

RENAISSANCE ESMERALDA RESORT AND SPA PICKLEBALL NOISE STUDY

APRIL 15, 2025

PREPARED FOR:
THE CITY OF INDIAN WELLS

PREPARED BY:

ACOUSTICS GROUP, INC.
CONSULTANTS IN ACOUSTICS, NOISE & VIBRATION

RENAISSANCE ESMERALDA RESORT AND SPA PICKLEBALL NOISE STUDY

Prepared for:
Luis Rubalcava and Maria Alvarez
City of Indian Wells
44-950 Eldorado Drive
Indian Wells, CA 92210

Prepared by:
Robert Woo – Principal Acoustical Consultant, INCE
Angelica Nguyen – Senior Acoustical Consultant

ACOUSTICS GROUP, INC.
CONSULTANTS IN ACOUSTICS, NOISE & VIBRATION
(877) 595-9988

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
INTRODUCTION 3
NOISE FUNDAMENTALS 5
NOISE STANDARDS 7
AMBIENT AND PICKLEBALL NOISE SURVEY 7
Methodology 7
Ambient Noise Survey 8
Propagation noise survey 9
Pickleball Demonstration Survey 10
NOISE ANALYSIS AND IMPACT ASSESSMENT 11
Methodology 11
Noise Analysis 12
NOISE CONTROL ANALYSIS 20
General Noise Control Options for Greater Compliance Levels 25
FREQUENCY CONTENT OF TENNIS AND PICKLEBALL NOISE 26
CONCLUSION 27
APPENDICES 28

Tables

Table 1. Indian Wells Residential Exterior Noise Standard 7
Table 2. Existing Ambient Noise Levels 9
Table 3. Summary of Pickleball Leq Noise Levels and Impact Assessment 13
Table 4. Summary of Pickleball Lmax Noise Levels and Impact Assessment..... 13
Table 5. Impact Assessment of Pickleball Noise at NM1 15
Table 6. Impact Assessment of Pickleball Noise at NM2A..... 16
Table 7. Impact Assessment of Pickleball Noise at NM3A..... 17
Table 8. Impact Assessment of Pickleball Noise at NM4 18
Table 9. Impact Assessment of Pickleball Noise at NM5 19
Table 10. Minimum Sound Transmission Loss for Acoustic Blanket Barrier 20
Table 11. Minimum Sound Absorption for Acoustic Blanket Barrier 20
Table 12. Assessment of Pickleball Leq Noise Levels Noise Control Options 1, 2 and 3 24
Table 13. Assessment of Pickleball Lmax Noise Levels Noise Control Options 1, 2, and 3 24

Figures

Figure 1. Locations of the Proposed Pickleball Courts..... 3
Figure 2. Proposed Pickleball Four (4) Court Layout 4
Figure 3. Typical A-weighted Noise Levels 6
Figure 4. Noise Measurement Locations..... 8
Figure 5. Pickleball Impact Noise Spectral Data 10
Figure 6. Pickleball Leq, dBA Noise Contour Map 14
Figure 7. Comparison of Future Pickleball Noise with Ambient Noise at NM1 15
Figure 8. Comparison of Future Pickleball Noise with Ambient Noise and Residential Noise Standard at NM2A..... 16
Figure 9. Comparison of Future Pickleball Noise with Ambient Noise and Residential Noise Standard at NM3A..... 17
Figure 10. Comparison of Future Pickleball Noise with Ambient Noise at NM4 18
Figure 11. Comparison of Future Pickleball Noise with Ambient Noise at NM5 19
Figure 12. Location of Noise Barrier..... 20
Figure 13. Leq, dBA Noise Contour Map – Noise Control Option 1 (Barrier) 21
Figure 14. Leq, dBA Noise Contour Map – Noise Control Option 2 (Barrier & Hush).... 22
Figure 15. Leq, dBA Noise Contour Map – Noise Control Option 3 (Hush)..... 23
Figure 16. Frequency Content of Pickleball vs Tennis Strike 26

EXECUTIVE SUMMARY

Acoustics Group, Inc., (AGI) was retained by the City of Indian Wells to evaluate pickleball noise for the proposed pickleball courts at the Renaissance Esmeralda Resort and Spa. The Resort proposes adding four (4) pickleball courts directly east of the existing tennis courts. AGI has reviewed the City of Indian Wells Noise Standard, conducted ambient noise level measurements, conducted a propagation survey which considers local environmental factors, analyzed pickleball noise, assessed the impact of the pickleball noise, and evaluated noise control measures for reducing the noise at the nearby residential homes.

The Leq from the pickleball play on the proposed four (4) courts was determined to be 45.6, 36.0, 40.5, 49.5, and 65.6 dBA at locations NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 60.6, 51.0, 55.5, 64.5, and 80.6 dBA at the same locations. NM1, NM4, and NM5 are located within resort commercial zones, while NM2A and NM3A are located in residential zones. At locations NM2A and NM3A, future pickleball noise will comply with the City's Daytime Residential Noise Standard of 55 dBA and the Residential Lmax standard of 75 dBA. At locations NM1 and NM4, future pickleball noise will below the existing ambient noise level and the City's Daytime Residential Noise Standard and Lmax standard of 55 and 75 dBA, respectively; however, NM1 and NM4 are located within resort commercial area and not subject to residential noise standards. Although the noise level at NM5 exceeds the ambient noise level and the residential Leq and Lmax standards, the receptor is located within the resort commercial area and is not subject to residential noise limits per the City's Ordinance. The Ordinance permits higher noise levels in commercial properties, evaluating such noise based on its impact on adjacent sensitive receptors such as nearby residential areas. Pickleball play could be audible during when ambient background noise is lower.

Three noise control options were evaluated to reduce the noise level at the nearby residences: Option 1 with a 10-ft high acoustic blanket noise barrier along the east and south sides of the courts, Option 2 with the use of the Hush Paddle and 10-ft high acoustic blanket noise barrier from Option 1, and Option 3 only the use of the Hush Paddle. With Option 1, the Leq from the pickleball activity would be reduced to 42.8, 33.3, 37.5, 49.5, and 61.4 dBA at NM1 through NM5, respectively. With Option 2, the noise level would be reduced to 39.1, 28.8, 33.1, 45.7, and 58.0 dBA at NM1 through NM5, respectively. With Option 3, the noise level would be reduced to 42.0, 31.5, 36.3, 45.7, and 62.2 dBA at NM1 through NM5, respectively.

The Hush Paddles assist in reducing pickleball impact noise between the frequency range of 800 to 2,000 Hertz and can help in reducing the potential "annoyance" of impact sounds from pickleball play. With all forms of noise control, the impulsive character of the noise could remain audible and may still be a source of annoyance to sensitive individuals,

especially when the ambient background noise level is lower during the early morning and late afternoon hours.

This report has been organized into multiple sections for ease of reference. Section 1 introduces the Project and provides a general discussion on Project Components. Section 2 discusses Noise Fundamentals. Section 3 presents the Indian Wells Noise Standards. Section 4 discusses the Ambient and Pickleball Noise Survey, Section 5 discusses the Noise Analysis and Impact Assessment. Section 6 presents the Noise Control Analysis, including Recommendations. Section 7 discusses general pickleball noise and Section 8 discusses the Conclusion.

(Remainder of page is blank)

INTRODUCTION

Acoustics Group, Inc., (AGI) was retained by the City of Indian Wells to evaluate pickleball noise for the proposed pickleball courts at the Renaissance Esmeralda Resort and Spa. Renaissance Esmeralda Resort and Spa is proposing the addition of four (4) pickleball courts and the City seeks to quantify the noise from proposed pickleball play and evaluate noise control if determined to be necessary. Figure 1 shows the location of the future pickleball courts with respect to Renaissance Esmeralda Resort and Spa, nearby residential homes, and future resort property. Figure 2 shows the four (4) pickleball court layout.



Figure 1. Locations of the Proposed Pickleball Courts

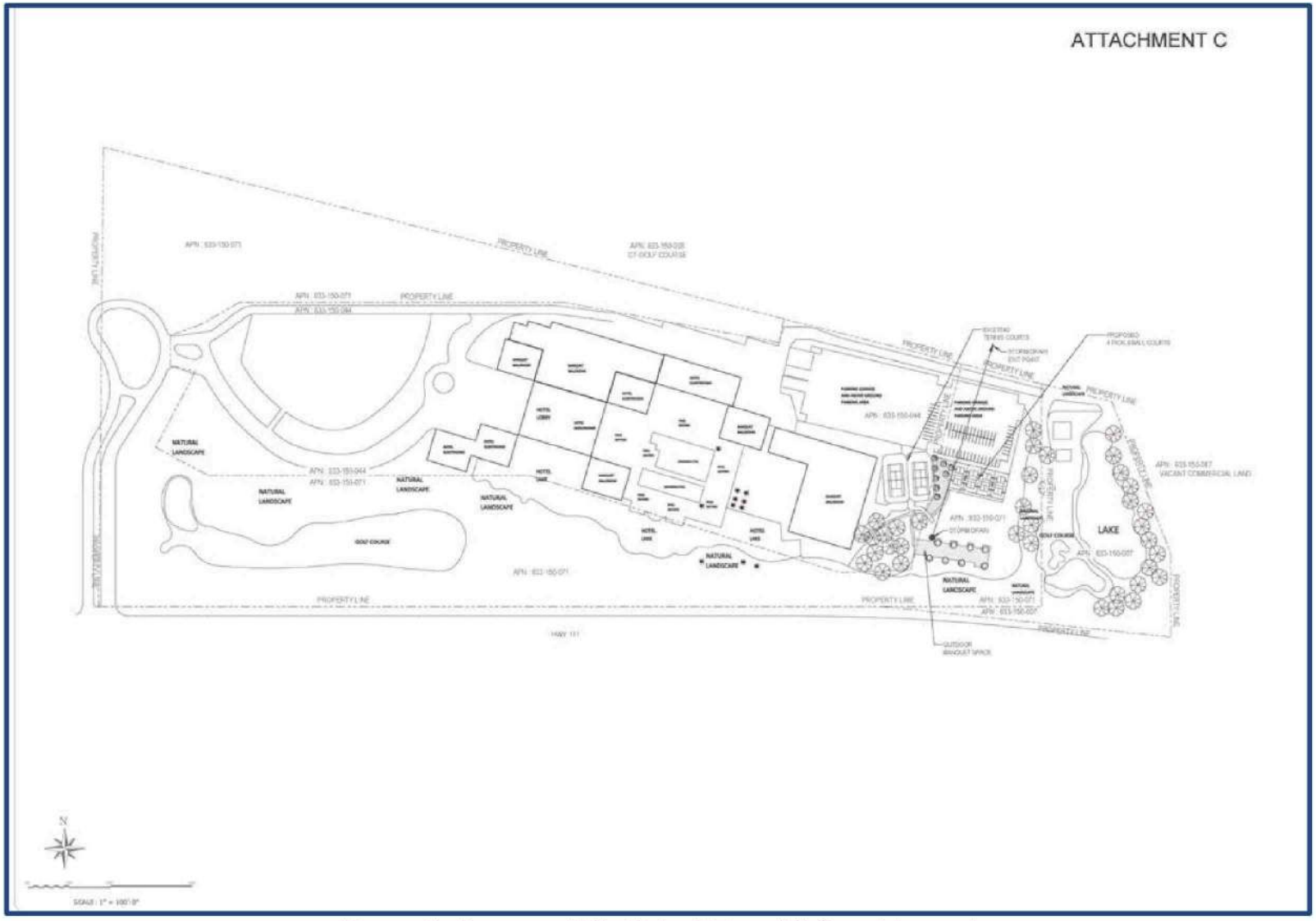


Figure 2. Proposed Pickleball Four (4) Court Layout

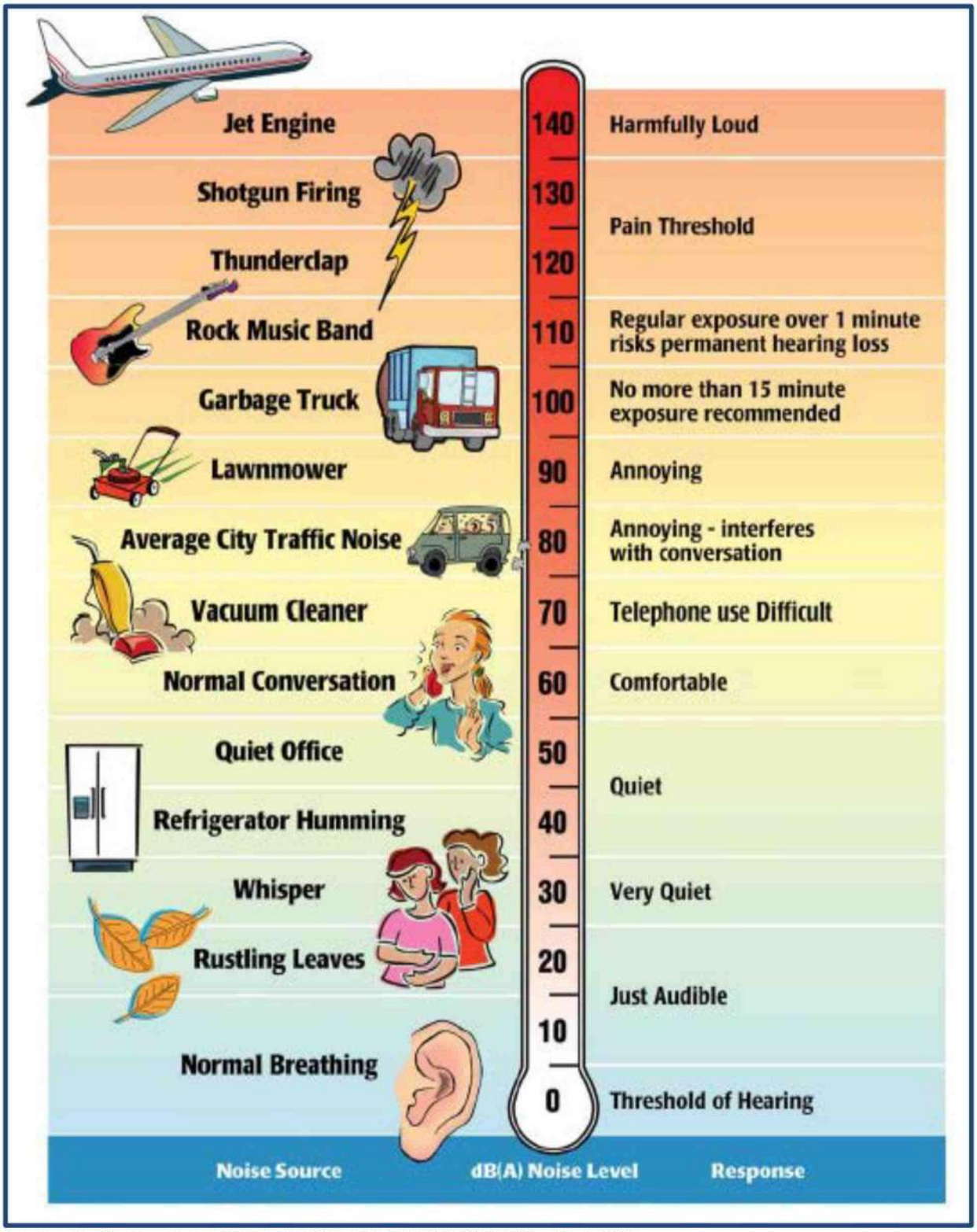
NOISE FUNDAMENTALS

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perceptibility is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB).

The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighting filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in "dBA" or "dB(A)". Figure 3 provides typical A-weighted sound levels measured for various sources, as well as people’s responses to these levels.

When sound is measured for distinct time intervals, the statistical distribution of the overall sound level can be obtained during that period. The energy-equivalent sound level (Leq) is the most common parameter associated with such measurements. The Leq metric is a single-number noise descriptor which represents the average sound level over a given period of time, where the actual sound level varies with time. Lmax, Lmin, and Lxx are also common noise descriptors. Lmax and Lmin are the maximum and minimum noise levels, respectively, and Lxx, known as a statistical sound level, is the time-varying noise level which would be exceeded xx percent of the time. For example, L50 is the average noise level that is exceeded 50% of the measurement duration or for 30-minutes in a 60-minute period.

.



Source: Melville Branch and R. Beland, 1970. EPA/ONAC 550/9-74-004, March 1974.

Figure 3. Typical A-weighted Noise Levels

NOISE STANDARDS

The City of Indian Wells Noise Ordinance Section 9.06.040 specifies exterior noise standards for residential uses. The City sets a cumulative Leq daytime and nighttime residential noise standard of 55 and 50 dBA, respectively. Additionally, there are increased noise level allowances for shorter cumulative time periods with a daytime and nighttime Lmax of 75 and 70 dBA, respectively. Additionally, if the ambient noise level exceeds the noise levels permitted by the 30 and 15 minutes per hour categories the allowed noise limit shall be increased in five (5) dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the daytime and nighttime residential Lmax of 75 and 70 dBA, respectively, the maximum ambient noise level shall be the noise limit. Table 1 summarizes the City of Indian Wells Noise Standards. Refer to Appendix B for the City of Indian Wells Noise Standards.

Table 1. Indian Wells Residential Exterior Noise Standard

Period	Leq, dB
Daytime (7:01AM to 10:00PM)	55
Nighttime (10:01PM to 7:00AM)	50

Note:

Decibels	Time Period, dBA (Daytime/Nighttime)	Cumulative Period
+3	58/53	30 minutes/hour
+5	60/55	15 minutes/hour
+10	65/60	5 minutes/hour
+15	70/65	1 minute/hour
+20	75/70	Not to be exceeded

Source: City of Indian Wells Municipal Code, Section 9.06

AMBIENT AND PICKLEBALL NOISE SURVEY

Methodology

Five (5) Brüel & Kjær Model 2270 Acoustical Analyzers were used to conduct the noise survey measurements. The analyzers are precision Type 1 instruments that were calibrated to laboratory standards. The instrument systems were field calibrated before and after the measurements to ensure accuracy and were operated per manufacturer's recommendations.

Ambient Noise Survey

AGI conducted a noise survey on March 25 to March 26, 2025, to document baseline ambient noise levels. Four long-term 24-hour noise measurements to document baseline noise levels: NM1 (future commercial hotel boundary to the east), NM4 (resort guestrooms to the west), and NM5 (resort property to the east) are located within resort commercial zones, while NM2 (residential to the southeast) and NM3 (residential to the south) are located in residential zones. Refer to Figure 4 for the location of the noise monitors.



Figure 4. Noise Measurement Locations

At NM1, the measured ambient Leq ranged from 45 to 56.6 dBA. At NM2, the measured ambient Leq ranged from 48.8 to 65.8 dBA. At NM3, the measured ambient Leq ranged from 51.3 to 65.8 dBA. At NM4, the measured ambient Leq ranged from 46.1 to 55.8 dBA. NM4 was placed between the 4th and 5th floor above the banquet ballroom shielding. At NM5, the measured ambient Leq ranged from 43.1 to 54.8 dBA. Noise sources at NM1, NM2, NM3, and NM5 included vehicular traffic and aircraft noise. At NM4, noise sources

included vehicular traffic and resort activity (people talking, walking by). Table 2 summarizes the ambient noise measurement data.

