9/21)

Contact:

City Clerk: 714-536-5227

Appendix B

Ambient Noise Measurement
Field Data and Photos

Field Sheet

Project: Edison Park Pickleball Courts
Engineer: B. Estrada
Date: 5/16/23 - 5/18/23
JN: 3092-2023-01

Measurement Address:
Edison Park

City:
Huntington Beach, CA

Site No.: 1

Sound Level Meter:
Piccolo II
Serial # P0221010801
Serial # P0222082205

Calibrator:
BSWA
Serial # 500732

Calibration Record:

	Input, dB/	Time	Date
1	94.0	2:25 PM	5/16/23
2	90.0	2:35 PM	5/16/23
3	/	/	/
4	/	/	/
5	/	/	/

Conditions:

Temp (F):	72 Deg. F.
Windspeed:	9 m.p.h.
Direction:	Southwest
Skies:	Partly Cloudy

Meter Settings:

☑ A-WTD	☐ LINEAR	☑ SLOW	☐ 1/1 OCT	☑ _60_ MINUTE INTERVALS
☐ C-WTD	☐ IMPULSE	☐ FAST	☐ 1/3 OCT	☐ L(N) PERCENTILE VALUES

Notes:
Measurements recorded from 12:00 AM on 5/17/23 to 12:00 AM on 5/18/23

Measurement Type:
☑ Long-term
☐ Short-term

1 = Noise Monitoring Location

RK engineering group, inc.

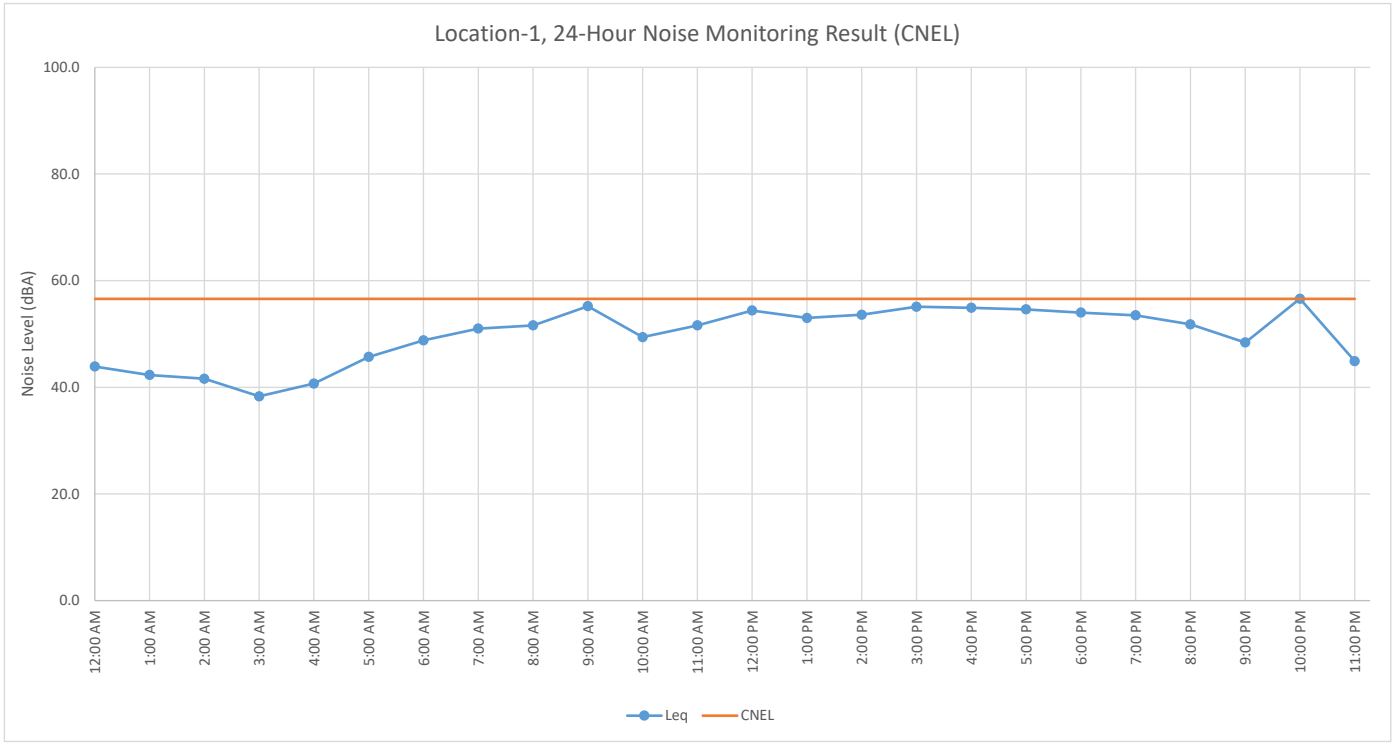
Field Sheet - Noise Monitoring Location 1 Photo

