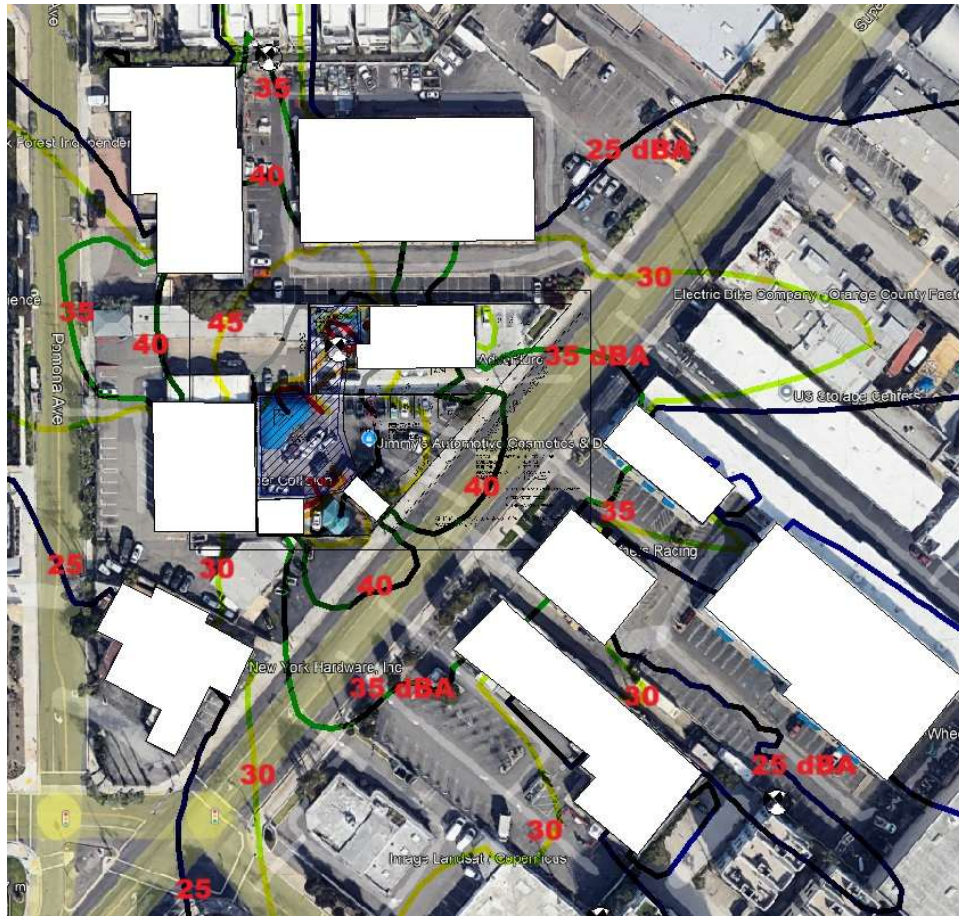




THE BONE ADVENTURE FACILITY EXPANSION NOISE STUDY

SEPTEMBER 19, 2025

PREPARED FOR:
THE BONE ADVENTURE

PREPARED BY:
ACOUSTICS GROUP, INC.
CONSULTANTS IN ACOUSTICS, NOISE & VIBRATION





The Bone Adventure Facility Expansion Noise Study

Prepared for:
Diane Cuniff
The Bone Adventure, Inc.
1629 Superior Ave.
Costa Mesa CA 92627

Prepared by:
ROBERT WOO – Principal Acoustical Consultant, INCE

ACOUSTICS GROUP, INC.
CONSULTANTS IN ACOUSTICS, NOISE & VIBRATION
2102 Business Center Dr. Suite 130
Irvine, CA 92612
(877) 595-9988



TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
INTRODUCTION.....	4
NOISE.....	4
NOISE STANDARDS.....	5
NOISE SURVEY.....	7
NOISE ANALYSIS.....	9
IMPACT ASSESSMENT.....	13
NOISE CONTROL RECOMMENDATIONS.....	13
CONCLUSION.....	14
REFERENCES.....	15
APPENDIX.....	16