Table 2. Existing Ambient Noise Levels

Receiver		Existing Ambient Noise Levels, dBA				Description
		Time	Leq	Lmin	Lmax	
NM1	Future Hotel Resort to the East	3/25/25 3:00 PM – 3/26/25 3:00 PM	45.0 to 56.6	37.2	77.7	Vehicular Traffic, Aircraft
NM2	Nearest Residence to the Southeast	3/25/25 3:00 PM – 3/26/25 3:00 PM	48.8 to 65.8	32.8	95.7	Vehicular Traffic, Aircraft
NM3	Nearest Residence to the South	3/25/25 3:00 PM – 3/26/25 3:00 PM	51.3 to 65.8	34.7	90.4	Vehicular Traffic, Aircraft
NM4	Hotel Guestrooms (Worst Case between 4th and 5th floor above Banquet Ballroom shielding)	3/25/25 3:00 PM – 3/26/25 3:00 PM	46.1 to 55.8	48.7	64.7	Vehicular Traffic, Resort Activity
NM5	On Property Directly East of Proposed Courts	3/25/25 3:00 PM – 3/26/25 3:00 PM	43.1 to 54.8	35.9	62.4	Vehicular Traffic, Aircraft

Propagation noise survey

A propagation noise survey was conducted at the project site to quantify the sound attenuation and reflection between the proposed pickleball court location and the nearest residential or noise sensitive receptors. The survey included the acoustical effects including any reflection (from buildings, barriers, and structures) that could affect the propagation of noise from the pickleball courts to the nearest residential boundaries. The amount of attenuation is attributed to the topography, foliage, structures, and meteorological conditions. A broadband noise spectrum was generated with loudspeakers and simultaneously measured in the near field (at a distance of 25-feet from the source) and far field at each noise monitoring location (NM1 through NM5). The loudspeakers were configured with a source height of approximately 5-feet above the ground and noise measurements were conducted with a microphone height of approximately 5-feet above the ground. Noise measurement location ST4.1 experiences shielding from the Banquet Ballroom, therefore a long-term monitor (NM4) and an additional short-term measurement (ST4.2) was placed between the fourth and fifth floor. Additionally, measurements were taken at the Renaissance Esmeralda south wall (ST2.1, ST2.2, ST3.1, ST3.2), the north residential community wall (ST2.3, ST3.3), and at the residences (ST2.4, ST3.4) to measure the far-field attenuation and barrier attenuation. The noise measurement data was used to calibrate the noise model to accurately model the onsite acoustical conditions. Refer to Appendix A for the attenuation test data.

Pickleball Demonstration Survey

Demonstrative pickleball play was measured at a local pickleball facility near the City of Indian Wells on February 20, 2025, to document pickleball noise characteristics. Noise from pickleball play directly surrounding the court ranged from 62.1 to 63.3 dBA. Additional noise measurements were conducted at Tustin Pickleball on March 3, 2025, to document pickleball play with a quiet paddle, specifically Hush Paddles. At Tustin Pickleball, standard pickleball noise levels directly surrounding the court ranged from 63.7 to 73.8 dBA. When Quiet/Hush Paddles were used, the pickleball noise levels ranged from 44.7 to 73.6 dBA. Refer to the Appendix A for the pickleball noise measurement data.

Noise measurements of the pickleball play were processed and used to create acoustic source data for the noise control analysis. Adjustments were made to the data to account for advanced pickleball players with harder and louder ball strikes. Refer to Figure 5 for a plot of pickleball impact noise. The spectral content of a standard paddle impact noise typically ranges between 500 and 2,000 Hertz. The Hush and Owl Paddles reduce the impulsive noise of a pickleball strike and can assist in reducing the “annoyance” that can be associated with the noise created during pickleball play.

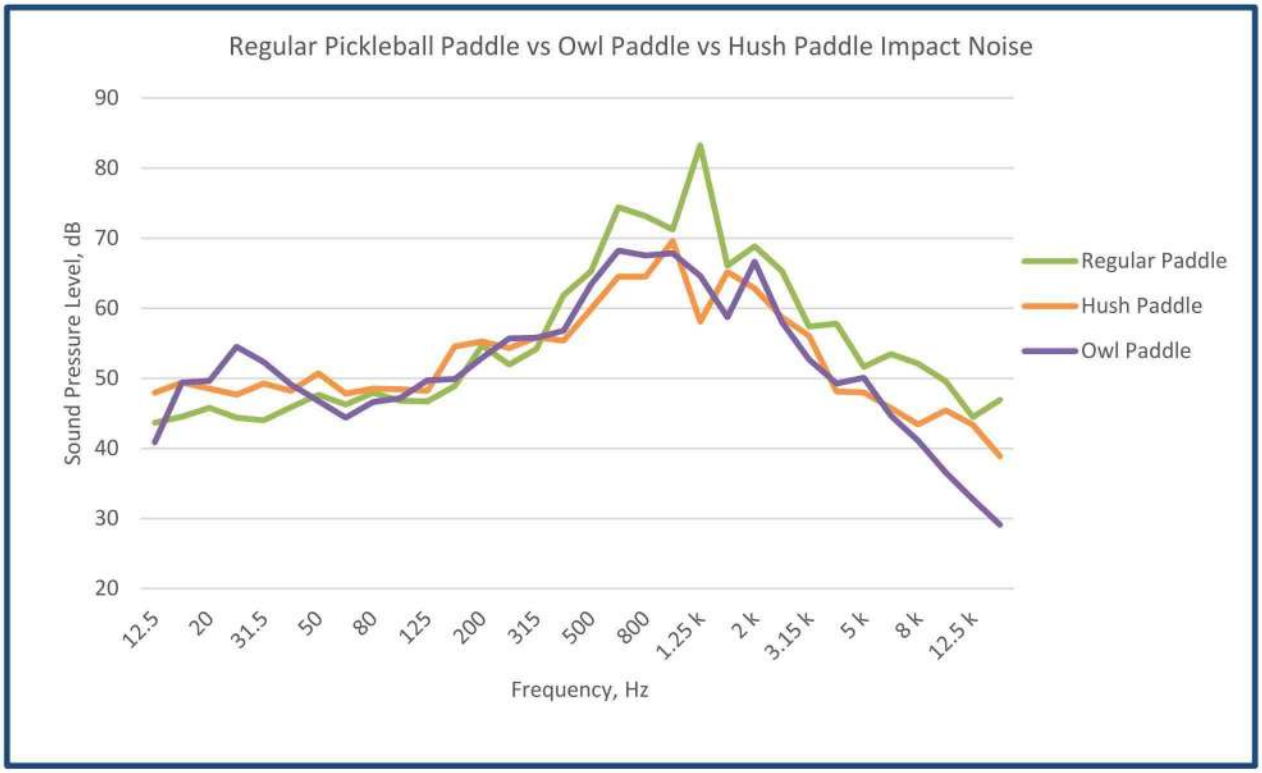


Figure 5. Pickleball Impact Noise Spectral Data

NOISE ANALYSIS AND IMPACT ASSESSMENT

Methodology

The methodology used to analyze and predict operations noise involved the use of the CadnaA computer noise model. CadnaA can simulate the physical environment by factoring in x, y, and z geometrics of a particular site to simulate the buildings, obstacles, and topography. The model uses industry recognized algorithms (ISO 9613) to perform acoustic analyses. The noise generated by future pickleball courts was calculated by inputting acoustic sources at the project site as well as site geometrics. AGI's measurement data from the pickleball noise measurements was used for the modeling inputs and calibration. All proposed courts were modeled to simulate and predict a full capacity noise analysis for continuous pickleball play during the hours from 8AM to 10PM. Pickleball play is expected to only occur during the daytime hours of 8AM to 10PM.

The CadnaA Noise Model was also used to evaluate noise control options. The use of the computer model allows the maximum noise level to be evaluated without interference from extraneous ambient noise sources.

Pickleball activity was modeled with meteorological conditions at 68 degrees F, relative humidity at 30% and zero wind. Changes in meteorological conditions can affect pickleball noise propagation and audibility at nearby residential boundaries.

(Remainder of page is blank)

Noise Analysis

The Leq from the pickleball play on the proposed four (4) courts was evaluated with the CadnaA Acoustical Model and determined to be 45.6, 36.0, 40.5, 49.5, and 65.6 dBA at locations NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 60.6, 51.0, 55.5, 64.5, 80.6 dBA at the same locations. NM4 was measured and modeled between the 4th and 5th floor above the shielding provided by the banquet ballroom building and pickleball noise levels at the ground floor would be lower due to the shielding. At locations NM2A and NM3A, future pickleball noise will comply with the City's Daytime Residential Noise Standard of 55 dBA. Pickleball noise will also comply with the Residential Lmax standard of 75 dBA during the daytime hours. At locations NM1 and NM4, future pickleball noise will below the existing ambient noise level and the City's Daytime Residential Noise Standard and Lmax standard of 55 and 75 dBA, respectively; however, NM1 and NM4 are located within resort commercial area and not subject to residential noise standards. Although the noise level at NM5 exceeds the existing ambient noise level, and the residential Leq and Lmax standards, the receptor is also located within a resort commercial area and is not subject to residential noise limits per the City's Ordinance. The Ordinance permits higher noise levels in commercial properties, evaluating such noise based on its impact on adjacent sensitive receptors, such as nearby residential areas.. Pickleball noise could remain audible and may still be a source of annoyance to sensitive individuals, especially when the ambient background noise level is lower.

Tables 3 and 4 summarize the pickleball noise levels with all four courts in play with impact assessment. Figure 6 presents the pickleball Leq noise contour map for a receptor height of 5-ft above the ground. Tables 5 through 9 present the hourly assessment at NM1 through NM5, respectively. Figures 7 through 11 present a comparison of pickleball noise, ambient noise, and the noise standard at NM1 through NM5, respectively.

Table 3. Summary of Pickleball Leq Noise Levels and Impact Assessment

Receptor	Land Use	4 courts - Pickleball Noise Level, Leq, dBA	Indian Wells Noise Standard, Leq, dBA (Daytime)	Ambient Noise Level, dBA[1]	Assessment (Daytime)
NM1	Commercial	45.6	N/A[5]	50.7 - 56.6	N/A[5]
NM2A	Residential	36.0	55	57.1 - 63.3[2]	**Compliance**
NM3A	Residential	40.5	55	56.1 - 60.4[3]	**Compliance**
NM4[4]	Commercial	49.5	N/A[5]	50.4 - 55.8	N/A[5]
NM5	Commercial	65.6	N/A[5]	48.3 - 54.8	N/A[5]

Note: [1] The pickleball courts are proposed to operate during the daytime hours of 8AM to 10PM.
[2]Hourly ambient noise levels for NM2A were calculated based on a simultaneous 24-hour ambient noise measurement at NM2.
[3]Hourly ambient noise levels for NM3A were calculated based on a simultaneous 24-hour ambient noise measurement at NM3.
[4]NM4 was measured and modeled between the 4th and 5th floor above the banquet ballroom shielding. Pickleball noise levels at the ground floor are expected to be lower.
[5]Receptors NM1, NM4, and NM5, are located within report commercial area and not subject to residential noise standards.

Table 4. Summary of Pickleball Lmax Noise Levels and Impact Assessment

Receptor	Land Use	4 courts - Pickleball Noise Level, Lmax, dBA	Indian Wells Noise Standard, Lmax, dBA (Daytime)	Assessment (Daytime)
NM1	Commercial	60.6	N/A[1]	N/A[1]
NM2A	Residential	51.0	75	**Compliance**
NM3A	Residential	55.5	75	**Compliance**
NM4[2]	Commercial	64.5	N/A[1]	N/A[1]
NM5	Commercial	80.6	N/A[1]	N/A[1]

Note: [1] Receptors NM1, NM4, and NM5, are located within report commercial area and not subject to residential noise standards.
[2]NM4 was measured and modeled between the 4th and 5th floor above the banquet ballroom shielding. Pickleball noise levels at the ground floor are expected to be lower.

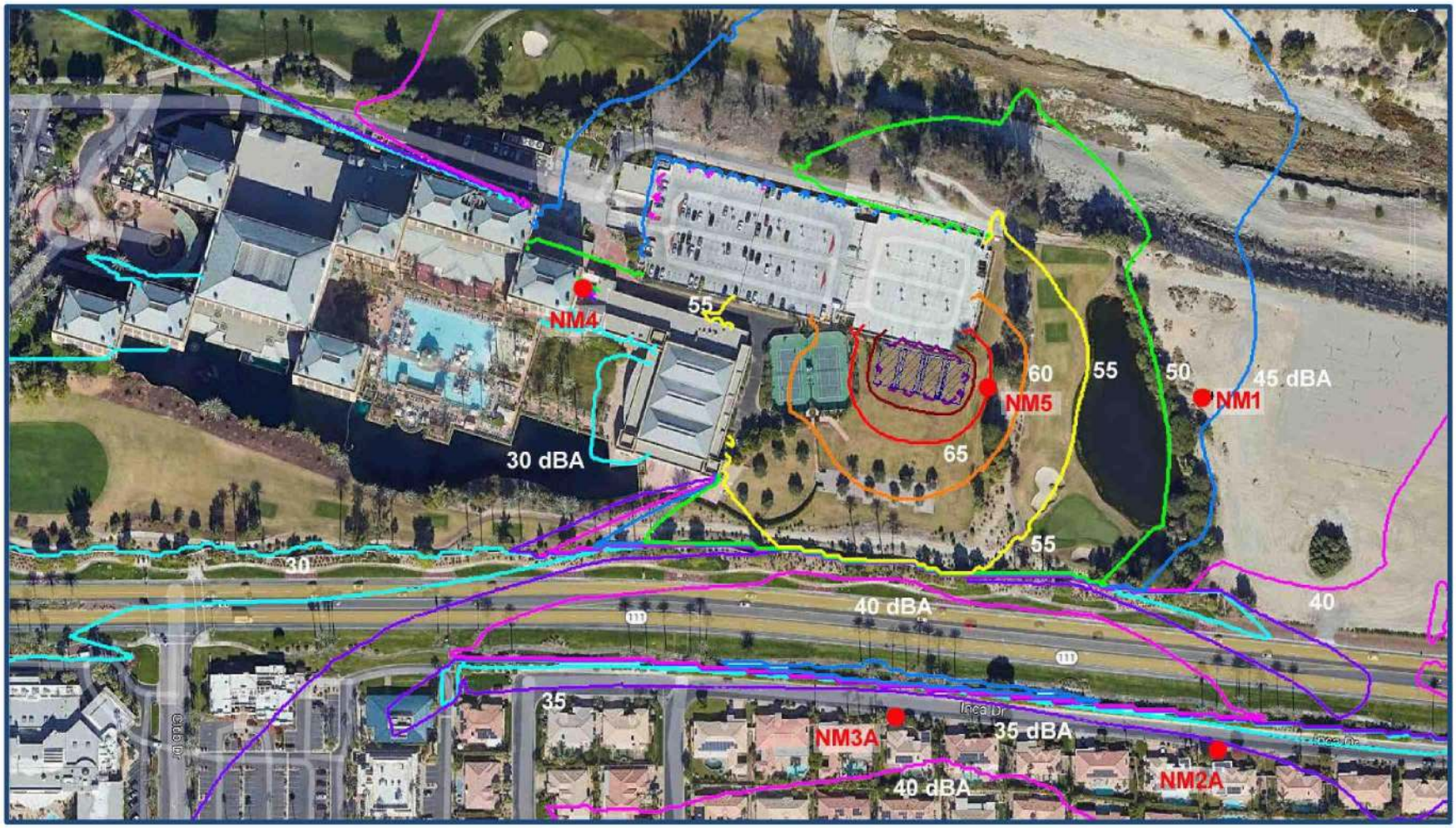
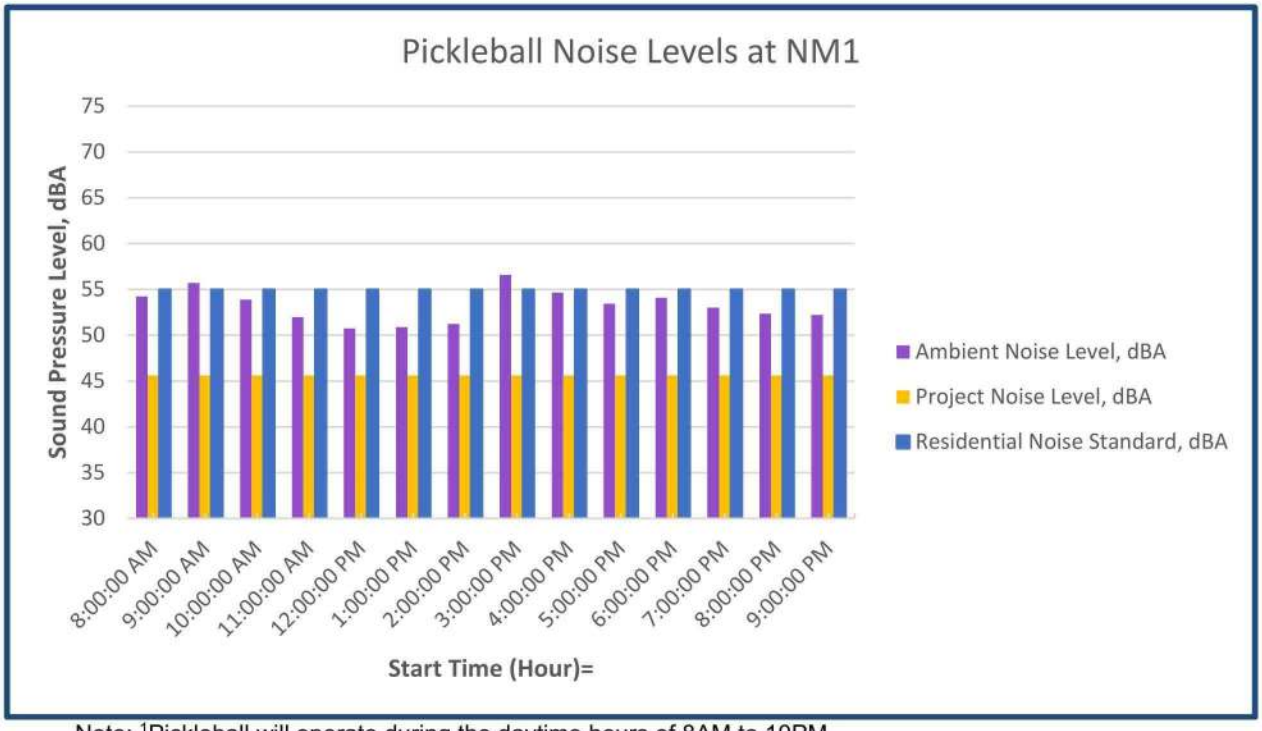


Figure 6. Pickleball Leq, dBA Noise Contour Map

Table 5. Impact Assessment of Pickleball Noise at NM1

Hour Start Time	Pickleball Noise Level, Leq, dBA[1]	Ambient Noise, Leq, dBA	Noise Standard, Leq, dBA[2]	Assessment
8:00 AM	45.6	54.3	N/A[2]	N/A[2]
9:00 AM	45.6	55.7	N/A[2]	N/A[2]
10:00 AM	45.6	53.9	N/A[2]	N/A[2]
11:00 AM	45.6	52.0	N/A[2]	N/A[2]
12:00 PM	45.6	50.7	N/A[2]	N/A[2]
1:00 PM	45.6	50.9	N/A[2]	N/A[2]
2:00 PM	45.6	51.2	N/A[2]	N/A[2]
3:00 PM	45.6	56.6	N/A[2]	N/A[2]
4:00 PM	45.6	54.7	N/A[2]	N/A[2]
5:00 PM	45.6	53.4	N/A[2]	N/A[2]
6:00 PM	45.6	54.1	N/A[2]	N/A[2]
7:00 PM	45.6	53.0	N/A[2]	N/A[2]
8:00 PM	45.6	52.3	N/A[2]	N/A[2]
9:00 PM	45.6	52.2	N/A[2]	N/A[2]

Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Receptor NM1 complies with residential noise standard but is located within report commercial areas and not subject to residential noise standards.