Project: Edison Park Pickleball Courts	**Engineer:** B. Estrada	**Date:**	5/16/23 - 5/18/23
		JN:	3092-2023-01
Measurement Address: Edison Park	**City:** Huntington Beach, CA	**Site No.:**	
Notes: Measurement was taken approximately 60 ft. south of the centerline of Stilwell Drive and approximately 475 ft. west of the centerline of Magnolia Street			1

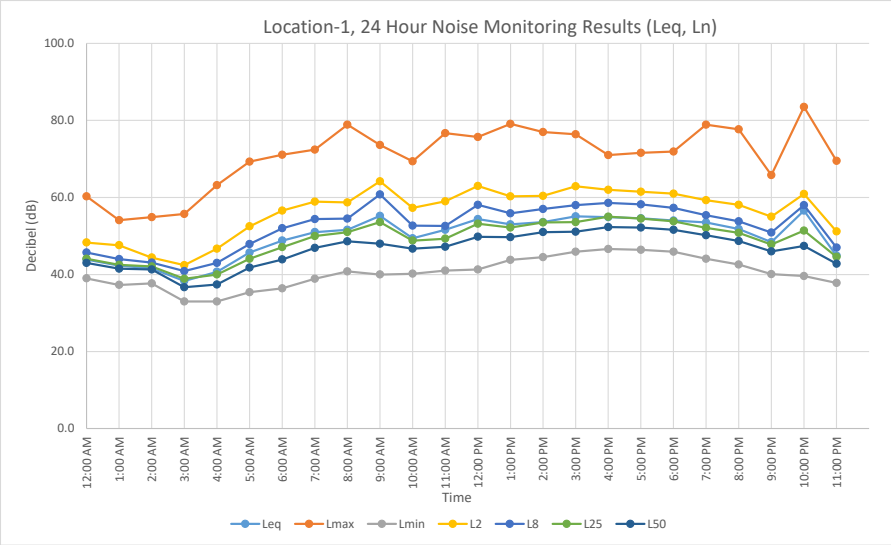
RK engineering group, inc.

Time	Leq	CNEL
12:00 AM	43.9	56.6
1:00 AM	42.3	56.6
2:00 AM	41.6	56.6
3:00 AM	38.3	56.6
4:00 AM	40.7	56.6
5:00 AM	45.7	56.6
6:00 AM	48.8	56.6
7:00 AM	51.0	56.6
8:00 AM	51.6	56.6
9:00 AM	55.2	56.6
10:00 AM	49.4	56.6
11:00 AM	51.6	56.6
12:00 PM	54.4	56.6
1:00 PM	53.0	56.6
2:00 PM	53.6	56.6
3:00 PM	55.1	56.6
4:00 PM	54.9	56.6
5:00 PM	54.6	56.6
6:00 PM	54.0	56.6
7:00 PM	53.5	56.6
8:00 PM	51.8	56.6
9:00 PM	48.4	56.6
10:00 PM	56.6	56.6
11:00 PM	44.9	56.6