Figures

Figure 1. Project Site.....	4
Figure 2. Site Plan.....	5
Figure 3. Typical A-weighted Noise Levels.....	6
Figure 4. Noise Contour Map – Bone Adventure Existing Operations.....	10
Figure 5. Noise Contour Map – Bone Adventure Future Operations.....	12

Tables

Table 1. City of Costa Mesa Noise Standards.....	5
Table 2. Ambient Noise Measurement Data.....	8
Table 3. Sound Power Levels.....	8
Table 4. Existing Bone Adventure Noise Levels and Impact Assessment.....	9
Table 5. Future Bone Adventure Noise Levels with Facility Expansion and Impact Assessment.....	11



EXECUTIVE SUMMARY

Acoustics Group, Inc., (AGI) was retained by The Bone Adventure to evaluate the future noise level from their proposed Facility Expansion Project at 1619 Superior Avenue in Costa Mesa, CA. AGI has reviewed the City of Costa Mesa Noise Ordinance Standards, conducted an ambient and operations noise survey, analyzed the future Project Layout and Operations, assessed the impact, and identified noise control measures.

The future average hourly noise levels from the Bone Adventure expanded facility will be as high as 39.2, 43.3 and 35.2 dBA at Receptors NM1, ST1 and NM2, respectively. When the future noise from the Bone Adventure Operations is compared to the City of Costa Mesa Daytime Exterior Noise Standard of 55 dBA for Residential Land Uses, the future noise will be in full compliance with the City's noise standard during the daytime hours. When compared with the hourly range in ambient daytime average noise level, the noise from the Bone Adventure will also be below the daytime average noise levels. However, even though the projected noise levels from the Project will be below the ambient background, dog barking may still be occasionally audible especially when there are lulls in traffic or industrial activity. There are no outdoor operations at the Bone Adventure during the nighttime and therefore no nighttime noise events related to the facility.

Implementation of the recommended noise control measures will ensure compliance with the City's Noise Standards. The acoustical design should be reviewed by a qualified acoustical consultant to ensure compliance with City Noise Standards.

INTRODUCTION

Acoustics Group, Inc., (AGI) was retained by The Bone Adventure to evaluate the future noise level from their proposed Facility Expansion into 1619 Superior Avenue in Costa Mesa, CA. The owner is concerned about future noise from the Facility Expansion Project affecting the nearby residences to the North and to the Southeast. AGI has reviewed the City of Costa Mesa Noise Ordinance Standards, conducted an ambient and operations noise survey, analyzed the future Project Layout and Operations, assessed the impact, and identified noise control measures. Figure 1 shows the location of the project site and Figure 2 shows the site plan of the proposed expansion.

NOISE

The magnitude by which noise affects its surrounding environment is measured on a logarithmic scale in decibels (dB). Because the human ear is limited to hearing a specific range of frequencies, the A-weighted filter system is used to form relevant results. A-weighted sound levels are represented as dBA. Figure 3 shows typical A-weighted exterior and interior noise levels that occur in human environments.

Several noise metrics have been developed to evaluate noise. L_{eq} is the energy average noise level and corresponds to a steady-state sound level that has the same acoustical energy as the sum of all the time varying noise events. L_{max} is the maximum noise level measured during a sampling period, and L_{xx} are the statistical noise levels that are exceeded xx-% of the time of the measurement. L_{50} is the average noise level that is exceeded 50% of the time, 30-minutes in a 60-minute period.