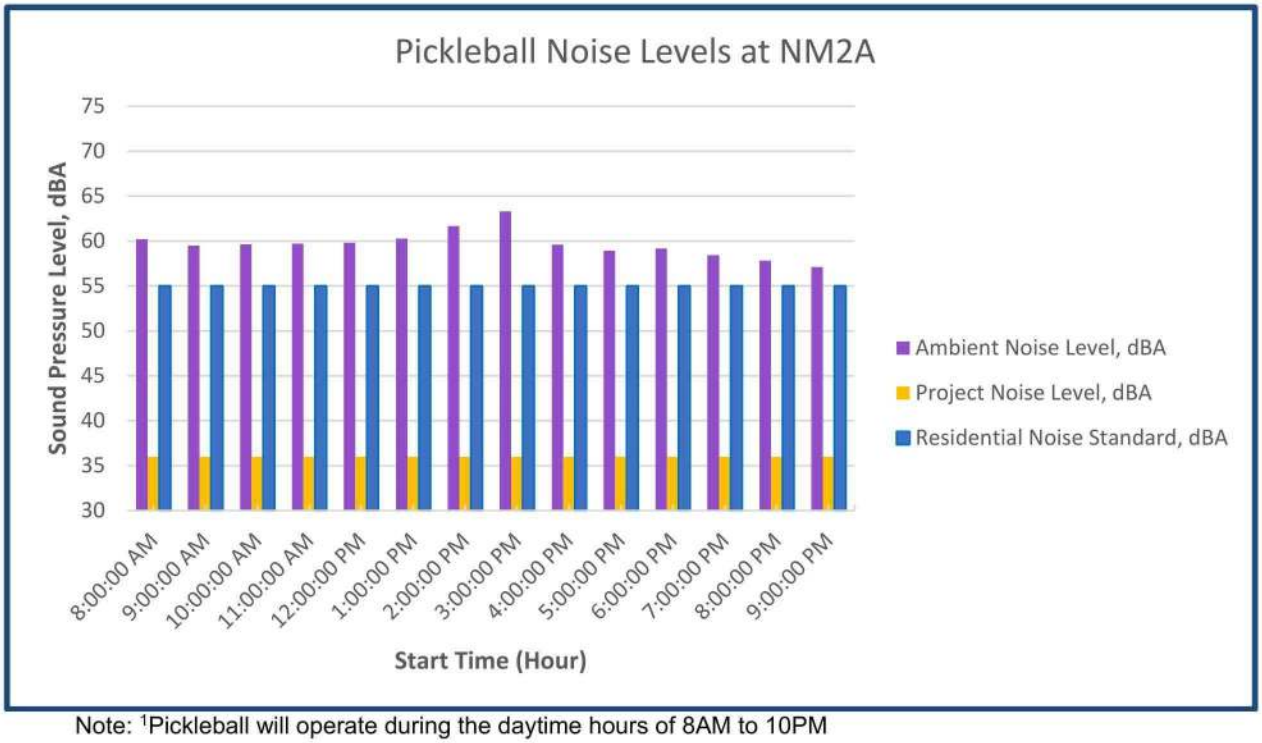
Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Receptor NM1 complies with residential noise standard but is located within report commercial areas and not subject to residential noise standards.

Figure 7. Comparison of Future Pickleball Noise with Ambient Noise at NM1

Table 6. Impact Assessment of Pickleball Noise at NM2A

Hour Start Time	Pickleball Noise Level, Leq, dBA[1]	Ambient Noise, Leq, dBA[2]	Noise Standard, Leq, dBA	Assessment
8:00 AM	36.0	60.2	55	Compliance
9:00 AM	36.0	59.5	55	Compliance
10:00 AM	36.0	59.6	55	Compliance
11:00 AM	36.0	59.7	55	Compliance
12:00 PM	36.0	59.8	55	Compliance
1:00 PM	36.0	60.3	55	Compliance
2:00 PM	36.0	61.7	55	Compliance
3:00 PM	36.0	63.3	55	Compliance
4:00 PM	36.0	59.6	55	Compliance
5:00 PM	36.0	58.9	55	Compliance
6:00 PM	36.0	59.2	55	Compliance
7:00 PM	36.0	58.4	55	Compliance
8:00 PM	36.0	57.8	55	Compliance
9:00 PM	36.0	57.1	55	Compliance

Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Hourly ambient noise levels for NM2A were calculated based on a simultaneous 24-hour ambient noise measurement at NM2.



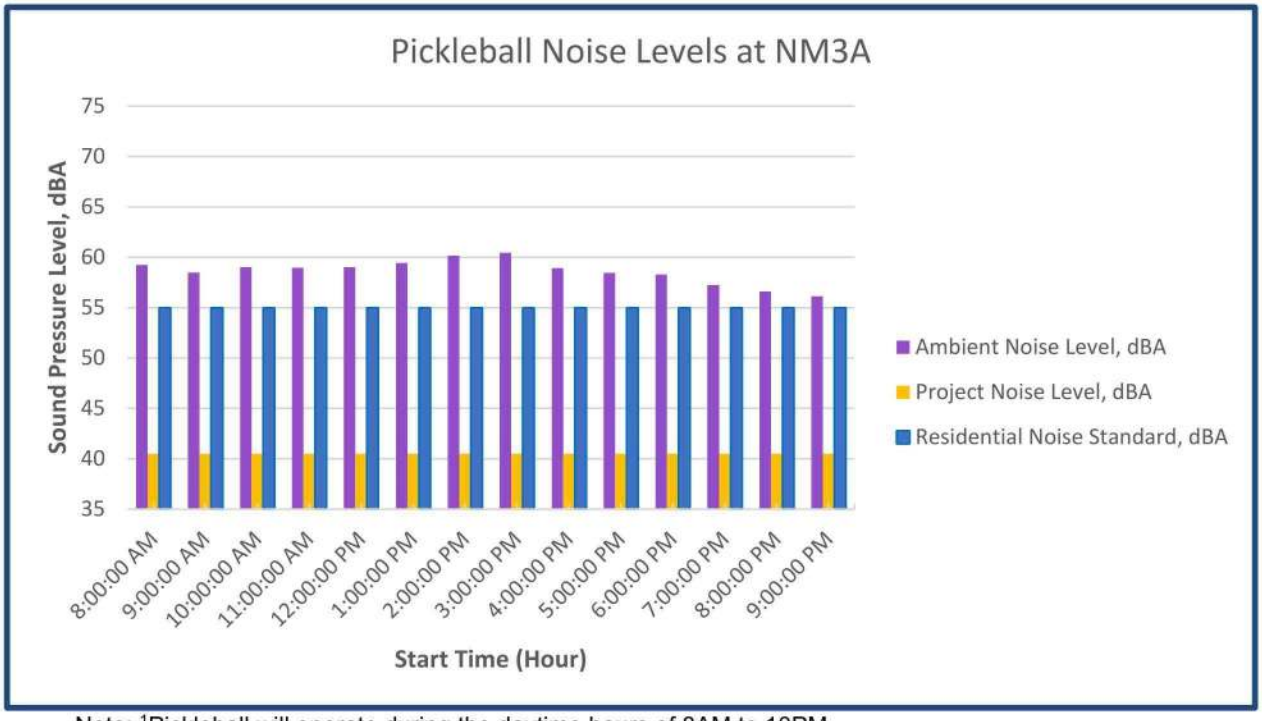
Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM

Figure 8. Comparison of Future Pickleball Noise with Ambient Noise and Residential Noise Standard at NM2A

Table 7. Impact Assessment of Pickleball Noise at NM3A

Hour Start Time	Pickleball Noise Level, Leq, dBA[1]	Ambient Noise, Leq, dBA[2]	Noise Standard, Leq, dBA	Assessment
8:00 AM	40.5	59.2	55	Compliance
9:00 AM	40.5	58.5	55	Compliance
10:00 AM	40.5	59.0	55	Compliance
11:00 AM	40.5	58.9	55	Compliance
12:00 PM	40.5	59.0	55	Compliance
1:00 PM	40.5	59.4	55	Compliance
2:00 PM	40.5	60.2	55	Compliance
3:00 PM	40.5	60.4	55	Compliance
4:00 PM	40.5	58.9	55	Compliance
5:00 PM	40.5	58.5	55	Compliance
6:00 PM	40.5	58.3	55	Compliance
7:00 PM	40.5	57.2	55	Compliance
8:00 PM	40.5	56.6	55	Compliance
9:00 PM	40.5	56.1	55	Compliance

Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Hourly ambient noise levels for NM3A were calculated based on a simultaneous 24-hour ambient noise measurement at NM3.



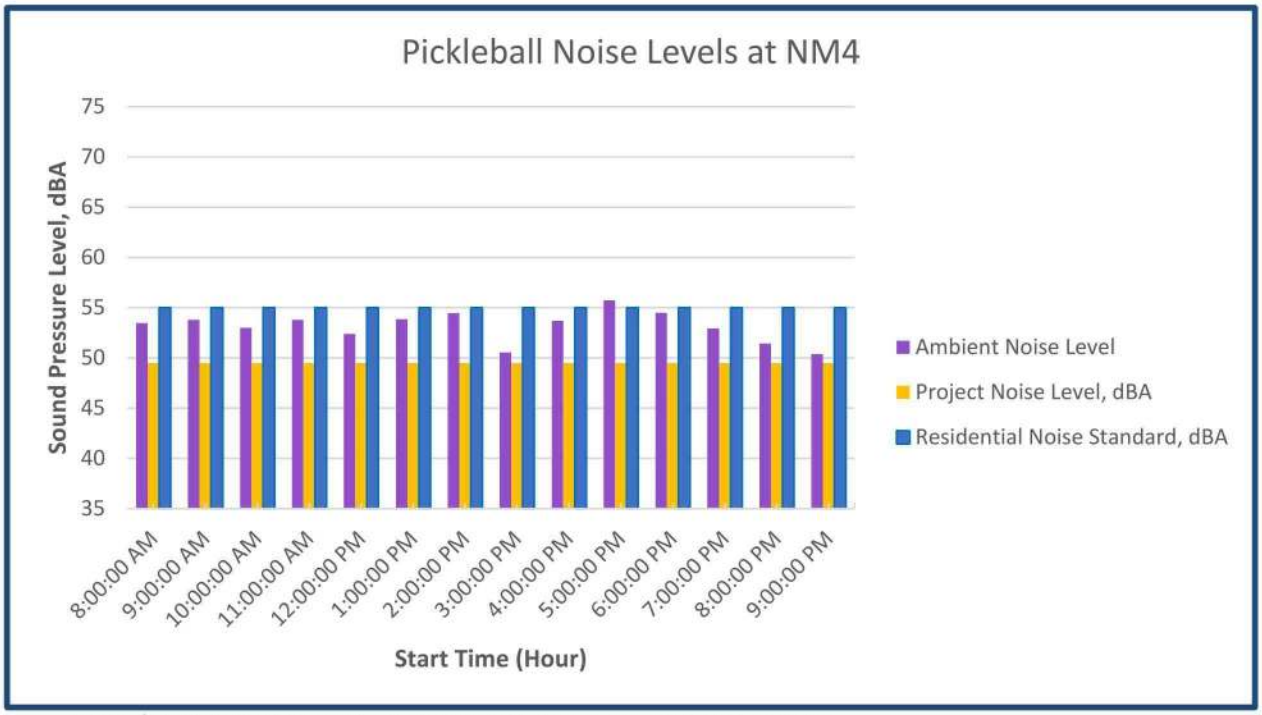
Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM

Figure 9. Comparison of Future Pickleball Noise with Ambient Noise and Residential Noise Standard at NM3A

Table 8. Impact Assessment of Pickleball Noise at NM4

Hour Start Time	Pickleball Noise Level, Leq, dBA[1]	Ambient Noise, Leq, dBA	Noise Standard, Leq, dBA[3]	Assessment[2]
8:00 AM	49.5	53.5	N/A[3]	N/A[3]
9:00 AM	49.5	53.8	N/A[3]	N/A[3]
10:00 AM	49.5	53.0	N/A[3]	N/A[3]
11:00 AM	49.5	53.8	N/A[3]	N/A[3]
12:00 PM	49.5	52.4	N/A[3]	N/A[3]
1:00 PM	49.5	53.9	N/A[3]	N/A[3]
2:00 PM	49.5	54.5	N/A[3]	N/A[3]
3:00 PM	49.5	50.6	N/A[3]	N/A[3]
4:00 PM	49.5	53.7	N/A[3]	N/A[3]
5:00 PM	49.5	55.8	N/A[3]	N/A[3]
6:00 PM	49.5	54.5	N/A[3]	N/A[3]
7:00 PM	49.5	52.9	N/A[3]	N/A[3]
8:00 PM	49.5	51.4	N/A[3]	N/A[3]
9:00 PM	49.5	50.4	N/A[3]	N/A[3]

Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]NM4 was measured and modeled between the 4th and 5th floor above the banquet ballroom shielding. Pickleball noise levels at the ground floor are expected to be lower.
[3]Receptor NM4 complies with residential noise standard but is located within report commercial areas and not subject to residential noise standards.



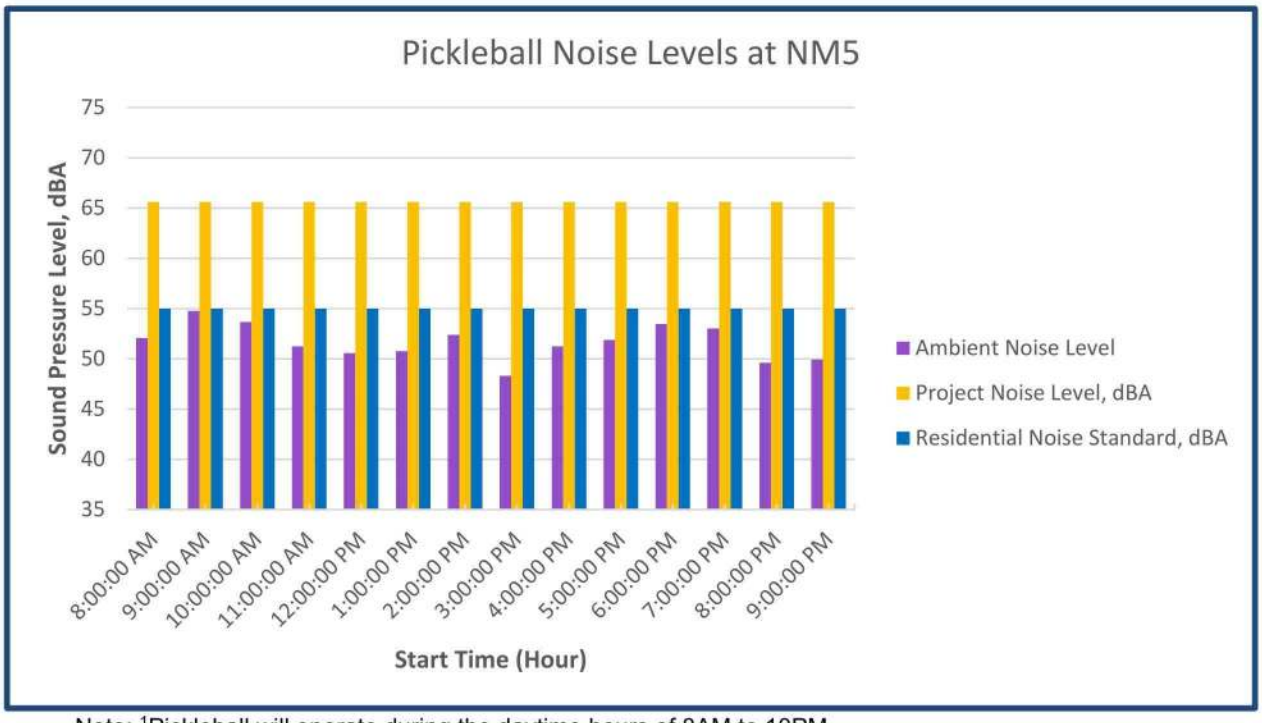
Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Receptor NM4 complies with residential noise standard but is located within report commercial areas and not subject to residential noise standards.

Figure 10. Comparison of Future Pickleball Noise with Ambient Noise at NM4

Table 9. Impact Assessment of Pickleball Noise at NM5

Hour Start Time	Pickleball Noise Level, Leq, dBA[1]	Ambient Noise, Leq, dBA	Noise Standard, Leq, dBA[2]	Assessment[2]
8:00 AM	65.6	52.1	N/A[2]	N/A[2]
9:00 AM	65.6	54.8	N/A[2]	N/A[2]
10:00 AM	65.6	53.7	N/A[2]	N/A[2]
11:00 AM	65.6	51.3	N/A[2]	N/A[2]
12:00 PM	65.6	50.6	N/A[2]	N/A[2]
1:00 PM	65.6	50.8	N/A[2]	N/A[2]
2:00 PM	65.6	52.4	N/A[2]	N/A[2]
3:00 PM	65.6	48.3	N/A[2]	N/A[2]
4:00 PM	65.6	51.3	N/A[2]	N/A[2]
5:00 PM	65.6	51.9	N/A[2]	N/A[2]
6:00 PM	65.6	53.5	N/A[2]	N/A[2]
7:00 PM	65.6	53.0	N/A[2]	N/A[2]
8:00 PM	65.6	49.6	N/A[2]	N/A[2]
9:00 PM	65.6	49.9	N/A[2]	N/A[2]

Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Receptor NM5 is located within report commercial areas and not subject to residential noise standards.



Note: [1]Pickleball will operate during the daytime hours of 8AM to 10PM
[2]Receptor NM5 is located within report commercial areas and not subject to residential noise standards.

Figure 11. Comparison of Future Pickleball Noise with Ambient Noise at NM5

NOISE CONTROL ANALYSIS

10-ft high Noise Barrier (Option 1)

Noise control was evaluated to evaluate options to further reduce pickleball noise at the nearest residences. Noise control evaluated a 10-foot high continuous acoustic blanket noise barrier installed on the east, and south sides of the pickleball courts as per Figure 12. An acoustic blanket with a minimum STC of 34 and NRC 0.75 (e.g., Sound Seal BBC-EXT-R-2" or acoustical equivalent) attached to a chain link fence could be used to provide the sound transmission needed. Refer to Tables 10 and 11 for the acoustical performance requirements for the acoustic blanket used in this analysis.

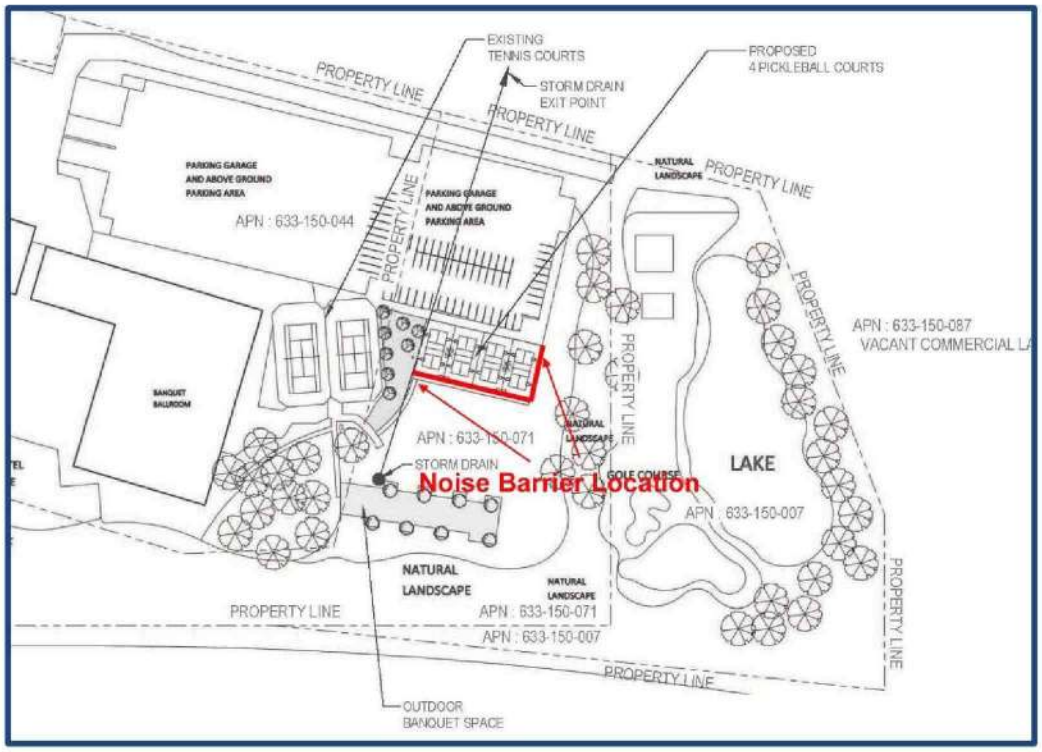


Figure 12. Location of Noise Barrier

Table 10. Minimum Sound Transmission Loss for Acoustic Blanket Barrier

Product	Octave Band Center Frequencies, Hz						STC
	125	250	500	1K	2K	4K	
Sound Seal BBC- EXT-N or acoustical equivalent	15	17	28	37	45	52	29

Table 11. Minimum Sound Absorption for Acoustic Blanket Barrier

Product	Octave Band Center Frequencies, Hz						NRC
	125	250	500	1K	2K	4K	
Sound Seal BBC- EXT-N or acoustical equivalent	.17	.30	.83	.82	.59	.37	.65

Future pickleball Leq noise levels with a 10-ft high acoustic blanket noise barrier would be reduced to 42.8, 33.3, 37.5, 49.5, and 61.4 dBA at NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 57.8, 48.3, 52.5, 64.5, and 76.4 dBA, at the same locations, respectively. The noise reduction provided by the noise barrier would range from 0 to 4.2 dB. Figure 13 depicts the pickleball Leq noise contour map for a 10-ft high acoustic blanket noise barrier. Tables 12 and 13 summarize and assess the pickleball Leq and Lmax noise levels for noise control options, respectively.