Day Min:	48.4
Night Min	38.3



PROJECT:	Edison Park Pickleball Courts					JOB #:	3092-2023-01
NOISE METER:	Piccolo II SLM, 24-Hour Measurement					DATE:	5/16/23 - 5/18/23
LOCATION:	L-1					BY:	B. Estrada
Time	Leq	Lmax	Lmin	L2	L8	L25	L50
12:00 AM	43.9	60.3	39.0	48.3	45.7	44.1	43.0
1:00 AM	42.3	54.1	37.3	47.6	44.0	42.5	41.5
2:00 AM	41.6	54.9	37.7	44.4	43.1	42.1	41.3
3:00 AM	38.3	55.7	33.0	42.4	40.9	38.9	36.7
4:00 AM	40.7	63.2	33.0	46.7	43.0	40.0	37.4
5:00 AM	45.7	69.3	35.4	52.5	47.9	44.1	41.8
6:00 AM	48.8	71.1	36.4	56.6	52.0	47.1	43.9
7:00 AM	51.0	72.4	38.9	58.9	54.4	50.0	46.9
8:00 AM	51.6	78.9	40.8	58.7	54.5	51.0	48.6
9:00 AM	55.2	73.6	40.0	64.2	60.8	53.6	48.0
10:00 AM	49.4	69.4	40.2	57.3	52.7	48.8	46.7
11:00 AM	51.6	76.7	41.0	59.0	52.6	49.3	47.2
12:00 PM	54.4	75.7	41.3	63.0	58.1	53.2	49.8
1:00 PM	53.0	79.1	43.8	60.3	55.9	52.2	49.7
2:00 PM	53.6	77.0	44.5	60.4	57.0	53.5	51.0
3:00 PM	55.1	76.4	45.9	62.9	58.0	53.6	51.1
4:00 PM	54.9	71.0	46.6	62.0	58.6	55.0	52.3
5:00 PM	54.6	71.6	46.4	61.5	58.2	54.5	52.2
6:00 PM	54.0	71.9	45.9	61.0	57.3	53.8	51.6
7:00 PM	53.5	78.9	44.1	59.3	55.4	52.1	50.2
8:00 PM	51.8	77.7	42.6	58.1	53.8	50.8	48.7
9:00 PM	48.4	65.8	40.1	55.0	50.9	47.8	46.0
10:00 PM	56.6	83.5	39.6	60.9	58.0	51.4	47.4
11:00 PM	44.9	69.5	37.8	51.2	47.0	44.6	42.8
Daytime	53.5	83.5	38.9	60.7	56.7	52.4	49.7
Nighttime	44.4	71.1	33.0	50.9	46.8	43.6	41.6