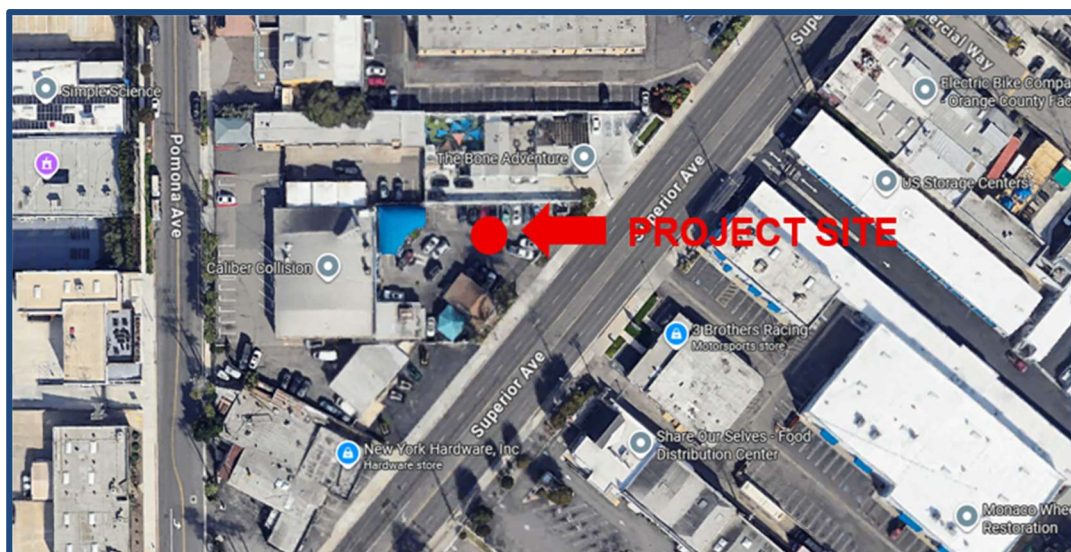


Figure 1. Project Site

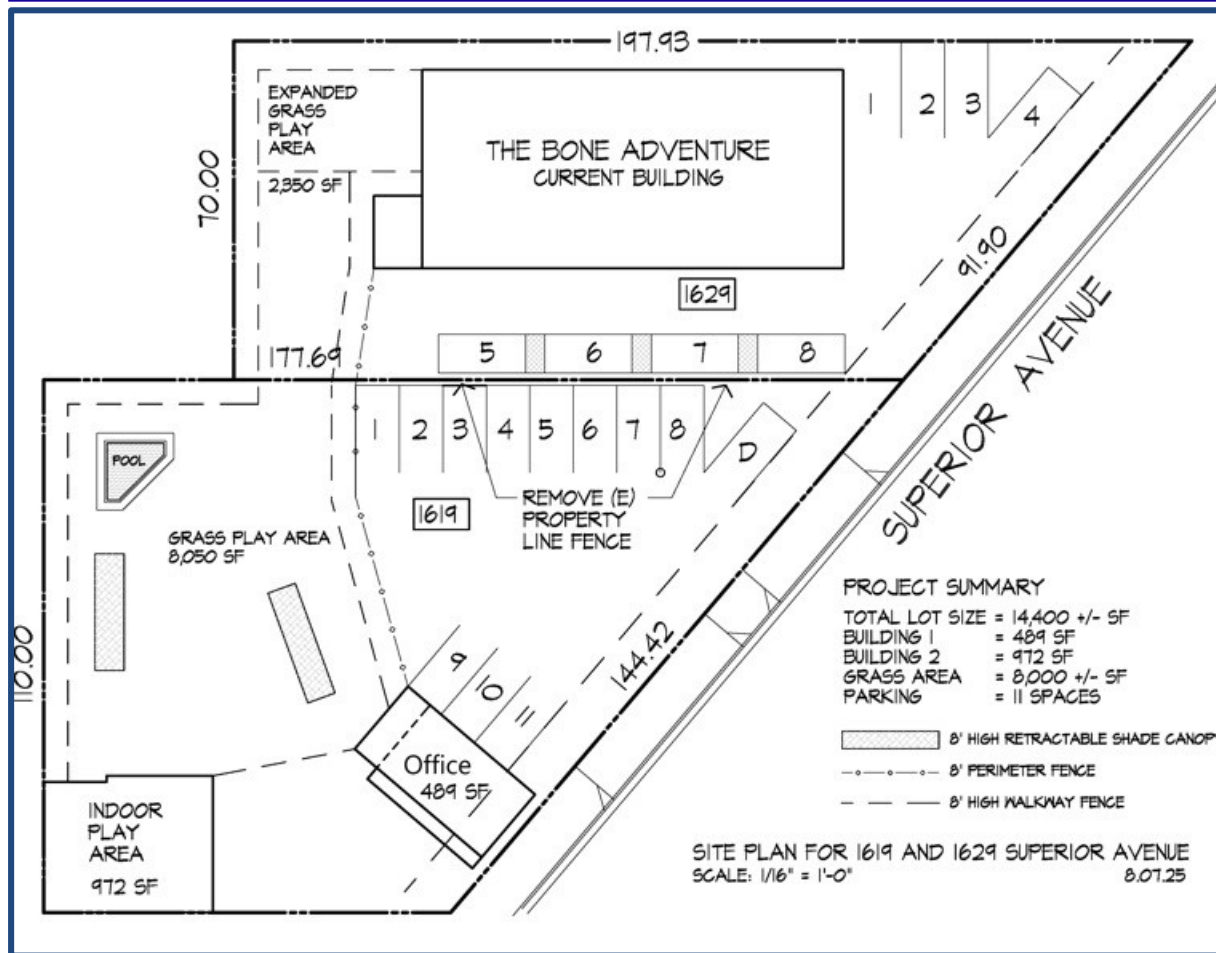


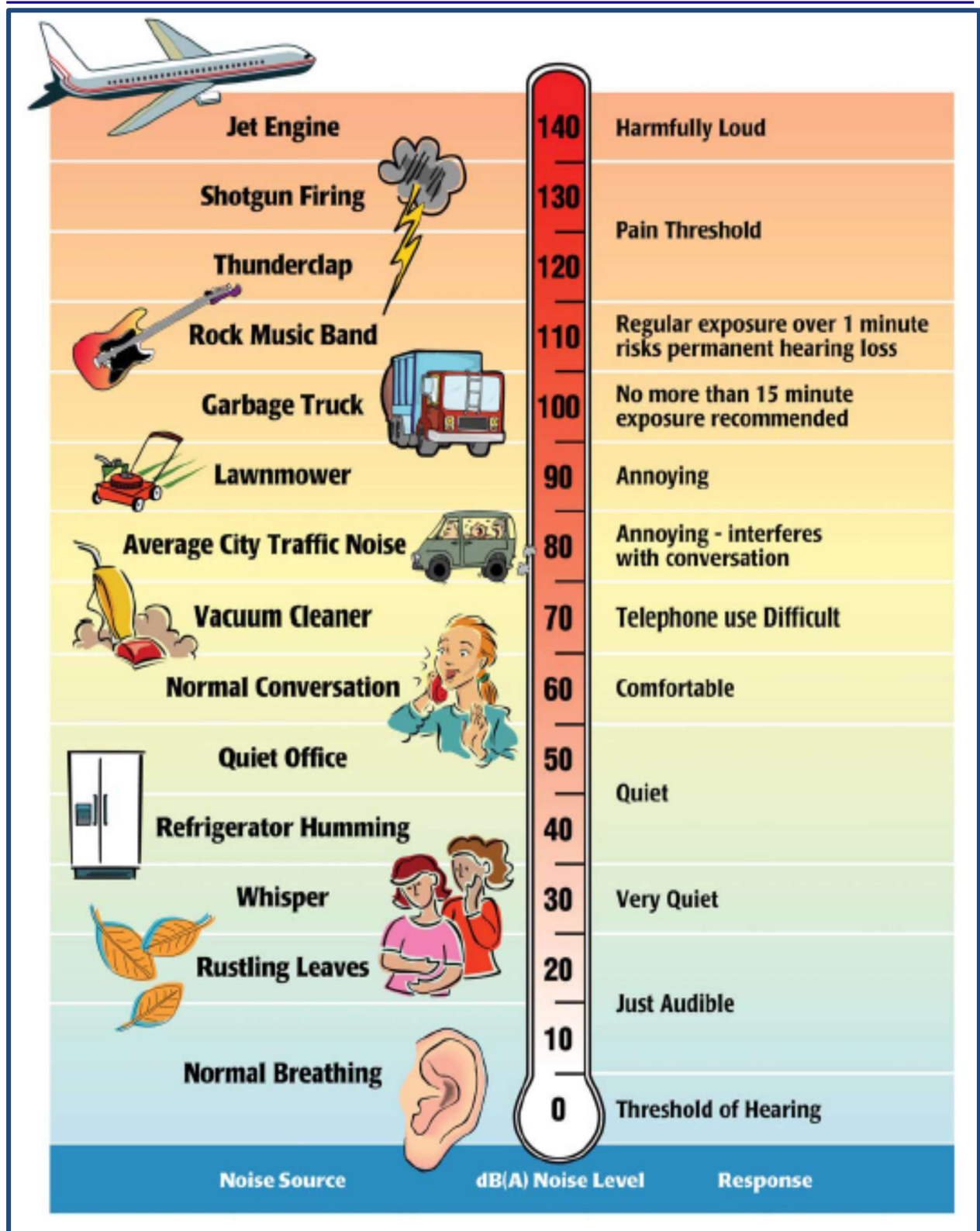
Figure 2. Site Plan

NOISE STANDARDS

The City of Costa Mesa Municipal Code has adopted regulations for the purpose of protecting citizens from excessive noise (Section 8.13.280). The City's Code limits exterior noise levels to an average noise level of 55 and 50 dBA at any residential property line between the hours from 7:00 am to 11:00 pm and 11:00 pm to 7:00 am, respectively. These noise limits are for noise occurring for a cumulative period of more than 30 minutes in any hour. Refer to Table 1 for the City of Costa Mesa Noise Standards. A copy of the noise ordinance is provided in the Appendix.

Table 1. City of Costa Mesa Noise Standards

Residential Exterior Noise Standards	
Average Noise Level, L50, dB(A)	Time Period
55	7:00 a.m. - 11:00 p.m.
50	11:00 p.m. - 7:00 a.m.