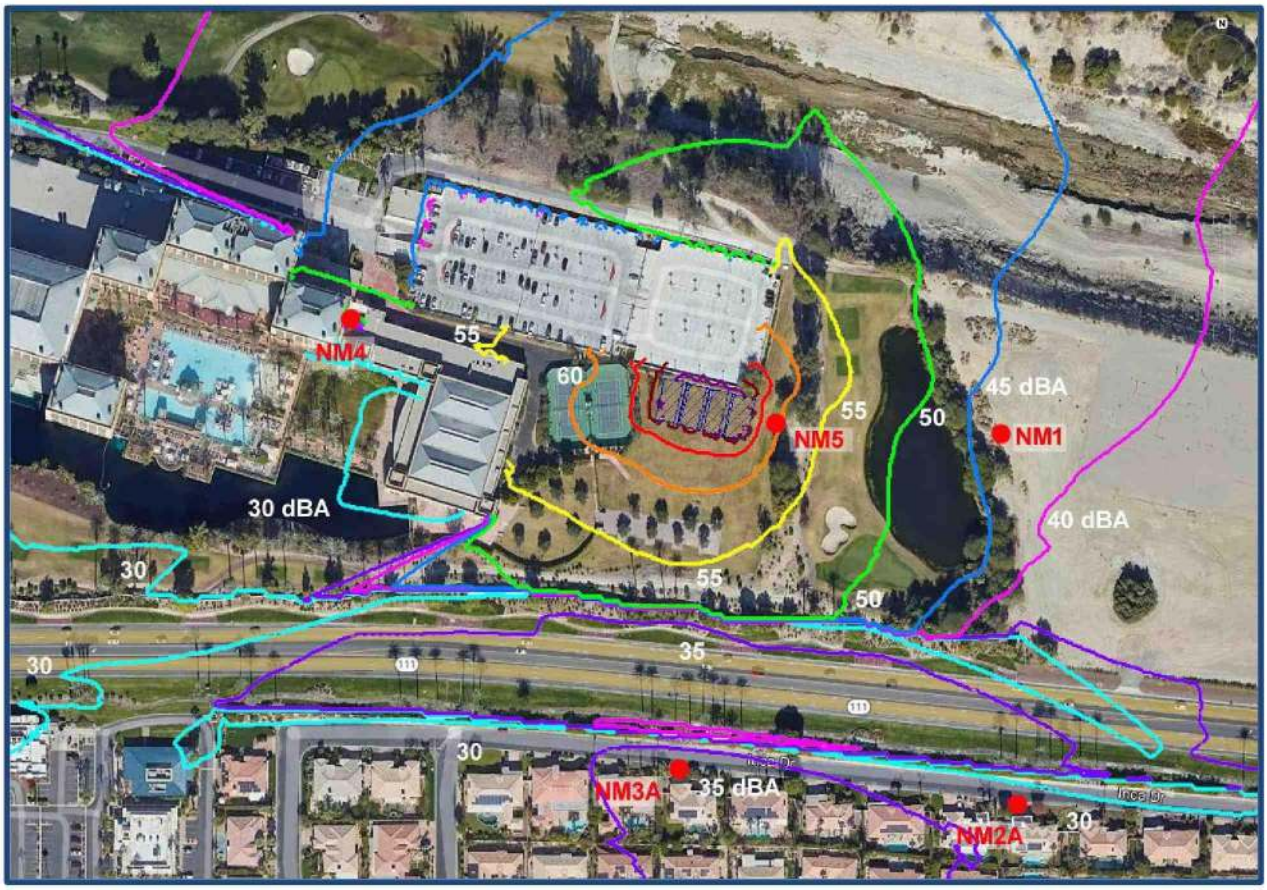


Figure 13. Leq, dBA Noise Contour Map – Noise Control Option 1 (Barrier)

10-ft high Noise Barrier and Quiet Paddles (Option 2)

Quiet pickleball paddles were also evaluated in addition to the 10-ft acoustic blanket from Option 1. With the use of the Hush Paddle and 10-ft high acoustic blanket noise barrier, the noise level would be reduced to 39.1, 28.8, 33.1, 45.7, and 58.0 dBA at NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 54.1, 43.8, 48.1, 60.7, and 73.0 dBA at the same locations, respectively. An overall noise reduction would range from 3.8 to 7.6 dBA at locations NM1 through NM5, respectively. Figure 14 depicts the pickleball Leq noise contour map for a 10-ft high acoustic blanket noise barrier and Hush Paddles. Tables 12 and 13 summarize and assess the pickleball Leq and Lmax noise levels for noise control options, respectively.



Figure 14. Leq, dBA Noise Contour Map – Noise Control Option 2 (Barrier & Hush)

Quiet Paddles (Option 3)

Only quiet pickleball paddles were also evaluated for this option. With the use of the Hush Paddle, the noise level would be reduced to approximately 42.0, 31.5, 36.3, 45.7, and 62.2 dBA at NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 57.0, 46.5, 51.3, 60.7, and 77.2 dBA at the same locations, respectively. An overall noise reduction would range from 3.4 to 4.5 dBA at locations NM1 through NM5, respectively. Figure 15 depicts the pickleball Leq noise contour map for Hush Paddles. Tables 12 and 13 assesses the pickleball Leq and Lmax noise levels for each noise control option, respectively.

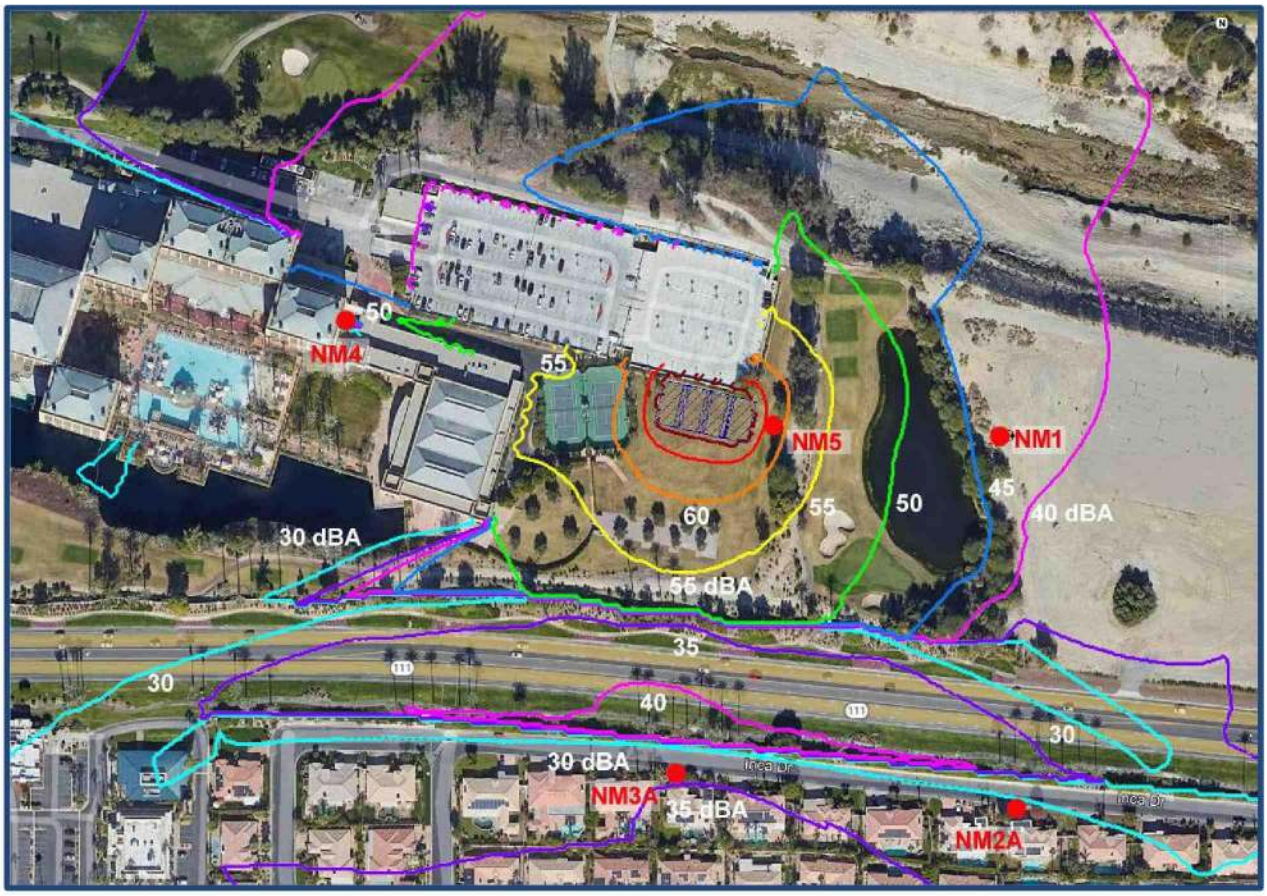


Figure 15. Leq, dBA Noise Contour Map – Noise Control Option 3 (Hush)

For all noise control options, the impulsive character of the pickleball noise could remain audible and may still be a source of annoyance to sensitive individuals, especially when the ambient background noise level is lower during early morning or late afternoon hours.

Table 12. Assessment of Pickleball Leq Noise Levels Noise Control Options 1, 2 and 3

Receptor	Land Use	Indian Wells Leq Noise Standard, dBA	Ambient Noise Level, dBA	Predicted Pickleball Noise Level, Leq, dBA									
					Option 1			Option 2			Option 3		
				Unmitigated	Option 1 Acoustic Blanket Barrier	Noise Reduction, dB [1]	Assessment	Option 2 Acoustic Blanket & Hush	Noise Reduction, dB [1]	Assessment	Option 3 Hush	Noise Reduction, dB [1]	Assessment
NM1	Commercial	N/A[5]	50.7 - 56.6	45.6	42.8	2.8	N/A[5]	39.1	6.5	N/A[5]	42.0	3.6	N/A[5]
NM2A	Residential	55	57.1 - 63.3[2]	36.0	33.3	2.7	**Compliance**	28.8	7.2	**Compliance**	31.5	4.5	**Compliance**
NM3A	Residential	55	56.1 - 60.4[3]	40.5	37.5	3.0	**Compliance**	33.1	7.4	**Compliance**	36.3	4.2	**Compliance**
NM4[4]	Commercial	N/A[5]	50.4 - 55.8	49.5	49.5	0.0	N/A[5]	45.7	3.8	N/A[5]	45.7	3.8	N/A[5]
NM5	Commercial	N/A[5]	48.3 - 54.8	65.6	61.4	4.2	N/A[5]	58.0	7.6	N/A[5]	62.2	3.4	N/A[5]

Note: [1]Noise Reduction achieved with corresponding Option calculated by subtracting the predicted noise level with noise barrier from the unmitigated noise level. For example, for NM1 Option 1, the noise reduction is 45.6 – 42.8 = 2.8 dB.
[2]Hourly ambient noise levels for NM2A were calculated based on a simultaneous 24-hour ambient noise measurement at NM2.
[3]Hourly ambient noise levels for NM3A were calculated based on a simultaneous 24-hour ambient noise measurement at NM3.
[4]NM4 was measured and modeled between the 4th and 5th floor above the banquet ballroom shielding. Pickleball noise levels at the ground floor are expected to be lower.
[5]Receptors NM1, NM4, and NM5 are located within report commercial areas and not subject to residential noise standards.

Table 13. Assessment of Pickleball Lmax Noise Levels Noise Control Options 1, 2, and 3

Receptor	Land Use	Indian Wells Lmax Noise Standard, dBA	Predicted Pickleball Noise Level, Lmax, dBA									
				Option 1			Option 2			Option 3		
			Unmitigated	Option 1 Acoustic Blanket Barrier	Noise Reduction, dB [1]	Assessment	Option 2 Acoustic Blanket & Hush	Noise Reduction, dB [1]	Assessment	Option 3 Hush	Noise Reduction, dB [1]	Assessment
NM1	Commercial	N/A[2]	60.6	57.8	2.8	N/A[2]	54.1	6.5	N/A[2]	57.0	3.6	N/A[2]
NM2A	Residential	75	51.0	48.3	2.7	**Compliance**	43.8	7.2	**Compliance**	46.5	4.5	**Compliance**
NM3A	Residential	75	55.5	52.5	3.0	**Compliance**	48.1	7.4	**Compliance**	51.3	4.2	**Compliance**
NM4[3]	Commercial	N/A[2]	64.5	64.5	0.0	N/A[2]	60.7	3.8	N/A[2]	60.7	3.8	N/A[2]
NM5	Commercial	N/A[2]	80.6	76.4	4.2	N/A[2]	73.0	7.6	N/A[2]	77.2	3.4	N/A[2]

Note: [1]Noise Reduction achieved with corresponding Option calculated by subtracting the predicted noise level with noise barrier from the unmitigated noise level. For example, for NM1 Option 1, the noise reduction is 60.6 – 57.8 = 2.8 dB.
[2]Receptors NM1, NM4, and NM5 are located within report commercial areas and not subject to residential noise standards
[3]NM4 was measured and modeled between the 4th and 5th floor above the banquet ballroom shielding. Pickleball noise levels at the ground floor are expected to be lower.

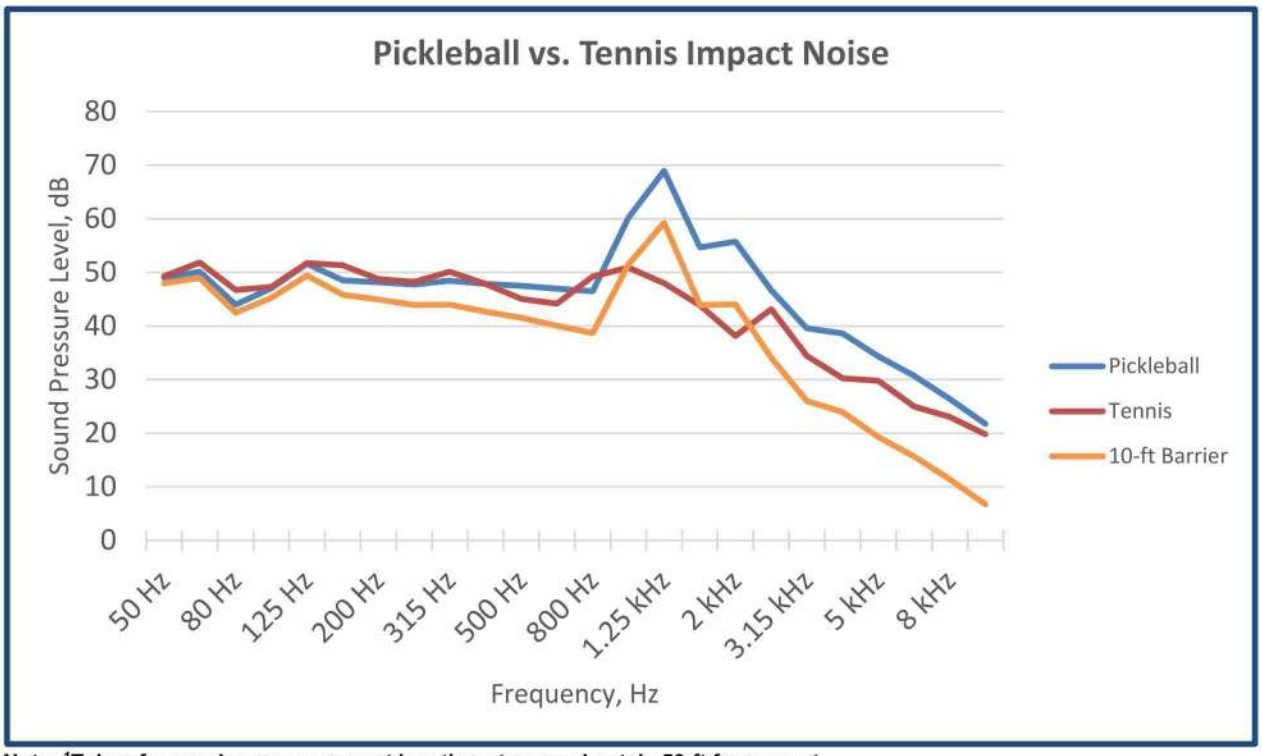
General Noise Control Options for Greater Compliance Levels

1. Consider requiring the use of quiet paddles. Renaissance Esmeralda could offer to rent quiet paddles for players with non-conforming equipment.
2. The Renaissance Esmeralda could maintain a list of acceptable quieter pickleball paddles to minimize noise disturbances. The list could be updated as necessary to reflect the current technology for paddles.
3. Encourage the use of low noise pickleball equipment whenever possible.
4. Consider days without pickleball activity or days with no pickleball in the early morning and late afternoon.

(Remainder of page blank)

FREQUENCY CONTENT OF TENNIS AND PICKLEBALL NOISE

The sound produced by the impact between a pickleball and paddle is characterized by a sudden onset and brief duration. The spectral content of the paddle impact is narrowband with a center frequency typically between 800 and 2,000 Hertz. Due to the frequency content of a pickleball strike, and the quantity of impact events, the impulsive character of the noise could remain audible and may still be a source of annoyance to sensitive individuals. Figure 16 displays the frequency plot of tennis, pickleball noise (no noise control), and pickleball noise with a 10-ft barrier at approximatley 50-ft from the court. The impact sound of pickleball and its frequency characteristics can be further reduced with the use of padded paddles and a soft ball.



Note: [1]Taken from noise measurement location at approximately 50-ft from court.

Figure 16. Frequency Content of Pickleball vs Tennis Strike

CONCLUSION

Acoustics Group, Inc., (AGI) was retained by the City of Indian Wells to evaluate pickleball noise for the proposed pickleball courts at the Renaissance Esmeralda Resort and Spa. Renaissance Esmeralda Report and Spa propose adding four (4) pickleball courts directly east of the existing tennis courts. AGI has reviewed the City of Indian Wells Noise Standard, conducted ambient noise level measurements, conducted a propagation survey which considers local environmental factors, analyzed pickleball noise, assessed the impact of the pickleball noise, and evaluated noise control measures for reducing the noise at the nearby residential homes.

The Leq from the pickleball play on the proposed four (4) courts was determined to be 45.6, 36.0, 40.5, 49.5, and 65.6 dBA at locations NM1 through NM5, respectively. Pickleball Lmax noise levels will be as high as 60.6, 51.0, 55.5, 64.5, and 80.6 dBA at the same locations. NM1, NM4, and NM5 are located within resort commercial zones, while NM2A and NM3A are located in residential zones. At locations NM2A and NM3, future pickleball noise will comply with the City's Daytime Residential Noise Standard of 55 dBA and the Residential Lmax standard of 75 dBA. At locations NM1 and NM4, future pickleball noise will below the existing ambient noise level and the City's Daytime Residential Noise Standard and Lmax standard of 55 and 75 dBA, respectively; however, NM1 and NM4 are located within resort commercial area and not subject to residential noise standards. Although the noise level at NM5 exceeds the existing ambient noise level and the residential Leq and Lmax standards, the receptor is located within the resort commercial area and is not subject to residential noise limits per the City's Ordinance. The Ordinance permits higher noise levels in commercial properties, evaluating such noise based on its impact on adjacent sensitive receptors such as nearby residential areas. Pickleball play could be audible during when ambient background noise is lower.

Three noise control options were evaluated to reduce the noise level at the nearby residences: Option 1 with a 10-ft high acoustic blanket noise barrier along the east and south sides of the courts, Option 2 with the use of the Hush Paddle and 10-ft high acoustic blanket noise barrier from Option 1, and Option 3 only the use of the Hush Paddle. With Option 1, the Leq from the pickleball activity would be reduced to 42.8, 33.3, 37.5, 49.5, and 61.4 dBA at NM1 through NM5, respectively. With Option 2, the noise level would be reduced to 39.1, 28.8, 33.1, 45.7, and 58.0 dBA at NM1 through NM5, respectively. With Option 3, the noise level would be reduced to 42.0, 31.5, 36.3, 45.7, and 62.2 dBA at NM1 through NM5, respectively.

The Hush Paddles assist in reducing pickleball impact noise between the frequency range of 800 to 2,000 Hertz and can help in reducing the "annoyance" of impact sounds from pickleball play. With all forms of noise control, the impulsive character of the noise could remain audible and may still be a source of annoyance to sensitive individuals, especially when the ambient background noise level is lower during the early morning and late afternoon hours.