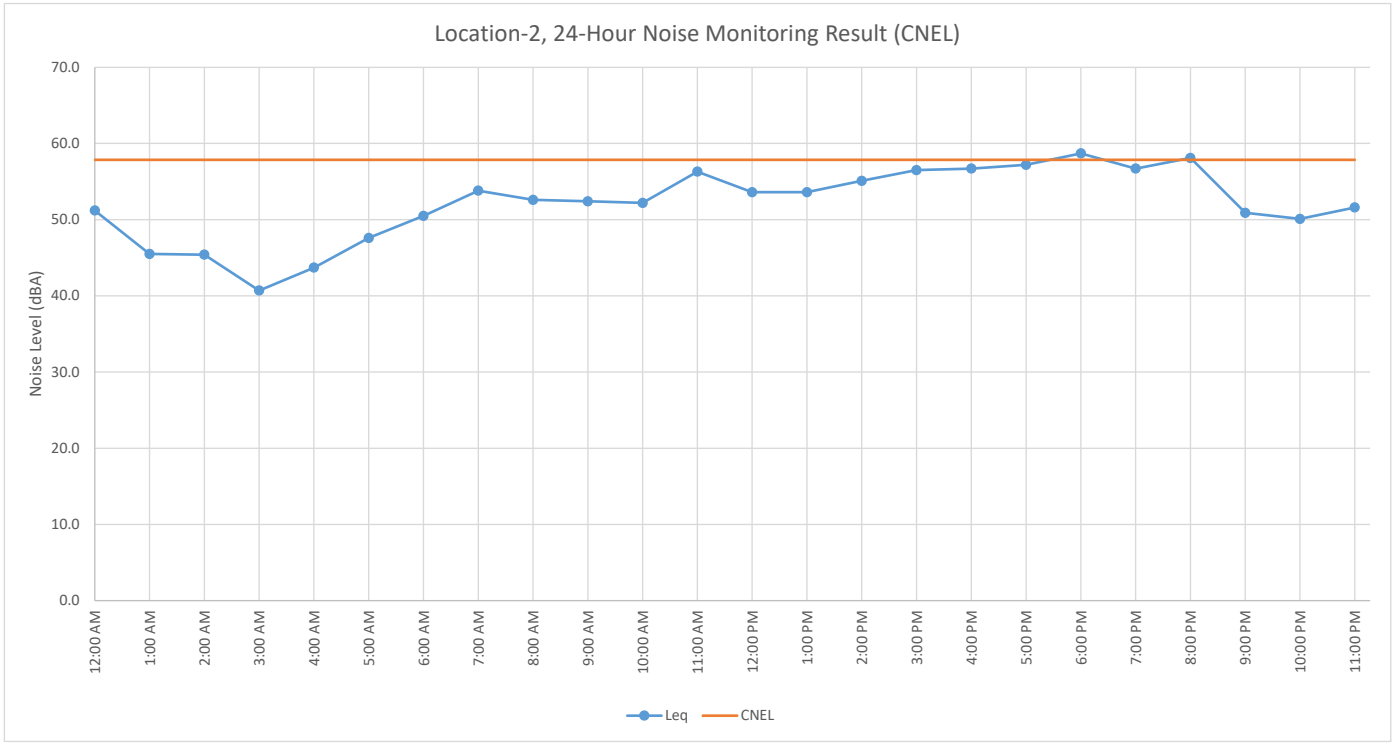
Field Sheet - Noise Monitoring Location 2 Photo

Project: Edison Park Pickleball Courts	**Engineer:** B. Estrada	**Date:**	5/16/23 - 5/18/23
		JN:	3092-2023-01
Measurement Address: Edison Park	**City:** Menifee, CA	**Site No.:**	
Notes: Measurement was taken approximately 350 ft. north of the centerline of Hamilton Ave. and approximately 1,260 ft. west of the centerline of Magnolia St.			1

RK engineering group, inc.

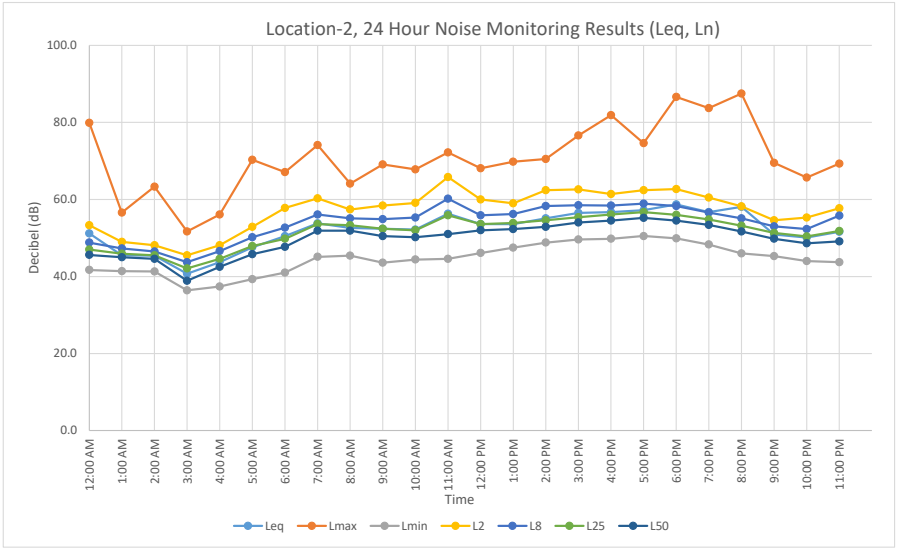
Time	Leq	CNEL
12:00 AM	51.2	57.8
1:00 AM	45.5	57.8
2:00 AM	45.4	57.8
3:00 AM	40.7	57.8
4:00 AM	43.7	57.8
5:00 AM	47.6	57.8
6:00 AM	50.5	57.8
7:00 AM	53.8	57.8
8:00 AM	52.6	57.8
9:00 AM	52.4	57.8
10:00 AM	52.2	57.8
11:00 AM	56.3	57.8
12:00 PM	53.6	57.8
1:00 PM	53.6	57.8
2:00 PM	55.1	57.8
3:00 PM	56.5	57.8
4:00 PM	56.7	57.8
5:00 PM	57.2	57.8
6:00 PM	58.7	57.8
7:00 PM	56.7	57.8
8:00 PM	58.1	57.8
9:00 PM	50.9	57.8
10:00 PM	50.1	57.8
11:00 PM	51.6	57.8