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

Figure 3. Typical A-weighted Noise Levels



NOISE SURVEY

AGI conducted a site visit on August 25 to 26, 2025 to measure ambient background noise levels around the Project site. Brüel & Kjær Model 2250 Acoustical Analyzers were used to conduct the surveys. These analyzers are precision Type 1 instruments that are calibrated to laboratory standards. The instrument system was field calibrated before and after the measurements to ensure accuracy and was operated per the manufacturer's recommendations.

A 24-hour noise measurement was conducted at location NM1 which is north of the Project site, at the nearest residential boundary. The microphone was attached to a telescoping pole approximately 20 ft above the ground and secured along the property line barrier. The hourly average noise levels ranged from 39.7 to 57.4 dBA at this location and between 8:00 AM to 6:00 PM, the hourly average noise level ranged from 53.9 to 57.4 dBA. For each hour, the noise level represents 60 minutes of data for the time period beginning with the stated hour. A simultaneous short-term measurement was also conducted at location ST1 which is located approximately 75 ft west of NM1. This location was selected because it has direct line of sight to the existing outdoor yard of the Bone Adventure. The average noise level measured at ST1 was 51.3 dBA during the short term survey. The hourly average noise level, L50, is estimated to range from 54.2 to 84.7 dBA for a 24-hour period and 48.2 to 51.7 dBA between 8:00 AM to 6:00 PM. At both of these two locations, the ambient background noise was attributed to nearby industrial activity, vehicular traffic, the adjacent car wash, birds, and aircraft. Dogs barking at the Bone Adventure were faintly audible at this location but were not measurable due to the high ambient background noise during the daytime hours.