APPENDICES

APPENDIX A. FIELD DATA SHEETS

APPENDIX B. CITY OF INDIAN WELLS MUNICIPAL CODE

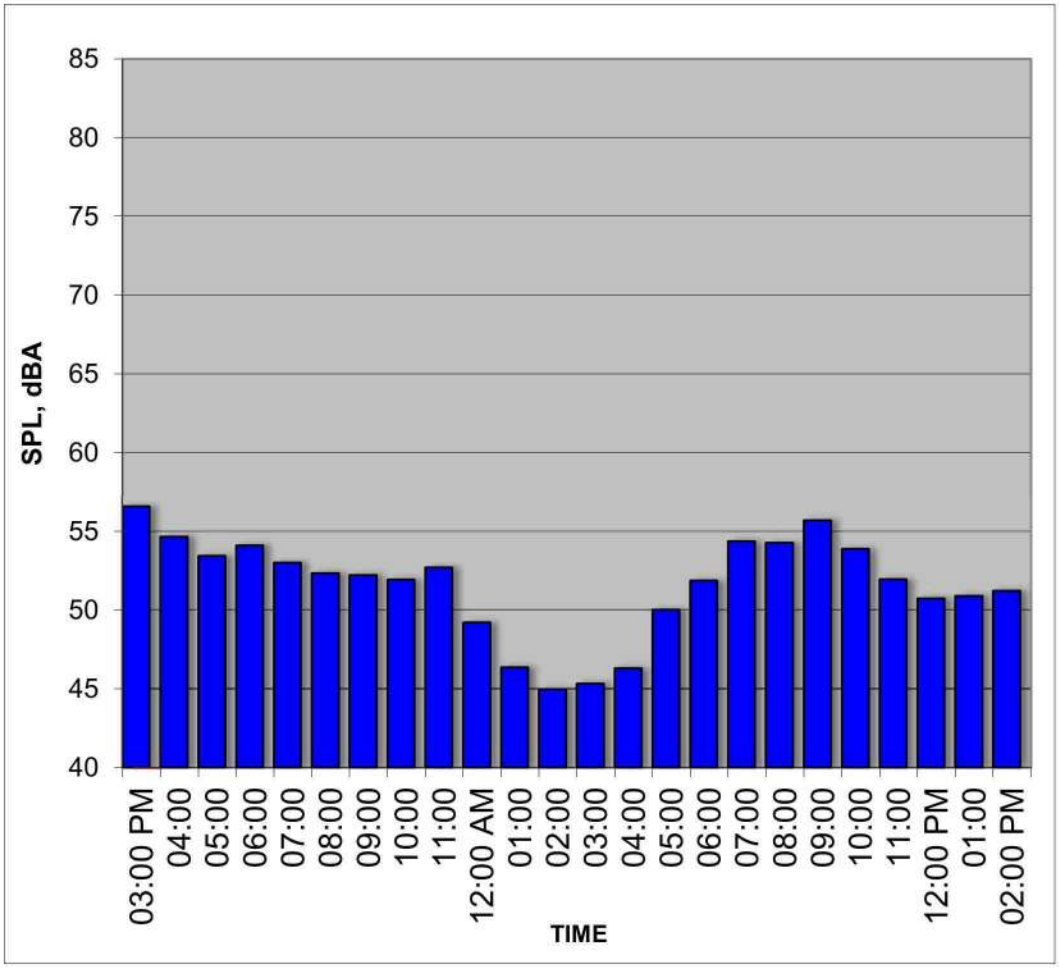
APPENDIX C. NOISE MODELING INPUT/OUTPUT

APPENDIX D. QUIET PADDLES

APPENDIX A. FIELD DATA SHEETS

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**Renaissance Esmeralda Pickleball**		
Address:	**44400 Indian Wells Ln, Indian Wells, CA 92210**	**Date:**	**3/25/2025 - 3/26/2025**
Location:	**East Property Line - Adjacent to Proposed Golf Course**		
Noise Sources:	**Vehicular Traffic, Aircraft**	**Position:**	**NM1**



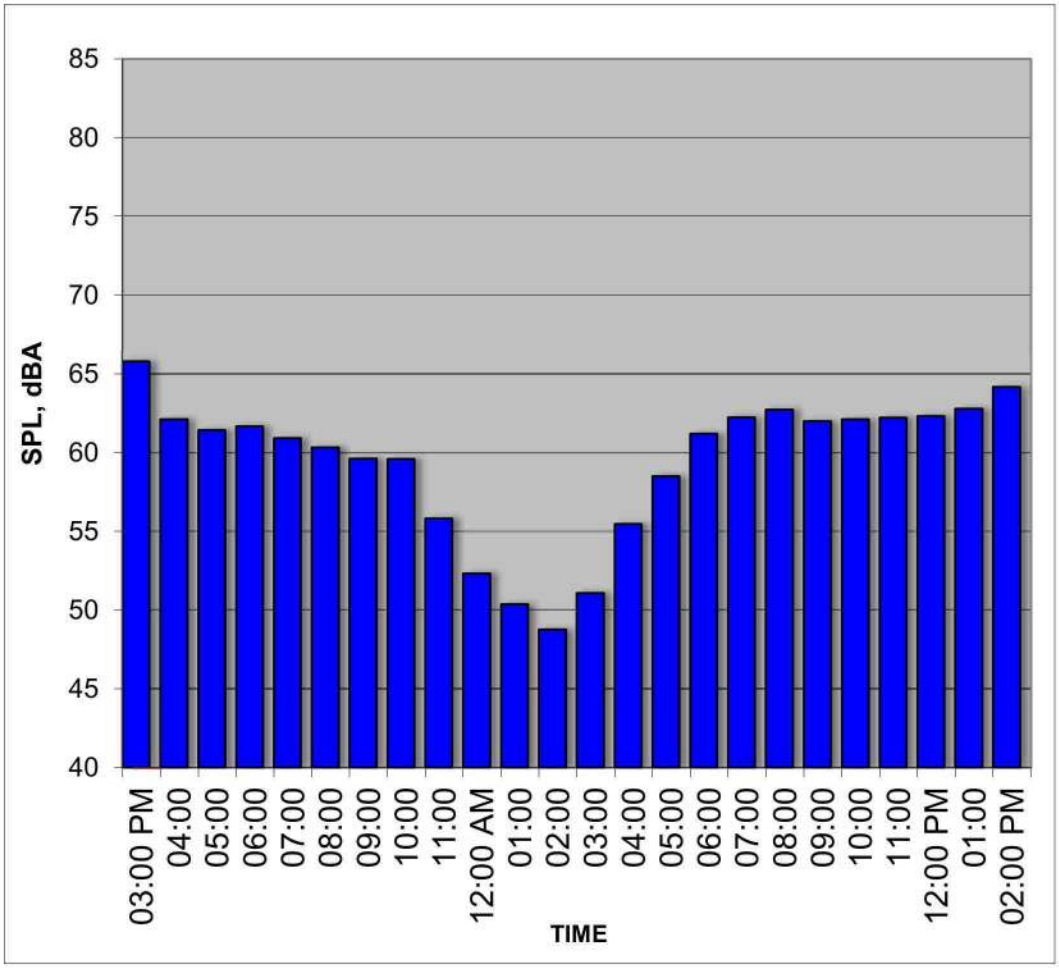
TIME	HNL, dB(A)
03:00 - 04:00 PM	56.6
04:00 - 05:00 PM	54.7
05:00 - 06:00 PM	53.4
06:00 - 07:00 PM	54.1
07:00 - 08:00 PM	53.0
08:00 - 09:00 PM	52.3
09:00 - 10:00 PM	52.2
10:00 - 11:00 PM	51.9
11:00 - 12:00 AM	52.7
12:00 - 01:00 AM	49.2
01:00 - 02:00 AM	46.4
02:00 - 03:00 AM	45.0
03:00 - 04:00 AM	45.3
04:00 - 05:00 AM	46.3
05:00 - 06:00 AM	50.0
06:00 - 07:00 AM	51.9
07:00 - 08:00 AM	54.4
08:00 - 09:00 AM	54.3
09:00 - 10:00 AM	55.7
10:00 - 11:00 AM	53.9
11:00 - 12:00 PM	52.0
12:00 - 01:00 PM	50.7
01:00 - 02:00 PM	50.9
02:00 - 03:00 PM	51.2
CNEL:	57.3



Source: Acoustics Group, Inc.

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**Renaissance Esmeralda Pickleball**		
Address:	**44400 Indian Wells Ln, Indian Wells, CA 92210**	**Date:**	**3/25/2025**
Location:	**76905 Inca Dr, Indian Wells, CA 92210**		**- 3/26/2025**
Noise		**Position:**	**NM2**
Sources:	**Vehicular Traffic, Aircraft**		



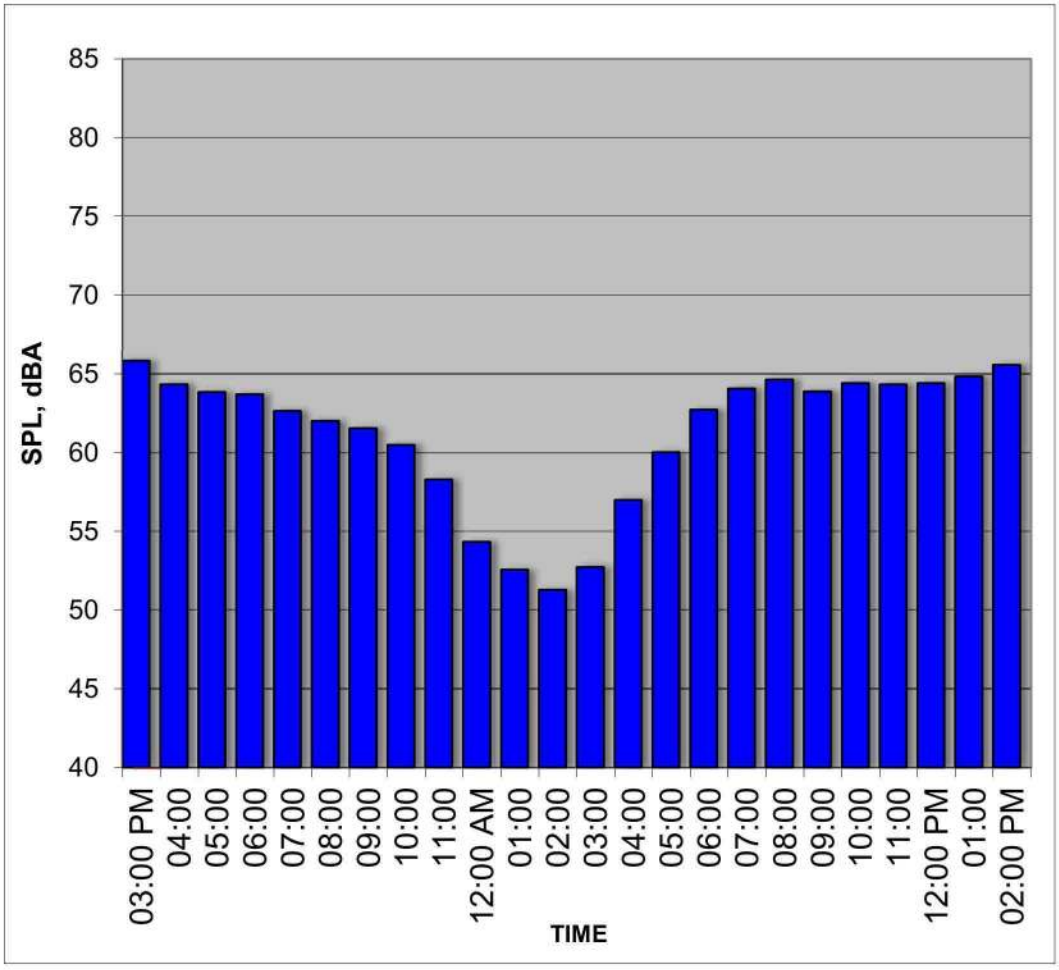
TIME	HNL, dB(A)
03:00 - 04:00 PM	65.8
04:00 - 05:00 PM	62.1
05:00 - 06:00 PM	61.4
06:00 - 07:00 PM	61.7
07:00 - 08:00 PM	60.9
08:00 - 09:00 PM	60.3
09:00 - 10:00 PM	59.6
10:00 - 11:00 PM	59.6
11:00 - 12:00 AM	55.8
12:00 - 01:00 AM	52.3
01:00 - 02:00 AM	50.4
02:00 - 03:00 AM	48.8
03:00 - 04:00 AM	51.1
04:00 - 05:00 AM	55.5
05:00 - 06:00 AM	58.5
06:00 - 07:00 AM	61.2
07:00 - 08:00 AM	62.2
08:00 - 09:00 AM	62.7
09:00 - 10:00 AM	62.0
10:00 - 11:00 AM	62.1
11:00 - 12:00 PM	62.2
12:00 - 01:00 PM	62.3
01:00 - 02:00 PM	62.8
02:00 - 03:00 PM	64.2
CNEL:	64.9



Source: Acoustics Group, Inc.

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**Renaissance Esmeralda Pickleball**		
Address:	**44400 Indian Wells Ln, Indian Wells, CA 92210**	**Date:**	**3/25/2025**
Location:	**76875 Inca Dr, Indian Wells, CA 92210**		**- 3/26/2025**
Noise		**Position:**	**NM3**
Sources:	**Vehicular Traffic, Aircraft**		



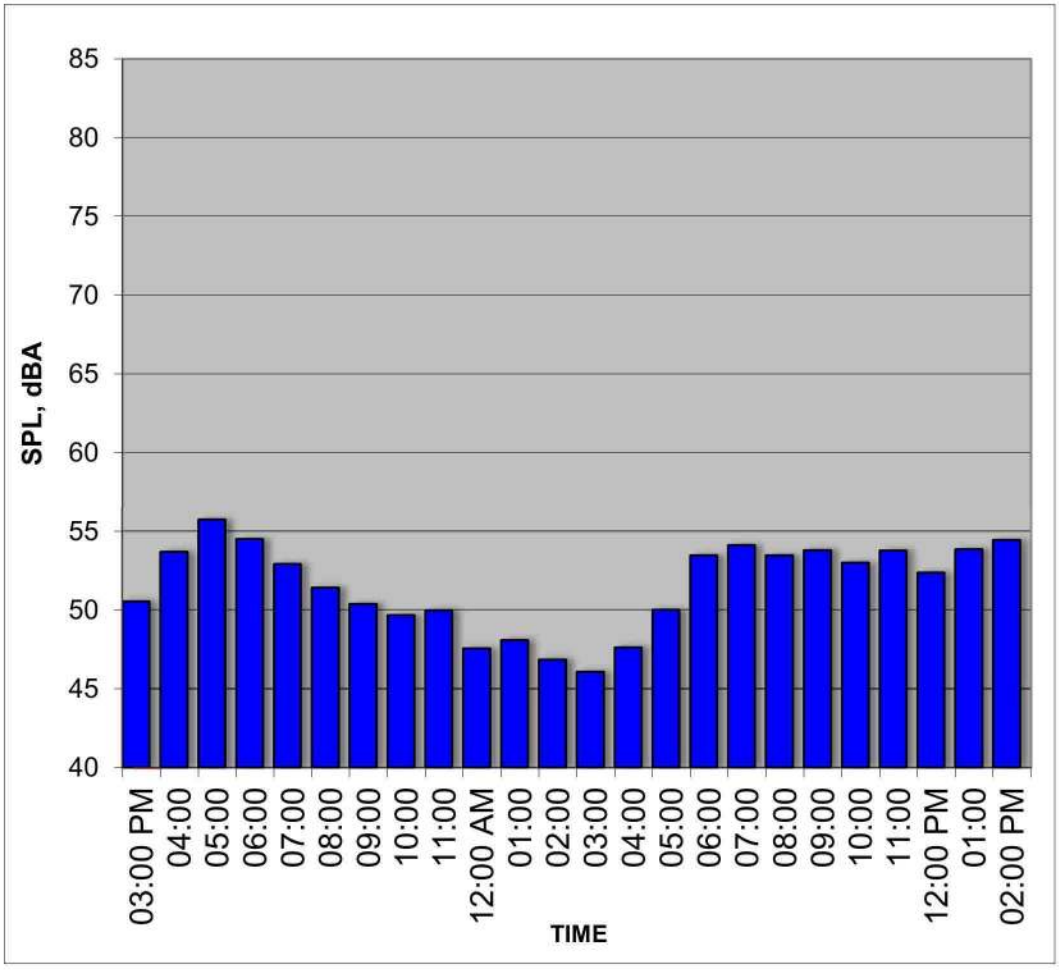
TIME	HNL, dB(A)
03:00 - 04:00 PM	65.8
04:00 - 05:00 PM	64.3
05:00 - 06:00 PM	63.9
06:00 - 07:00 PM	63.7
07:00 - 08:00 PM	62.6
08:00 - 09:00 PM	62.0
09:00 - 10:00 PM	61.5
10:00 - 11:00 PM	60.5
11:00 - 12:00 AM	58.3
12:00 - 01:00 AM	54.3
01:00 - 02:00 AM	52.6
02:00 - 03:00 AM	51.3
03:00 - 04:00 AM	52.7
04:00 - 05:00 AM	57.0
05:00 - 06:00 AM	60.0
06:00 - 07:00 AM	62.7
07:00 - 08:00 AM	64.1
08:00 - 09:00 AM	64.6
09:00 - 10:00 AM	63.9
10:00 - 11:00 AM	64.4
11:00 - 12:00 PM	64.3
12:00 - 01:00 PM	64.4
01:00 - 02:00 PM	64.8
02:00 - 03:00 PM	65.6
CNEL:	66.6



Source: Acoustics Group, Inc.

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**Renaissance Esmeralda Pickleball**		
Address:	**44400 Indian Wells Ln, Indian Wells, CA 92210**	**Date:**	**3/25/2025**
Location:	**Nearest Hotel Rooms at Fifth Floor**		**- 3/26/2025**
Noise		**Position:**	**NM4**
Sources:	**Vehicular Traffic, Resort Activity**		



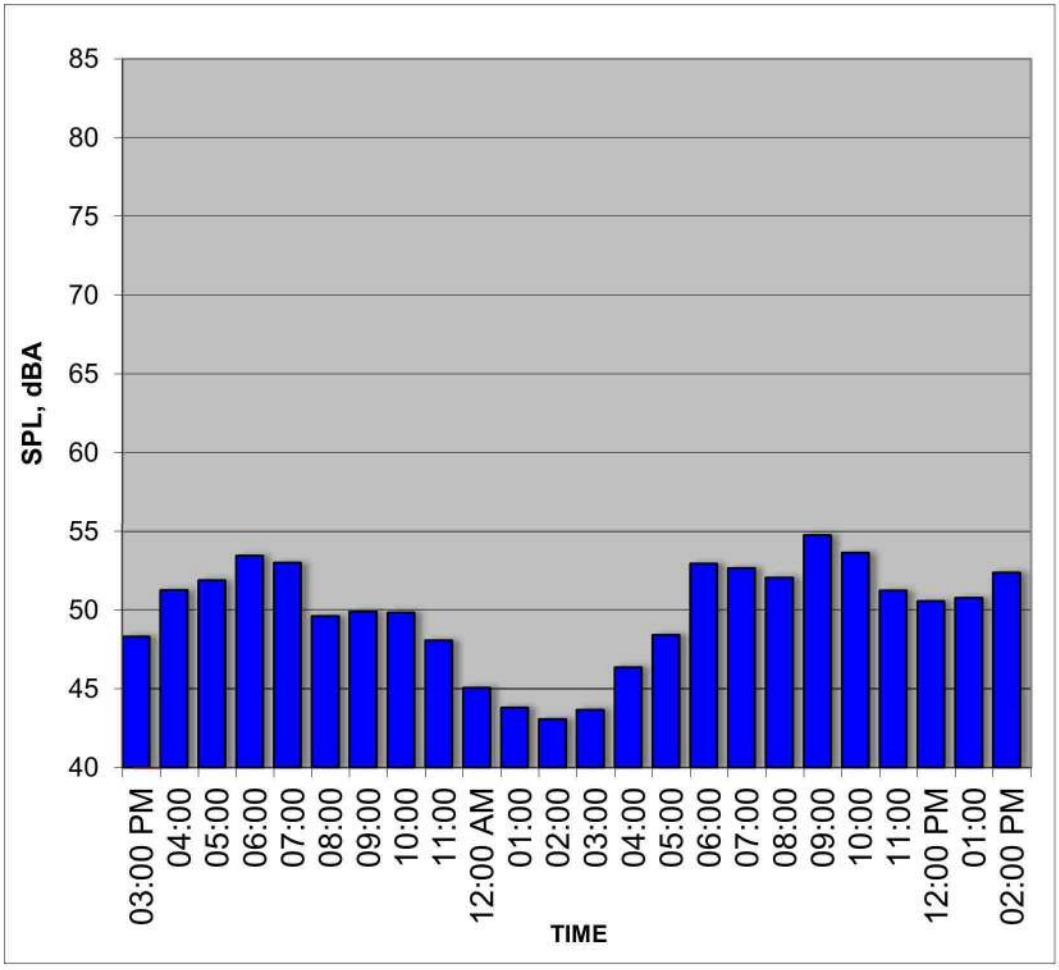
TIME	HNL, dB(A)
03:00 - 04:00 PM	50.6
04:00 - 05:00 PM	53.7
05:00 - 06:00 PM	55.8
06:00 - 07:00 PM	54.5
07:00 - 08:00 PM	52.9
08:00 - 09:00 PM	51.4
09:00 - 10:00 PM	50.4
10:00 - 11:00 PM	49.7
11:00 - 12:00 AM	50.0
12:00 - 01:00 AM	47.6
01:00 - 02:00 AM	48.1
02:00 - 03:00 AM	46.9
03:00 - 04:00 AM	46.1
04:00 - 05:00 AM	47.6
05:00 - 06:00 AM	50.0
06:00 - 07:00 AM	53.5
07:00 - 08:00 AM	54.1
08:00 - 09:00 AM	53.5
09:00 - 10:00 AM	53.8
10:00 - 11:00 AM	53.0
11:00 - 12:00 PM	53.8
12:00 - 01:00 PM	52.4
01:00 - 02:00 PM	53.9
02:00 - 03:00 PM	54.5
CNEL:	57.0



Source: Acoustics Group, Inc.