Day Min:	50.9
Night Min	40.7



PROJECT:	Edison Park Pickleball Courts					JOB #:	3092-2023-01
NOISE METER:	Piccolo II SLM, 24-Hour Measurement					DATE:	5/16/23 - 5/18/23
LOCATION:	L-1					BY:	B. Estrada

Time	Leq	Lmax	Lmin	L2	L8	L25	L50
12:00 AM	51.2	79.9	41.7	53.3	48.8	47.0	45.6
1:00 AM	45.5	56.6	41.4	49.0	47.3	45.9	45.0
2:00 AM	45.4	63.3	41.3	48.1	46.5	45.5	44.6
3:00 AM	40.7	51.7	36.4	45.5	43.7	42.1	38.9
4:00 AM	43.7	56.1	37.4	48.1	46.6	44.6	42.5
5:00 AM	47.6	70.3	39.3	52.9	50.2	47.9	45.8
6:00 AM	50.5	67.1	41.0	57.8	52.7	49.8	47.7
7:00 AM	53.8	74.1	45.1	60.3	56.1	53.6	51.9
8:00 AM	52.6	64.1	45.4	57.4	55.1	53.3	51.9
9:00 AM	52.4	69.1	43.6	58.4	54.9	52.4	50.5
10:00 AM	52.2	67.8	44.4	59.1	55.3	52.0	50.2
11:00 AM	56.3	72.2	44.6	65.8	60.2	55.9	51.0
12:00 PM	53.6	68.1	46.1	60.0	55.9	53.6	52.0
1:00 PM	53.6	69.8	47.5	59.0	56.2	53.9	52.3
2:00 PM	55.1	70.5	48.8	62.4	58.3	54.6	52.9
3:00 PM	56.5	76.6	49.6	62.6	58.5	55.4	54.0
4:00 PM	56.7	81.9	49.8	61.4	58.4	56.1	54.5
5:00 PM	57.2	74.6	50.5	62.4	58.9	56.7	55.2
6:00 PM	58.7	86.6	49.9	62.7	58.3	56.0	54.5
7:00 PM	56.7	83.7	48.3	60.5	56.6	54.8	53.4
8:00 PM	58.1	87.5	46.0	58.2	55.1	53.2	51.7
9:00 PM	50.9	69.5	45.3	54.6	53.0	51.3	49.8
10:00 PM	50.1	65.7	44.0	55.3	52.3	50.4	48.6
11:00 PM	51.6	69.3	43.7	57.7	55.8	51.8	49.1
Daytime	55.4	87.5	43.6	60.9	56.9	54.3	52.5
Nighttime	48.4	79.9	36.4	53.6	50.6	47.8	45.7



Appendix C

Bonita Canyon Courts Referenced Noise Levels
Field Data and Photos

Field Sheet

Project: Pickleball Courts Reference Noise Levels
Engineer: B. Morrison
Date: 05/10/2023
JN: 3092-2023-02