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**Renaissance Esmeralda Pickleball**		
Address:	**44400 Indian Wells Ln, Indian Wells, CA 92210**	**Date:**	**3/25/2025 - 3/26/2025**
Location:	**East Property Line - Adjacent to Project Site**		
Noise Sources:	**Vehicular Traffic, Aircraft**	**Position:**	**NM5**



TIME	HNL, dB(A)
03:00 - 04:00 PM	48.3
04:00 - 05:00 PM	51.3
05:00 - 06:00 PM	51.9
06:00 - 07:00 PM	53.5
07:00 - 08:00 PM	53.0
08:00 - 09:00 PM	49.6
09:00 - 10:00 PM	49.9
10:00 - 11:00 PM	49.8
11:00 - 12:00 AM	48.1
12:00 - 01:00 AM	45.1
01:00 - 02:00 AM	43.8
02:00 - 03:00 AM	43.1
03:00 - 04:00 AM	43.7
04:00 - 05:00 AM	46.4
05:00 - 06:00 AM	48.4
06:00 - 07:00 AM	53.0
07:00 - 08:00 AM	52.7
08:00 - 09:00 AM	52.1
09:00 - 10:00 AM	54.8
10:00 - 11:00 AM	53.7
11:00 - 12:00 PM	51.3
12:00 - 01:00 PM	50.6
01:00 - 02:00 PM	50.8
02:00 - 03:00 PM	52.4
CNEL:	55.7

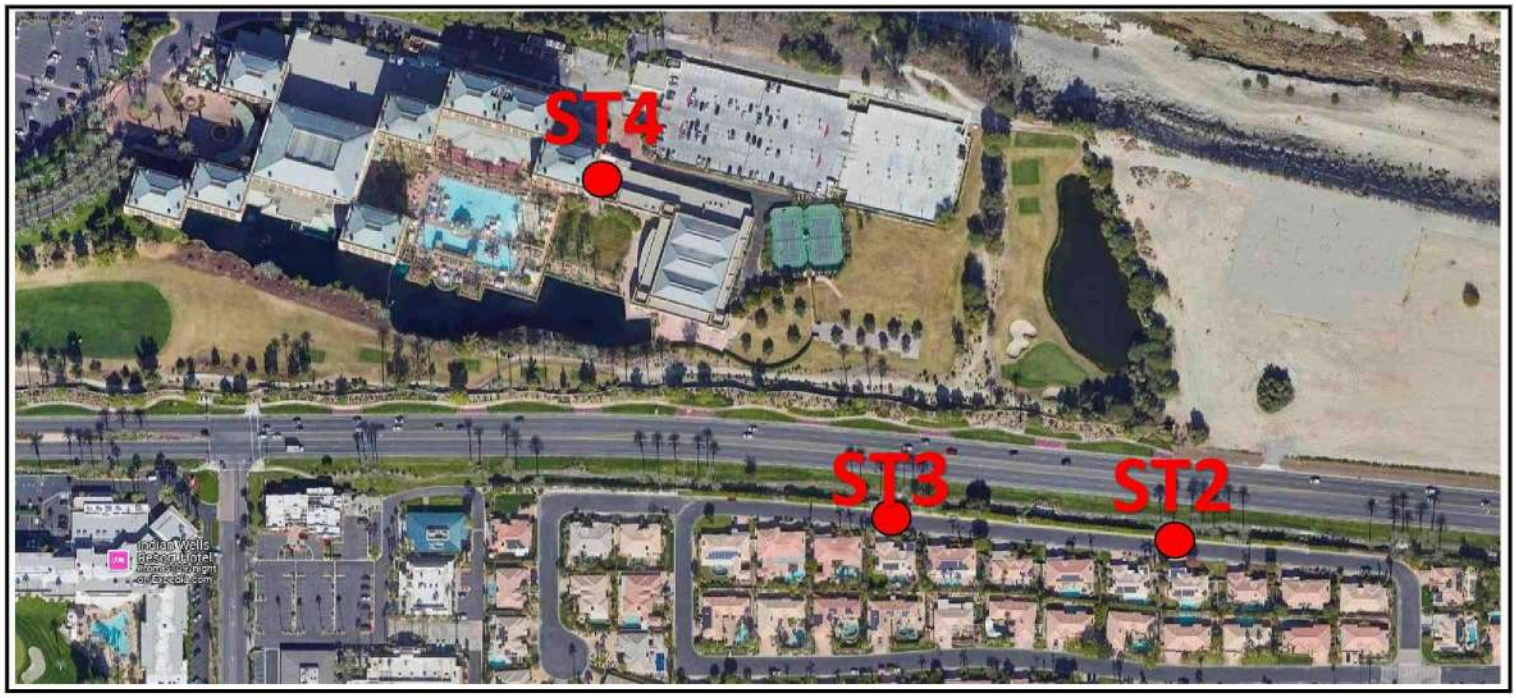


Source: Acoustics Group, Inc.

NOISE MONITORING FIELD DATA SHEET

Project:	**City of Indian Wells - Renaissance Esmeralda - Ambient Noise Survey**	**Date:**	**3/26/2025**
Loc:	ST2 - 76905 Inca Dr, Indian Wells, CA 92210		
	ST3 - 76875 Inca Dr, Indian Wells, CA 92210		
	ST4 - 44400 Indian Wells Ln, Indian Wells, CA 92210		
SLM:	**Brüel & Kjær 2270**	**SN:**	**3023677**
Mic:	**Brüel & Kjær 4189**	**SN:**	**3100242**
P/A:	**Brüel & Kjær ZC0032**	**SN:**	**26386**
SLM:	**Brüel & Kjær 2270**	**SN:**	**3023678**
Mic:	**Brüel & Kjær 4189**	**SN:**	**3100588**
P/A:	**Brüel & Kjær ZC0032**	**SN:**	**26523**

Start	Duration	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
3/26/2025 3:21 PM	0:10:01	63.3	62.3	61.3	59.9	56.4	51.2	73.0	49.4	60.3	ST2 - In Front Lawn
3/26/2025 3:20 PM	0:13:32	63.0	61.9	60.6	59.2	55.8	49.7	73.5	47.8	59.8	ST3 - In Front Lawn
3/26/2025 4:01 PM	0:10:02	57.0	55.5	54.1	53.2	52.3	51.7	59.6	51.3	53.7	ST4 - At Ground Level, Adjacent to Hotel Rooms



APPENDIX B. CITY OF INDIAN WELLS MUNICIPAL CODE

CHAPTER 9.06
NOISE

§ 9.06.010. Purpose.

The purpose of this Chapter is to control unnecessary, excessive, and annoying noise in the City as specified in this Chapter.
(Ord. 277 § 3, 1991)

§ 9.06.020. 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.

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

"Decibel" or "dBA" means a unit which denotes the ratio between two (2) quantities which are proportional to power; the number of decibels corresponding to the ratio of two (2) amounts of power is ten (10) times the logarithm to the base of ten (10) of this ratio.

"Emergency work" means the use of any machinery, equipment, vehicle, manpower or other activity in an effort to protect, maintain, provide or restore safe conditions in the community or for citizenry, or work by private or public utilities when restoring utility service.

"Grading" means any excavating or drilling of earth material or any combination thereof conducted to prepare a site for construction or the placement of the improvements thereon.

"Leaf blower" means portable power equipment that is powered by fuel or electricity, either hand held or transported on the back, and 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 and trimmings from trees and shrubs or other debris.

"Mobile noise source" means any noise source other than a stationary noise source.

"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 twenty micropascals. The unit of measurement shall be designated as dBA.

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

"Power equipment" means equipment that is powered by fuel or electricity and used in any landscape maintenance, construction, property repair, or property maintenance.

"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 and motels, and other than nonconforming residential uses within nonresidential zones.

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

"Simple tone noise" or "pure tone noise" means a noise characterized by the presence of a predominant frequency or frequencies such as might be produced by a whistle or hum.

"Sound level meter" means an instrument that meets or exceeds American National Standards Institute's Standard S1.4 1971 for type 2 sound level meters for an instrument and the associated recording and analyzing equipment which will provide equivalent data.

"Sound pressure level" means a sound pressure level of a sound, in decibels, as defined in ANSI Standards 51.2 1962 and 51.13 1921; that is, twenty (20) times the logarithm to the base ten of the ratio of the pressure of the sound to a reference pressure, which reference pressure shall be 0.0002 dryness per square centimeter.

"Stationary noise source" means the source which is often referred to as "fixed source" (non-transportation related) including, but not limited to, mechanical electric equipment, various power tools, construction, commercial, industrial and agricultural activity and animal noise.
(Ord. 277 § 3, 1991; Ord. 359 § 1, 1995; Ord. 438 § 1, 1998)

§ 9.06.030. Sound level measurement—General.

(a) Use of Sound Level Meter. Any noise level measurements made pursuant to the provisions of this Chapter shall be performed using a sound level meter as defined in Section 9.06.020. If the sound standard applied pursuant to this Chapter is not measured in decibels, then sound level measurements are not required to establish a violation of this Chapter.

(b) Location for Measuring Exterior Noise Levels. The location selected for measuring exterior noise levels shall be at any point on the receiver's affected property. In the case of interior noise measurements, the windows shall be in normal seasonal configuration (closed during the months of May through September) and the measurement shall be made at a point at least four feet (4') from the wall, ceiling or floor nearest the affected occupied area.
(Ord. 277 § 3, 1991; Ord. 359 § 1, 1995; Ord. 684 § 1, 2015)

§ 9.06.040. Noise standards.

(a) Exterior Noise Standards.

(1) Standards for Residential Properties. The following exterior noise standards, unless otherwise specifically indicated in this Chapter for all residential properties shall be:

55 dBA	7:01 a.m. to 10 p.m.
50 dBA	10:01 p.m. to 7 a.m.

(2) Noise Level Categories. It is unlawful for any person at any location within the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, that exceeds, when measured on any other residential property the exterior residential noise standard by:

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

Decibels		Cumulative Period
(i)	+3	30 minutes/hour
(ii)	+5	15 minutes/hour
(iii)	+10	5 minutes/hour
(iv)	+15	1 minute/hour
(v)	+20	Not to be exceeded.

(3) Ambient Noise Level. If the ambient noise level exceeds that permitted by the noise limit categories specified in subsections (a)(2)(i) and (a)(2)(ii) of this Section, the allowed noise limit shall be increased in five (5) dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the noise level category set forth in subsection (a)(2)(v), the maximum ambient noise level shall be the noise limit set forth in subsection (a)(2)(v) of this Section.

(b) Interior Noise Standards.

(1) Standards for Residential Properties. It is unlawful for any person to create any noise from inside his or her unit that causes the noise level, when measured in a neighboring unit during the period 10:00 p.m. to 7:00 a.m., to exceed:

Decibels		Cumulative Period
(i)	45 dBA	more than 5 min. in any hour
(ii)	50 dBA	more than 1 min. in any hour
(iii)	55 dBA	in any period of time

(2) Ambient Noise Level. In the event the ambient noise level exceeds the noise limit set forth in either subsection (b)(1)(i) or (b)(1)(ii) of this Section, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the noise limit set forth in subsection (b)(1)(iii) of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

(Ord. 359 § 1, 1995)

§ 9.06.041. Exceptions.

The following activities shall be exempted from the noise standard provisions of Section 9.06.040:

(a) School bands, school athletic and school entertainment events. School entertainment events shall not include events sponsored by student organizations;

(b) Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a discretionary license or permit by the City;

(c) Activities conducted on parks and public playgrounds, provided such parks and public

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

playgrounds are owned and operated by a public entity;

(d) Any mechanical device, apparatus, emergency generator having a maximum generation of fifteen thousand (15,000) kilowatts, equipment related to or connected with emergency activities or emergency work, but only for the period in which there is an emergency and, in the case of emergency generators, only during a power outage and routine testing of generators;

(e) Noise sources associated with construction or landscape maintenance activities during the hours specified by Section 9.06.047(b); provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The Planning Director may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three (3) days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work;

(f) Maintenance of trees and residential property by the property occupant him/herself provided said activities take place between the hours of 7:00 a.m. and 6:00 p.m.;

(g) Tree and park and street maintenance activities conducted by the City;

(h) Any activity to the extent provisions of Chapter 65 of Title 42 of the United States Code, and Articles 3 and 3.5 of Chapter 4 of Division 9 of the Public Utilities Code of the State of California preempt local control of noise regulations and land use regulations related to noise control of airports and their surrounding geographical areas, any noise source associated with the construction, development, manufacture, maintenance, testing or operation of any aircraft engine, or of any weapons system or subsystems which are owned, operated or under the jurisdiction of the United States, any other activity to the extent regulation thereof has been preempted by State or Federal law or regulation.

(Ord. 359 § 1, 1995; Ord. 626 § 1, 2009)

§ 9.06.042. Schools, hospitals, and churches.

It is unlawful for any person to create any noise which causes the noise level at any school, hospital or church while the same is in use to exceed the noise limits as specified in subsection (a) of this Section, or which noise level unreasonably interferes with the use of such institutions or which unreasonably disturbs or annoys patients in the hospital, provided conspicuous signs, conforming to applicable law and as may be required to be approved by applicable authority, are displayed in three (3) separate locations within one-tenth (1/10) of a mile of the institution indicating the presence of a school, church, or hospital.

(Ord. 359 § 1, 1995)

§ 9.06.043. Residential pumps, fans, and air conditioners.

(a) It is unlawful for any person to operate any residential fans, air conditioners, stationary pumps, stationary cooling towers, stationary compressors, similar mechanical device or any combination thereof installed after August 16, 1991 in any manner so as to create any noise which would cause the maximum noise level to exceed: (i) sixty (60) dBA at any point at

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

least one (1) foot inside the property line of the affected residential property and three (3) to five (5) feet above ground level; (ii) fifty-five (55) dBA in the center of a neighboring patio three (3) to five (5) feet above ground level; (iii) fifty-five (55) dBA outside of the neighboring living area window nearest the equipment location. Measurements shall be taken with the microphone not more than three (3) feet from the window opening but at least three (3) feet from any other surface.

(b) Equipment installed after August 18, 1996 must comply with a maximum limit of fifty-five (55) dBA at any point at least one (1) foot inside the property line of the affected residential property and three (3) to five (5) feet above ground level.

(c) Equipment installed before August 18, 1991 must comply with a limit of sixty-five (65) dBA maximum sound level, at any point at least one (1) foot inside the property line of the affected residential property and three (3) to five (5) feet above ground level after the effective date of this Chapter.

(Ord. 359 § 1, 1995)

§ 9.06.044. Off-road vehicles.

It is unlawful for any person to operate any motorcycle or recreational off-road vehicle on or off a public road in such a manner that the noise level exceeds the exterior noise standards specified in subsection 9.06.040(a).

(Ord. 359 § 1, 1995)

§ 9.06.045. Waste disposal vehicles.

It is unlawful for any person authorized to engage in waste disposal service or garbage collection to operate any truck mounted waste or garbage loading and/or composting equipment or similar mechanical device in any manner so as to create any noise exceeding the following level, when measured at a distance of fifty (50) feet from the equipment or any residential property:

(a) New equipment purchased or leased on or after February 16, 1992 shall not exceed a noise level of eighty (80) dBA.

(b) New equipment purchased or leased on or after February 16, 1995 shall not exceed a noise level of seventy-five (75) dBA.

(c) No equipment shall exceed a noise level of eighty (80) dBA after August 18, 1996.

(Ord. 359 § 1, 1995)

§ 9.06.047. Construction or landscape maintenance noise.

Construction, landscape maintenance, and similar activities shall be limited to the following hours unless a temporary waiver is granted by the Planning Director or his/her authorized designee:

Monday - Friday	7:00 a.m. - 5:00 p.m.
Saturday	8:00 a.m. - 5:00 p.m.

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

No usage on Sundays or National Holidays*

* New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Day After Thanksgiving and Christmas Day.

(Ord. 277 § 3 (Exhibit A), 1991; Ord. 300 §§ 1-3, 1992; Ord. 330 § 1, 1993; Ord. 359 § 1, 1995; Ord. 362 (Exhibit A), 1995; Ord. 366 (Exhibit A), 1995; Ord. 392 §§ 1-2, 1996; Ord. 438 § 3, 1998)

§ 9.06.048. Golf courses.

This section applies only to golf courses.

(a) Mowing. Mowing of greens and tees may begin at 6:00 a.m. year round.

(1) Special Events. Mowing of all other golf course areas may begin at 6:00 a.m. for special events providing the golf course manager has received City approval in the form of a Temporary Use Permit.

(b) Leaf blowers. Golf course operators may operate leaf blowers in conjunction with general maintenance subject to the hours of operation as specified in Section 9.06.047.

(c) Noise Levels. All golf course activities are subject to the general noise and hour regulations except as noted in this Section.

(Ord. 438 § 4, 1998)

§ 9.06.049. Restrictions and waivers.

(a) Disposal of Dirt, Dust. Debris, Leaves, Grass Clippings, Etc. Operation of power equipment shall not cause dirt, dust, debris, leaves, grass clippings, cuttings or trimmings from trees or shrubs to be blown or deposited on any adjacent or other parcel of land, lot, or public right-of-way/property other than the parcel, land, lot upon which the power equipment is being operated. Deposits of dirt, dust, leaves, grass clippings, debris, cuttings or trimmings from trees or shrubs shall be removed and disposed of in a sanitary manner which will prevent dispersion by wind, vandalism, or similar means within six (6) hours of deposit by the user or property occupant.

(b) Waivers.

(1) Limited Temporary Waivers. The Planning Director may issue a temporary waiver allowing construction or landscape maintenance activities that may cause intermittent noise between 6:00 a.m. to 7:00 a.m. from June 1st through September 14th, Monday through Friday. The waiver shall not allow the operation of heavy equipment, internal combustion engines, pneumatic tools or power equipment before 7:00 a.m. Upon receipt by the Building and Safety Division of the Community Development Department of two (2) written complaints identifying the address where the noise violation occurred, the time of the violation, and the name of the complainant, the Department shall commence an investigation. If in the opinion of the Department a violation of the temporary waiver

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

or of this Chapter has occurred, notice of revocation shall be served on the permittee or any worker on the job site and posted on the job site. The revocation hearing may be held with at least twenty-four (24) hours' notice to the permittee. The director's decision may be appealed to the City Council. The written appeal must be filed with the City Clerk within ten (10) days of the decision. Appeals do not stay the decision of the Director. A fee for the waiver shall be charged in the amount set by resolution. In the absence of a resolution setting a flat fee, the fee shall be the amount necessary to reimburse the City for expenses incurred with respect to issuing, administering or enforcing the waiver or conditions thereof. The fee imposed shall not exceed the actual administrative costs, including applicable overhead costs as permitted by Federal Circular A 87 standards.