Measurement Address: Bonita Canyon Pickleball Courts
City: Newport Beach, CA
Site No.: 1

Sound Level Meter:
Piccolo II
Serial # P0222082204
P0222082205
P0221010801

Calibrator:
BSWA
Serial # 500732

Calibration Record:

	Input, dB/	Time
Meter 1	94.0	9:54 AM
Meter 2	94.0	9:56 AM
Meter 3	/	/
Meter 4	/	/
Meter 5	/	/

Conditions:

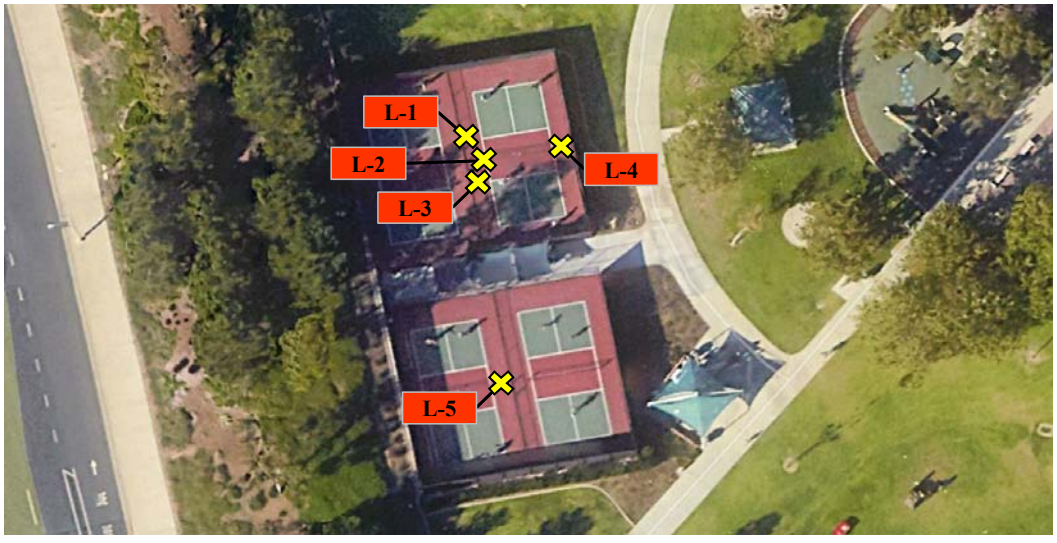
Temp:	63 Deg. F.
Windspeed:	6 m.p.h.
Direction:	Southwest
Skies:	Partly Cloudy

Meter Settings:
☑ A-WTD ☐ C-WTD | ☐ LINEAR ☐ IMPULSE | ☑ SLOW ☐ FAST | ☐ 1/1 OCT ☐ 1/3 OCT | ☐ ___ MINUTE INTERVALS ☑ L(N) PERCENTILE VALUES

Notes:
The noise measurement site consists of four pickleball courts, located approximately 178 feet from the centerline of Macarthur Boulevard. All four courts were active during each of the 15-minute measurements. Ambient noise during the measurement periods consisted of noise from active pickleball play, people speaking, and minimal roadway noise along MacArthur Boulevard.

Measurement Type:
☐ Long-term
☑ Short-term

		Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
Interval	L-1	10:25 AM	10:50 AM	70.2	83.8	56.9	76.7	73.8	70.9	68.3
		Comments: Measurement was taken approximately 14 feet northwest of the center of the northeastern pickleball court and approximately 208 feet east of the centerline of MacArthur Boulevard.								
	L-2	10:02 AM	10:17 AM	70.1	83.6	57.8	76.9	73.5	70.4	68.0
		Comments: Measurement was taken approximately 13 feet west of the center of the northeastern pickleball court and approximately 208 feet east of the centerline of MacArthur Boulevard.								
	L-3	10:25 AM	10:50 AM	69.6	82.6	56.9	76.1	73.3	70.1	67.7
		Comments: Measurement was taken approximately 14 feet southwest of the center of the northeastern pickleball court and approximately 207 feet east of the centerline of MacArthur Boulevard.								
	L-4	10:02 AM	10:17 AM	69.9	84.5	57.5	77.2	73.3	70.1	67.8
		Comments: Measurement was taken approximately 13 feet east of the center of the northeastern pickleball court and approximately 234 feet east of the centerline of MacArthur Boulevard.								
	L-5	11:11 AM	11:26 AM	71.4	85.7	55.1	79.0	75.0	71.5	68.6
		Comments: Measurement was taken approximately 16 feet east of the center of the southwestern pickleball court and approximately 203 feet east of the centerline of MacArthur Boulevard.								