(2) Limited Temporary Waivers. The City Council may issue a temporary waiver allowing construction activities that may cause intermittent noise between 6:00 a.m. to 10:00 p.m. Monday through Saturday. A waiver may be granted if the noise source is located at least nine hundred (900) feet from a residential neighborhood, will not disturb residential areas and there is documented urgency to complete construction. The waiver shall make findings as herein required, state which sections are waived and shall state all applicable mitigation measures. The waiver may be issued for a limited term. Upon receipt by the Building and Safety Division of the Community Development Department of two (2) written complaints identifying the address where the noise violation occurred, the time of the violation, and the name of the complainant, the Department shall commence an investigation. If in the opinion of the Department a violation of the temporary waiver or of this Chapter has occurred, notice of violation shall be served on the permittee or any worker on the job site and posted on the job site. A revocation hearing before the City Council may be held with at least twenty-four (24) hours notice to the permittee. In the absence of a resolution setting a flat fee, the fee shall be the amount necessary to reimburse the City for expenses incurred with respect to issuing, administering or enforcing the waiver or conditions thereof. The fee imposed shall not exceed the actual administrative costs, including applicable overhead costs as permitted by Federal Circular A 87 standards.

(3) Limited Provisional Waivers. After holding a public hearing, the City Council may in its discretion issue a provisional waiver for a limited term allowing construction activities between 10:00 p.m. and 6:00 a.m. Monday through Saturday if the noise source is located at least nine hundred (900) feet from a residential neighborhood and there is documented urgency to complete construction. Without notice or hearing, the City Council may terminate the provisional waiver or modify the conditions under which it was issued. Termination or modification without notice or hearing is necessary to account for the increased adverse response to noise during these time periods. Absent such controls, this Chapter authorizing provisional waivers would not have been adopted.

(4) Bridge Reconstruction Waivers (Miles Avenue). The Planning Director may issue a temporary waiver allowing Miles Avenue Bridge re-construction activities that may cause intermittent noise between 6:00 a.m. to 7:00 a.m. from June 1st through September 14th, Monday through Friday and early morning concrete and or asphalt installation due to climatic conditions between 2:00 a.m. to 7:00 a.m. from June 1st

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

through September 14th, Monday through Friday. If any written complaints are received, without notice of hearing the Planning Director may terminate the provisional waiver or modify the conditions as necessary under which it was issued to account for the increased adverse response to noise during these time periods. Following the Planning Director's decision the provisional waiver will be placed on the next City Council Agenda for final determination review.

(5) Warner Trail Sewer, Storm Drain and Street Widening Project. The Planning Director may issue a temporary waiver allowing construction activities for the Warner Trail Sewer, Storm Drain and Street Widening Project that may cause intermittent noise between 5:00 p.m. and 7:00 a.m. weekdays, and between 5:00 p.m. and 8:00 a.m. Saturdays from August 19, 2004 through October 15, 2004. If any written complaints are received concerning construction noise due to this Project during such time periods, then without notice or hearing, the Planning Director may terminate such waiver or impose any conditions he or she deems necessary to mitigate adverse impacts during these time periods. Following the Planning Director's issuance of a temporary waiver and/or decision to impose or not impose conditions following the subsequent receipt of complaints, the temporary waiver and/or decision of the Planning Director following receipt of any such complaint shall be placed on the next feasible City Council Agenda for ratification or disapproval by the City Council; provided, however, that any temporary waiver granted by the Planning Director shall remain in effect unless and until modified or terminated by the City Council.

(6) Large Developments in Excess of Six Hundred (600) Acres (Site Access). Contractors or any person involved in the development of a single project site in excess of six hundred (600) acres is permitted vehicle access to the portion of the project site where work is to be performed ("the work site") after 6:00 a.m. Monday through Friday and after 7:00 a.m. on Saturday. Such access between the hours of 6:00 a.m. and 7:00 a.m. Monday through Friday, and 7:00 a.m. and 8:00 a.m. on Saturdays, shall be solely for the purposes of access to the work site and preconstruction set-up. The operation of heavy equipment such as grading equipment, internal combustion engines such as generators, pneumatic tools or power equipment except for the sole purpose of access to the work site, shall not take place prior to 7:00 a.m. Monday through Friday and 8:00 a.m. Saturday.

(Ord. 438 § 5, 1998; Ord. 514 § 1, 2002; Ord. 538 § 3, 2003; Ord. 562 § 2, 2004; Ord. 563 § 2, 2004; Ord. 730 § 1, 2020)

§ 9.06.050. General noise regulations.

(a) General Prohibition. Notwithstanding any other provisions of this Chapter, and in addition thereto, it is unlawful, between the hours of 10:00 p.m. to 7:00 a.m., for any person to make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise that causes discomfort or annoyance to any reasonable person of ordinary sensibilities that is audible from any curb line or beyond the boundary line of the parcel from which the noise emanates.

(b) Standards for Determining a Violation. The standard(s) that may be considered in determining whether a violation of this Section exists may include, but are not limited to, any

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

or all of 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) Whether the noise is continuous, recurrent or intermittent; or

(8) Whether the noise is produced by a commercial or noncommercial activity.

(Ord. 277 § 3, 1991; Ord. 684 § 2, 2015; Ord. 731 § 3, 2020)

§ 9.06.051. Declaration of certain acts constituting excessive noise.

(a) The following activities are deemed to cause loud and excessive noise that are harmful to the health, safety, and general welfare of the community when conducted between the hours of 10:00 p.m. and 7:00 a.m.:

(1) Yelling, shouting, hooting, whistling, singing, and loud or boisterous talking that is audible from any curb line or beyond the boundary line of the parcel from which the noise emanates;

(2) Using a stereo system, Bluetooth speaker, or sound amplifier of any nature that is audible from any curb line or beyond the boundary line of the parcel from which the noise emanates; or

(3) Playing musical instruments outside.

(b) Evidence showing a person engaged in any of the activities listed in subsection (a) during the prohibited hours shall constitute prima facie evidence establishing a violation of this Chapter. Any law enforcement officers, including, but not limited to, City code enforcement officers and building inspectors, and Riverside County Sheriff's Department deputies, who are authorized by the City to enforce codes, ordinances, mandates, regulations, resolutions, rules or other laws adopted by the City, and who encounters evidence of a prima facie violation of this Section may impound as evidence any stereo system, Bluetooth speaker, sound amplifier of any nature or musical instruments used in commission of the violation.

(Ord. 684 § 3, 2015; Ord. 731 § 4, 2020)

§ 9.06.060. Special conditions permits.

Notwithstanding any provision of this Chapter, the Community Development Director may grant special condition permits for a period not exceeding three (3) days when the general purpose and intent of this Chapter can be carried out by the granting of the special condition permit, provided, however, that no permit shall be issued for any activity which violates any provision of Section

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

9.06.040(a). Said special condition permits may be renewed for a period not to exceed three (3) days at the discretion of the Community Development Director.
(Ord. 277 § 3, 1991)

§ 9.06.070. Variances procedures.

(a) Application and Fee. The owner or operator of a noise source which violates any of the provisions of this Chapter may file an application with the Community Development Director for a variance from the provisions thereof. The application shall set forth all actions taken to comply with this Chapter, the reasons why immediate compliance cannot be achieved, a proposed method for achieving compliance and a proposed time schedule for its accomplishment. If the applicant determines that compliance cannot be feasibly achieved at all, the application shall also set forth the reasons for such determination, the actions which have been taken to comply with this Chapter, a proposed method for complying as nearly as is feasible and a proposed time schedule for its accomplishment. Said application shall be accompanied by a fee in the amount established by resolution of the City Council.

(b) Application for More Than One Noise Source. 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.

(c) Referral to Planning Commission. Upon receipt of said application and fee, the Community Development Director shall refer the application with his or her recommendation thereon within thirty (30) days to the Planning Commission.

(d) Public Hearing. Upon receipt of an application for a variance, the Planning Commission shall schedule a public hearing to be conducted within sixty (60) days of receipt of the application from the Community Development Director. During the public hearing, the applicant and the Community Development Director may submit oral and documentary evidence relative to their respective contentions. The Planning Commission may deny the application for a variance or may grant a variance. The Commission may grant a variance to permit a condition which violates this Chapter to exist. A variance may be for a limited period and may be subject to any other terms, conditions, and requirements as the Planning Commission deems reasonable to achieve maximum compliance with the provisions of this Chapter. Such terms, conditions, and requirements may include, but shall not be limited to, limitations of noise levels and operating hours.

(e) Conditions of Variance. Each variance shall set forth the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the Planning Commission shall consider the magnitude of nuisance caused by the offensive noise, the uses of property within the area of impingement by the noise, the time factors related to the study, design, financing and construction of remedial work, the economic factors related to age and useful life of equipment and the general public interest and welfare.

(f) Planning Commission Considerations. In deciding whether to grant a variance, the Planning Commission shall consider all facts relating to whether strict compliance with the requirement of this Chapter will cause practical difficulties, unnecessary hardship or unreasonable expense and any other relevant considerations, including, but not limited to, the fact that a commercial development commenced construction prior to the existence of a

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

residence affected by noise from such facility.

(g) Time Limit for Planning Commission Decision. The Planning Commission shall render a decision within sixty (60) days of completion of the hearing. The decision of the Planning Commission shall be transmitted to the applicant by the City Clerk.

(h) Status of Applicant Until Variance is Granted. An applicant for a variance shall remain subject to prosecution under the terms of this Chapter until a variance is granted.

(i) Appeals.

(1) Within fifteen (15) days following the decision of the Planning Commission on an application, the applicant, or any affected resident or property owner may appeal the decision to the City Council by filing a notice of appeal with the secretary of the Planning Commission. In the case of an appeal by the applicant for a variance the notice of appeal shall be accompanied by a fee to be computed by the secretary on the basis of the estimated cost of preparing the materials required to be forwarded to the City Council as discussed hereafter. If the actual cost of such preparation differs from the estimated cost a supplemental payment shall be made to the secretary.

(2) Within ten (10) days following the receipt of a notice of appeal, the secretary of the Planning Commission shall forward to the City Clerk copies of the application for a variance and all papers and exhibits concerning said application received by the hearing board and its decision thereon. Any person may file with the City Clerk written arguments in favor or against said decision.

(3) Within thirty (30) days following conduct of the hearing before the City Council, the Council shall either affirm, modify, or reverse the decision of the Planning Commission. In deciding the appeal, the City Council shall have the same powers as are conferred on the Planning Commission. The City Council may also direct the Planning Commission to conduct further proceedings on said application. Failure of the City Council to affirm, modify or reverse the decision of the Planning Commission or to direct the Planning Commission to conduct further proceedings within thirty (30) days from the date of the hearing will constitute an affirmation of the decision of the Planning Commission.

(Ord. 277 § 3, 1991)

§ 9.06.075. Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, any authorized person charged with the enforcement of this Chapter when such authorized person is engaged in the performance of his or her duties.

(Ord. 684 § 4, 2015)

§ 9.06.080. Violations—Penalty.

Any person violating any of the provisions of this Chapter is guilty of an infraction and shall be subject to the maximum punishment set forth in State law or applicable City Code Section 1.20.030, provided that the first citation shall be a fine of two hundred fifty dollars ($250.00) and each subsequent citation shall be a fine of five hundred dollars ($500.00). Each day such violation

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

is committed or permitted to continue shall constitute a separate offense and shall be punishable as such. The provisions of this Chapter shall not be construed as permitting conduct not proscribed herein and shall not affect the enforceability of any other applicable provisions of law.
(Ord. 277 § 3, 1991; Ord. 684 § 5, 2015; Ord. 721 § 1, 2019)

§ 9.06.090. Severability.

If any section, subsection, sentence, clause, phrase or portion of this Chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions thereof.
(Ord. 277 § 3, 1991)

Downloaded from https://ecode360.com/IN4940 on 2025-03-07

APPENDIX C. NOISE MODELING INPUT/OUTPUT

CadnaA Input Output
Project: Renaissance Esmeralda
Case: No NC

Receiver

Name	M.	ID	Level Lr Day (dBA)	Level Lr Night (dBA)	Limit. Value Day (dBA)	Limit. Value Night (dBA)	Land Use Type	Land Use Auto	Noise Type	Height (m)		Coordinates X (m)	Y (m)	Z (m)
NM1			45.6	45.6	0	0		x	Total	1.5	r	663.29	316.79	3.33
NM2A			36	36	0	0		x	Total	1.5	r	667.92	151.14	1.5
NM3A			40.5	40.5	0	0		x	Total	1.5	r	516.78	166.06	2.11
NM4.1			38.9	38.9	0	0		x	Total	1.5	r	370.15	366.77	1.5
NM4.2			49.5	49.5	0	0		x	Total	13.73	r	370.27	367.01	13.73
NM5			65.6	65.6	0	0		x	Total	1.5	r	559.38	320.78	1.5

Area Source

Name	M.	ID	Result. PWL Day (dBA)	Result. PWL Evening (dBA)	Result. PWL Night (dBA)	Result. PWL" Day (dBA)	Result. PWL" Evening (dBA)	Result. PWL" Night (dBA)	Lw / Li Type	Value	norm. dB(A)	Correction Day dB(A)	Correction Evening dB(A)	Correction Night dB(A)	Sound Reduction R	Sound Reduction Area (m^2)	Attenuation	Operating Time Day (min)	Operating Time Special (min)	Operating Time Night (min)	K0 (dB)	Freq. (Hz)	Direct.	Moving Pt. Src Number Day	Moving Pt. Src Number Evening	Moving Pt. Src Number Night
	1		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	2		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	3		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	4		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4

Sound Levels

Name	ID	Type	Oktave Spectrum (dB) Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	Source lin
Pickleball	Pk	Lw		84.4	79.4	75.5	74.1	75.1	76.6	71.1	66.4	61.4	79.5	87.2
Pickleball S	Ps	Lw		43.6	46.1	46.4	52.5	69.1	77.9	65.8	55.1	50.8	78.5	78.7
Person	P	Lw		56.2	57.3	59.9	56.5	56.5	54.3	51.1	43	37	58.9	65.1

Result Table

Receiver Name	ID	Land Use	Limiting Value Day dB(A)	Limiting Value Night dB(A)	rel. Axis Station m	Distance m	Height m	Lr w/o Noise Control Day dB(A)	Lr w/o Noise Control Night dB(A)	dL req. Day dB(A)	dL req. Night dB(A)	Lr w/ Noise Control Day dB(A)	Lr w/ Noise Control Night dB(A)	Exceeding Day dB(A)	Exceeding Night dB(A)	passive NC dB(A)
NM1			0	0	366	116.07	3.33	45.6	45.6	45.6	45.6	0	0	-	-	-
NM2A			0	0	327	7.74	1.5	36	36	36	36	0	0	-	-	-
NM3A			0	0	176	6.5	2.11	40.5	40.5	40.5	40.5	0	0	-	-	-
NM4.1			0	0	82	140.36	1.5	38.9	38.9	38.9	38.9	0	0	-	-	-
NM4.2			0	0	82	140.61	13.73	49.5	49.5	49.5	49.5	0	0	-	-	-
NM5			0	0	261	109.53	1.5	65.6	65.6	65.6	65.6	0	0	-	-	-

CadnaA Input Output
Project: Renaissance Esmeralda
Case: 10-ft Barrier ES

Receiver

Name	M.	ID	Level Lr Day (dBA)	Level Lr Night (dBA)	Limit. Value Day (dBA)	Limit. Value Night (dBA)	Land Use Type	Land Use Auto	Noise Type	Height (m)		Coordinates X (m)	Y (m)	Z (m)
NM1			42.8	42.8	0	0		x	Total	1.5	r	663.29	316.79	3.33
NM2A			33.3	33.3	0	0		x	Total	1.5	r	667.92	151.14	1.5
NM3A			37.5	37.5	0	0		x	Total	1.5	r	516.78	166.06	2.11
NM4.1			38.9	38.9	0	0		x	Total	1.5	r	370.15	366.77	1.5
NM4.2			49.5	49.5	0	0		x	Total	13.73	r	370.27	367.01	13.73
NM5			61.4	61.4	0	0		x	Total	1.5	r	559.38	320.78	1.5

Area Source

Name	M.	ID	Result. PWL Day (dBA)	Result. PWL Evening (dBA)	Result. PWL Night (dBA)	Result. PWL" Day (dBA)	Result. PWL" Evening (dBA)	Result. PWL" Night (dBA)	Lw / Li Type	Value	norm. dB(A)	Correction Day dB(A)	Correction Evening dB(A)	Correction Night dB(A)	Sound Reduction R	Sound Reduction Area (m^2)	Attenuatior	Operating Time Day (min)	Operating Time Special (min)	Operating Time Night (min)	K0 (dB)	Freq. (Hz)	Direct.	Moving Pt. Src Number Day	Moving Pt. Src Number Evening	Moving Pt. Src Number Night
	1		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	2		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	3		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
	4		101.5	101.5	101.5	78.5	78.5	78.5	Lw"	Ps		0	0	0								0	P			
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		4	4	4								0	P	4	4	4

Sound Levels

Name	ID	Type	Oktave Spectrum (dB) Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	Source lin
Pickleball	Pk	Lw		84.4	79.4	75.5	74.1	75.1	76.6	71.1	66.4	61.4	79.5	87.2
Pickleball S	Ps	Lw		43.6	46.1	46.4	52.5	69.1	77.9	65.8	55.1	50.8	78.5	78.7
Person	P	Lw		56.2	57.3	59.9	56.5	56.5	54.3	51.1	43	37	58.9	65.1

Result Table

Receiver Name	ID	Land Use	Limiting Value Day dB(A)	Limiting Value Night dB(A)	rel. Axis Station m	Distance m	Height m	Lr w/o Noise Control Day dB(A)	Lr w/o Noise Control Night dB(A)	dL req. Day dB(A)	dL req. Night dB(A)	Lr w/ Noise Control Day dB(A)	Lr w/ Noise Control Night dB(A)	Exceeding Day dB(A)	Exceeding Night dB(A)	passive NC dB(A)
NM1			0	0	366	116.07	3.33	42.8	42.8	42.8	42.8	0	0	-	-	-
NM2A			0	0	327	7.74	1.5	33.3	33.3	33.3	33.3	0	0	-	-	-
NM3A			0	0	176	6.5	2.11	37.5	37.5	37.5	37.5	0	0	-	-	-
NM4.1			0	0	82	140.36	1.5	38.9	38.9	38.9	38.9	0	0	-	-	-
NM4.2			0	0	82	140.61	13.73	49.5	49.5	49.5	49.5	0	0	-	-	-
NM5			0	0	261	109.53	1.5	61.4	61.4	61.4	61.4	0	0	-	-	-

CadnaA Input Output
Project: Renaissance Esmeralda
Case: 10-ft Barrier ES QP

Receiver

Name	M.	ID	Level Lr Day (dBA)	Level Lr Night (dBA)	Limit. Value Day (dBA)	Limit. Value Night (dBA)	Land Use Type	Land Use Auto	Noise Type	Height (m)		Coordinates X (m)	Y (m)	Z (m)
NM1			39.1	39.1	0	0		x	Total	1.5	r	663.29	316.79	3.33
NM2A			28.8	28.8	0	0		x	Total	1.5	r	667.92	151.14	1.5
NM3A			33.1	33.1	0	0		x	Total	1.5	r	516.78	166.06	2.11
NM4.1			34.9	34.9	0	0		x	Total	1.5	r	370.15	366.77	1.5
NM4.2			45.7	45.7	0	0		x	Total	13.73	r	370.27	367.01	13.73
NM5			58	58	0	0		x	Total	1.5	r	559.38	320.78	1.5

Area Source

Name	M.	ID	Result. PWL Day (dBA)	Result. PWL Evening (dBA)	Result. PWL Night (dBA)	Result. PWL" Day (dBA)	Result. PWL" Evening (dBA)	Result. PWL" Night (dBA)	Lw / Li Type	Value	norm. dB(A)	Correction Day dB(A)	Correction Evening dB(A)	Correction Night dB(A)	Sound Reduction R	Sound Reduction Area (m^2)	Attenuation	Operating Time Day (min)	Operating Time Special (min)	Operating Time Night (min)	K0 (dB)	Freq. (Hz)	Direct.	Moving Pt. Src Number Day	Moving Pt. Src Number Evening	Moving Pt. Src Number Night
	1		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	2		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	3		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	4		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		0	0	0								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		0	0	0								0	P	4	4	4
People			-41.1	-41.1	-41.1	-58.5	-58.5	-58.5	PWL-Pt	P		4	4	4								0	P	0	0	0