1 = Noise Monitoring Location

RK engineering group, inc.

Field Sheet - Photos

Project: Pickleball Courts Reference Noise Levels	**Engineer:** B. Morrison	**Date:** 05/10/2023 **JN:** 3092-2023-02
Measurement Address: Bonita Canyon Pickleball Courts	**City:** Newport Beach, CA	**Meter No.:** 1

RK engineering group, inc.

Field Sheet - Photos

Project: Pickleball Courts Reference Noise Levels	**Engineer:** B. Morrison	**Date:** 05/10/2023 **JN:** 3092-2023-02
Measurement Address: Bonita Canyon Pickleball Courts	**City:** Newport Beach, CA	**Meter No.:** 2

RK engineering group, inc.

Appendix D

Noise Analysis Results
(SoundPLAN Results Sheets)

Leq Scenario

Contribution levels of the receivers

Source name		Traffic lane	Level Day	Night
			dB(A)	
1	1.Fl		43.6	0.0
1		-	36.3	-
2		-	36.3	-
3		-	36.0	-
4		-	35.5	-
5		-	38.2	-
2	1.Fl		45.6	0.0
1		-	38.2	-
2		-	38.4	-
3		-	38.2	-
4		-	36.8	-
5		-	40.7	-
3	1.Fl		46.9	0.0
1		-	34.9	-
2		-	36.4	-
3		-	39.5	-
4		-	39.6	-
5		-	43.6	-
4	1.Fl		38.5	0.0
1		-	32.7	-
2		-	32.2	-
3		-	30.7	-
4		-	30.2	-
5		-	31.1	-
5	1.Fl		42.4	0.0
1		-	37.4	-
2		-	36.6	-
3		-	34.1	-
4		-	33.5	-
5		-	33.8	-
6	1.Fl		38.0	0.0
1		-	32.7	-
2		-	32.2	-
3		-	30.1	-
4		-	29.6	-
5		-	29.0	-
7	1.Fl		43.9	0.0
1		-	33.3	-
2		-	34.1	-
3		-	37.7	-
4		-	39.0	-
5		-	37.6	-

Lmax Scenario

Contribution levels of the receivers

Source name		Traffic lane	Level Day	Level Night
			dB(A)	
1	1.Fl		57.9	0.0
1		-	50.7	-
2		-	50.6	-
3		-	50.3	-
4		-	49.8	-
5		-	52.5	-
2	1.Fl		59.9	0.0
1		-	52.5	-
2		-	52.7	-
3		-	52.5	-
4		-	51.1	-
5		-	55.0	-
3	1.Fl		61.2	0.0
1		-	49.2	-
2		-	50.7	-
3		-	53.8	-
4		-	53.9	-
5		-	57.9	-
4	1.Fl		52.8	0.0
1		-	47.0	-
2		-	46.5	-
3		-	45.0	-
4		-	44.5	-
5		-	45.4	-
5	1.Fl		56.7	0.0
1		-	51.7	-
2		-	50.9	-
3		-	48.4	-
4		-	47.8	-
5		-	48.1	-
6	1.Fl		52.3	0.0
1		-	47.0	-
2		-	46.5	-
3		-	44.4	-
4		-	43.9	-
5		-	43.3	-
7	1.Fl		58.2	0.0
1		-	47.6	-
2		-	48.4	-
3		-	52.0	-
4		-	53.3	-
5		-	51.9	-