Sound Levels

Name	ID	Type	Oktave Spectrum (dB) Weight.	31.5	63	125	250	500	1000	2000	4000	8000	Source A	Source lin
Pickleball	Pk	Lw		84.4	79.4	75.5	74.1	75.1	76.6	71.1	66.4	61.4	79.5	87.2
Pickleball S	Ps	Lw		43.6	46.1	46.4	52.5	69.1	77.9	65.8	55.1	50.8	78.5	78.7
Hush Padd	HP	Lw		54.7	55.5	57.7	61.5	67.7	72.5	69.2	58.8	51.2	75.2	75.5
Person	P	Lw		56.2	57.3	59.9	56.5	56.5	54.3	51.1	43	37	58.9	65.1

Result Table

Receiver Name	ID	Land Use	Limiting Value Day dB(A)	Limiting Value Night dB(A)	rel. Axis Station m	Distance m	Height m	Lr w/o Noise Control Day dB(A)	Lr w/o Noise Control Night dB(A)	dL req. Day dB(A)	dL req. Night dB(A)	Lr w/ Noise Control Day dB(A)	Lr w/ Noise Control Night dB(A)	Exceeding Day dB(A)	Exceeding Night dB(A)	passive NC dB(A)
NM1			0	0	366	116.07	3.33	39.1	39.1	39.1	39.1	0	0	-	-	-
NM2A			0	0	327	7.74	1.5	28.8	28.8	28.8	28.8	0	0	-	-	-
NM3A			0	0	176	6.5	2.11	33.1	33.1	33.1	33.1	0	0	-	-	-
NM4.1			0	0	82	140.36	1.5	34.9	34.9	34.9	34.9	0	0	-	-	-
NM4.2			0	0	82	140.61	13.73	45.7	45.7	45.7	45.7	0	0	-	-	-
NM5			0	0	261	109.53	1.5	58	58	58	58	0	0	-	-	-

CadnaA Input Output
Project: Renaissance Esmeralda
Case: Quiet Paddles

Receiver

Name	M.	ID	Level Lr Day (dBA)	Level Lr Night (dBA)	Limit. Value Day (dBA)	Limit. Value Night (dBA)	Land Use Type	Land Use Auto	Noise Type	Height (m)		Coordinates X (m)	Y (m)	Z (m)
NM1			42	42	0	0	x		Total	1.5	r	663.29	316.79	3.33
NM2A			31.5	31.5	0	0	x		Total	1.5	r	667.92	151.14	1.5
NM3A			36.3	36.3	0	0	x		Total	1.5	r	516.78	166.06	2.11
NM4.1			34.9	34.9	0	0	x		Total	1.5	r	370.15	366.77	1.5
NM4.2			45.7	45.7	0	0	x		Total	13.73	r	370.27	367.01	13.73
NM5			62.2	62.2	0	0	x		Total	1.5	r	559.38	320.78	1.5

Area Source

Name	M.	ID	Result. PWL Day (dBA)	Result. PWL Evening (dBA)	Result. PWL Night (dBA)	Result. PWL" Day (dBA)	Result. PWL" Evening (dBA)	Result. PWL" Night (dBA)	Lw / Li Type	Value	norm. dB(A)	Correction Day dB(A)	Correction Evening dB(A)	Correction Night dB(A)	Sound Reduction R	Sound Reduction Area (m^2)	Attenuation	Operating Time Day (min)	Operating Time Special (min)	Operating Time Night (min)	K0 (dB)	Freq. (Hz)	Direct.	Moving Pt. Src Number Day	Moving Pt. Src Number Evening	Moving Pt. Src Number Night
	1		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	2		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	3		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
	4		98.2	98.2	98.2	75.2	75.2	75.2	Lw"	HP		0	0	0								0	P			
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		0	0	0								0	P	4	4	4
People			64.9	64.9	64.9	47.5	47.5	47.5	PWL-Pt	P		0	0	0								0	P	4	4	4
People			-41.1	-41.1	-41.1	-58.5	-58.5	-58.5	PWL-Pt	P		4	4	4								0	P	0	0	0

Sound Levels

Name	ID	Type	Oktave Spectrum (dB) Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	Source lin
Pickleball	Pk	Lw		84.4	79.4	75.5	74.1	75.1	76.6	71.1	66.4	61.4	79.5	87.2
Pickleball S	Ps	Lw		43.6	46.1	46.4	52.5	69.1	77.9	65.8	55.1	50.8	78.5	78.7
Hush Padd	HP	Lw		54.7	55.5	57.7	61.5	67.7	72.5	69.2	58.8	51.2	75.2	75.5
Person	P	Lw		56.2	57.3	59.9	56.5	56.5	54.3	51.1	43	37	58.9	65.1

Result Table

Receiver Name	ID	Land Use	Limiting Value Day dB(A)	Limiting Value Night dB(A)	rel. Axis Station m	Distance m	Height m	Lr w/o Noise Control Day dB(A)	Lr w/o Noise Control Night dB(A)	dL req. Day dB(A)	dL req. Night dB(A)	Lr w/ Noise Control Day dB(A)	Lr w/ Noise Control Night dB(A)	Exceeding Day dB(A)	Exceeding Night dB(A)	passive NC dB(A)
NM1			0	0	366	116.07	3.33	42	42	42	42	0	0	-	-	-
NM2A			0	0	327	7.74	1.5	31.5	31.5	31.5	31.5	0	0	-	-	-
NM3A			0	0	176	6.5	2.11	36.3	36.3	36.3	36.3	0	0	-	-	-
NM4.1			0	0	82	140.36	1.5	34.9	34.9	34.9	34.9	0	0	-	-	-
NM4.2			0	0	82	140.61	13.73	45.7	45.7	45.7	45.7	0	0	-	-	-
NM5			0	0	261	109.53	1.5	62.2	62.2	62.2	62.2	0	0	-	-	-

SOUND CURTAINS
BY SOUND SEAL

SPEC DATA SHEET **BBC SERIES**



BBC-EXT-N

EXTERIOR GRADE
NOISE BARRIER/SOUND ABSORBER COMPOSITE

The configuration of Sound Seal's **BBC-EXT-N** product offers the benefits of both a sound absorber and noise barrier for outdoor applications. Each curtain is custom fabricated to include A non-reinforced 1-LB psf loaded vinyl barrier is bonded to a 1" thick exterior grade vinyl-coated polyester faced quilted fiberglass absorber. Each is finished with grommets across the top and bottom, and vertical-mating exterior-grade Velcro along the edges for easy installation.

FEATURES:

- Excellent acoustical performance (STC-29/NRC .65)
- Nominal Thickness: 2"
- Weight: 1.25 lb psf
- Minimum lifespan of 7+ years*

*when properly installed

APPLICATIONS:

- Used as an economic Sound Curtain on temporary construction projects
- Available with a 2" thick sound absorber



BBC-EXT-N EXTERIOR GRADE NOISE BARRIER/SOUND ABSORBER COMPOSITE

ACOUSTICAL PERFORMANCE

Sound Transmission Loss Coefficients at the Octave Band Frequencies (Hz)							
Frequency (Hz)	**125**	**250**	**500**	**1K**	**2K**	**4K**	**STC**
BBC-EXT-N	15	17	28	37	45	52	29

ASTM E-90 & E 413

Sound Absorption Coefficients at the Octave Band Frequencies							
Frequency (Hz)	**125**	**250**	**500**	**1K**	**2K**	**4K**	**NRC**
BBC-EXT-N	.17	.30	.83	.82	.59	.37	.65

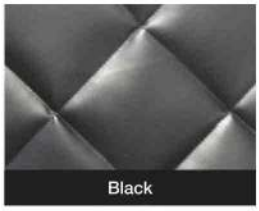
ASTM C 423

SIZING

Standard panel width is 54"

AVAILABLE COLORS


Grey


Black




White

Colo inconsistencies of various monitors, lighting sources, digital photograp dye lot variations, we cannot guarantee that the color you see on your screen accurately portrays the true color of the product. Screen images are intended as a guide only. Swatch samples available upon request.

AVAILABLE BARRIER COLORS

Gray, Tan, Black, Light Blue*

*subject to availability

SPECIFICATIONS:
Visit **www.soundseal.com**
or call **1.800.569.1294**

soundseal.com/bbcx

SOUND SEAL®

www.soundseal.com

A CATALYST ACOUSTICS GROUP COMPANY

APPENDIX D. QUIET PADDLES


HUSH
BY DIADEM
AVAILABLE IN
THE WORLD'S QUIETEST PADDLE
ANTI DAMP KRAIBON
ENHANCED SWEET SPOT & VIBRATION REDUCING TECH
eTPU FACE
FOR A QUIET SURFACE WITH A BLEND OF POWER & CONTROL
CORE MOLD SYSTEM 3D
DOUBLE THERMOFORMED WITH CARBON FIBER CORE FOR A SOLID FEEL
eTPU
ANTI - DAMP KRAIBON
CMS 3D
POWER
SPIN
TOUCH
SOUND
DIADEM
PADDLE SPECS
LENGTH 16.5 in
WIDTH 7.22 in
WEIGHT 8.15 oz
THICKNESS 18 mm
BALANCE 240 mm
HANDLE LENGTH 5.6 in
GRIP SIZE 4 1/8"



Skill Level	Weight Average	Paddle Width	Core Thickness
Beginner to Pro	7.5 oz	7.5"	13 mm (0.51")



The first paddle qualifying for USA Pickleball's new Quiet Category

SPECIFICATIONS

Skill Level:	Beginner to Pro
Weight Average:	7.5 oz
Grip:	OWL Flight Grip
Grip Circumference:	4.06" (actual grip sizes may vary up to 1/8")
Paddle Length:	16.3"
Handle Length:	5.0"
Paddle Width:	7.5"
Paddle Face:	Proprietary Acoustene™ Composite
Core Material:	Polypropylene Honeycomb
Core Thickness:	13 mm (0.51")
Edge Guard:	Woven Acoustene™ (patent pending)
	Made in China

FREE SHIPPING OVER $99 TO U.S. AND CANADA

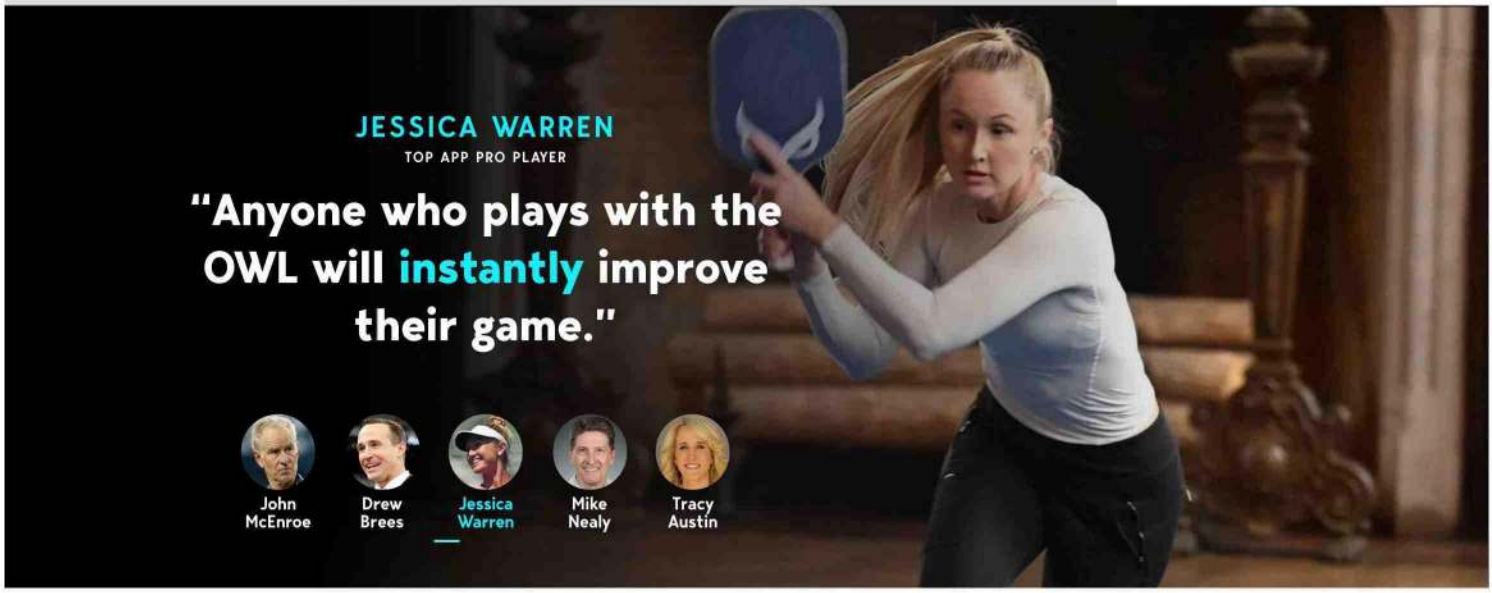
PADDLES TECHNOLOGY SUPPORT NEWS

AVERAGE CUSTOMER RATING
4.7/5

652
CERTIFIED REVIEWS

Powered by YOTPO

TODAY Forbes
ESPN CBS SPORTS
SiriusXM the dink.



FREE SHIPPING ON ALL OWL PADDLES



Founder's Edition
Limited Edition
A design to celebrate the OWL's goal to revolutionize your pickleball experience.

Core Thickness
16 mm (0.63")
Weight Average
7.9 oz
Handle Length



The OWL CX
Control Series
Delivers unprecedented touch, huge sweet spot, and soft feel for easy, pinpoint drops.

Core Thickness
16 mm (0.63")
Weight Average
7.8 oz
Handle Length



The OWL CXE
Control Series
Elongated handle version of the OWL CX with all the same control benefits.

Core Thickness
16 mm (0.63")
Weight Average
7.9 oz
Handle Length



The OWL PX
Power Series
Thinner profile with maximum hand speed and maneuverability, delivering put-away power.

Core Thickness
13 mm (0.51")
Weight Average
7.6 oz
Handle Length



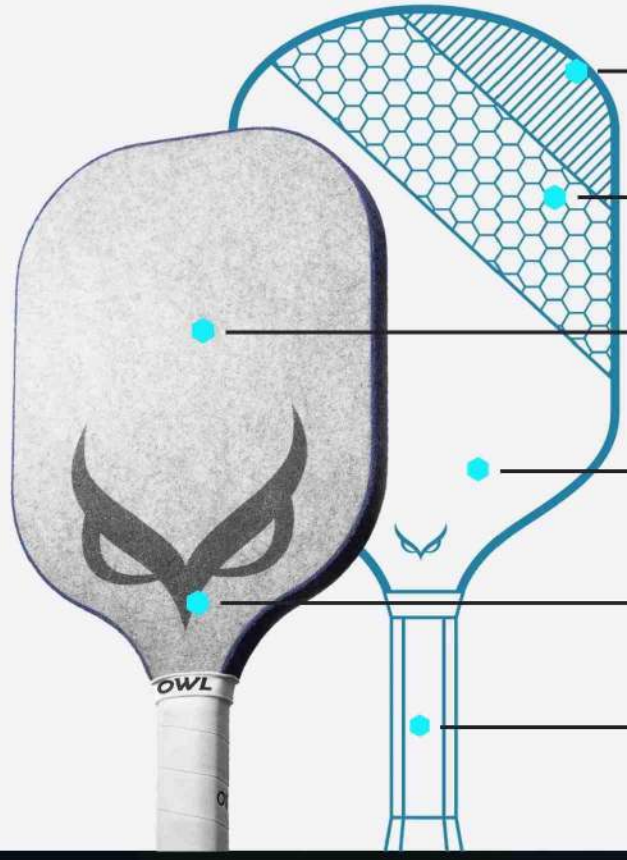
The OWL PXE
Power Series
Elongated handle version of the OWL PX with all the same power benefits.

Core Thickness
13 mm (0.51")
Weight Average
7.5 oz
Handle Length

FREE SHIPPING OVER $99 TO U.S. AND CANADA

PADDLES TECHNOLOGY SUPPORT NEWS

The OWL paddle is better by every measure that matters.



Playability
Proprietary blend of paddle benefits including control, spin, power and touch.

Noise profile
Proprietary Acoustene™ sheath available nowhere else in the world

Accuracy
Larger sweet spot for enhanced accuracy with off-center impacts

Maneuverability
Anti-head heavy design for incredible balance

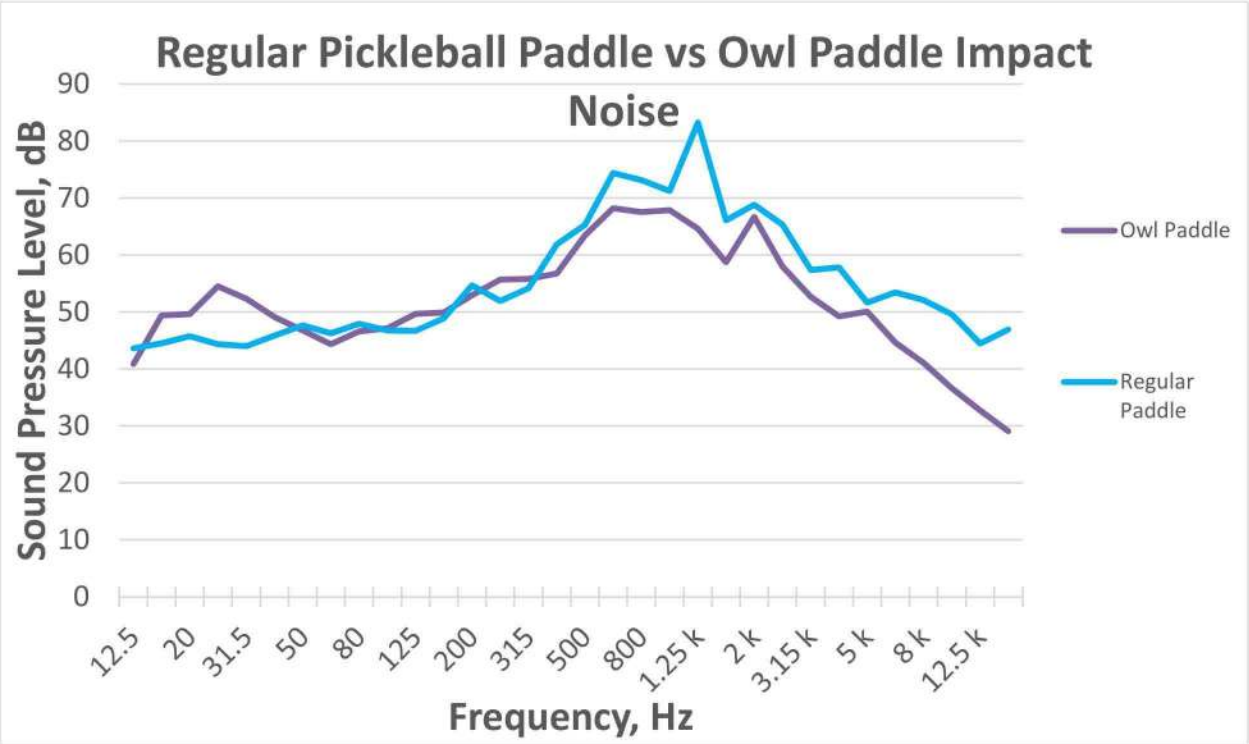
Arm & elbow comfort
Unique vibration dampening layered construction for arm and elbow comfort

Durability
Inside-out engineering built to deliver longer paddle performance.

USA PICKLEBALL QUIET

The first paddle qualifying for USA Pickleball's new Quiet Category

Learn More



Hz	OWL PADDLE SPL, dB
31.5	57.2846
63	50.78922
125	53.84864
250	59.76428
500	69.69457
1000	71.65208
2000	67.79392
4000	55.7006
8000	46.67099
Leq	75.1

Hz	STANDARD PADDLE SPL, dB
31.5	49.59108
63	52.12123
125	52.3509
250	58.52786
500	75.1207
1000	83.90518
2000	71.78102
4000	61.11888
8000	56.75753
Leq	84.7