A 24-hour noise measurement was also conducted at location NM2 which is the nearest residential boundary southeast of the Project site. The microphone was attached to the telephone pole approximately 12 ft above the ground and secured along the north property line. The 24-hour hourly average noise levels ranged from 41.3 to 58 dBA at this location. Between 8:00 AM to 6:00 PM, the hourly average noise levels ranged from 52.0 to 58 dBA. Ambient background noise at this location was attributed to nearby industrial activity, vehicular traffic, birds, and aircraft. Dog barking from the Bone Adventure was not audible at this location. Table 2 summarizes the measured ambient noise levels. Refer to the Appendix for the field data sheets.

Existing noise generated at the Bone Adventure outdoor yard was measured on August 26, 2025. During the measurement, approximately 20 dogs were in the outdoor area and were supervised by up to two staff members. Dogs could be heard running and occasionally barking while staff directed instructions at the dogs during the survey. The average noise level, L50, measured during the short term survey was 58 dBA at a distance of approximately 20 ft from the center of activity. Based on the noise measurement data, the sound power level, Lw was calculated for the 20 dogs and 2 staff members. Future sound power levels for approximately 145 dogs and 10+ staff members



was calculated for the expansion noise analysis. The sound power levels are summarized in Table 3.

Table 2. Ambient Noise Measurement Data

Receptor	Date/Time ¹	Range in Measured Hourly Average Noise Level, L ₅₀ , dBA	Range in Measured Hourly L _{max} , dBA	Range in Measured Hourly L _{min} , dBA
NM1	August 25 – 26, 2025 11:00 AM - 11:00 AM	39.7 - 57.4	58.7 - 84.2	38.0 - 51.8
	August 25 – 26, 2025 8:00 AM – 6:00 PM	53.9 – 57.4	70.2 – 84.5	44 – 51.8
	August 26, 2025 9:15 AM - 9:45 AM	57	73.7	51.3
ST1	August 26, 2025 9:15 AM - 9:45 AM	51.3	84.7	54.2
	August 25 – 26, 2025 8:00 AM – 6:00 PM	48.2 – 51.7 (estimated)	81.2 – 95.5 (estimated)	46.9 – 54.7 (estimated)
	August 25 – 26, 2025 11:00 AM - 11:00 AM	34 – 51.7 (estimated)	69.7 – 95.2 (estimated)	40.9 – 54.7 (estimated)
NM2	August 25 – 26, 2025 11:00 AM - 11:00 AM	41.3 – 58.0	49.9 - 85.8	35.8 - 50.1
	August 25 – 26, 2025 8:00 AM – 6:00 PM	52.0 – 58.0	67.5 – 85.8	43.6 – 50.1

Note: ¹ - For each hour, the noise level represents 60 minutes of data for the time period beginning with the stated hour.

Table 3. Sound Power Levels

Noise Sources at Outdoor Area	Octave Band Sound Power Level, L _w dB re: 1picowatt								
	31.5	63	125	250	500	1k	2k	4k	8k
20 dogs & 2 staff	62	61	57	54	61	60	54	46	42
145 dogs & 10+ staff	71	70	66	63	70	69	63	55	51



NOISE ANALYSIS

The methodology used to evaluate noise from the Bone Adventure 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 typography. The model uses industry recognized algorithms (ISO 9613) to perform acoustical analyses. The noise generated by existing and future Bone Adventure operations was calculated by inputting acoustical sources at the project site. AGI's measurement data from the short term survey with 20 dogs and 2 staff members was used for the modeling inputs and calibration.

The existing noise levels were estimated for a typical hour with 20 dogs and 2 staff members at the outdoor yard. This is the predominant noise source associated with daily operations and is characterized with dogs barking, dogs running and staff members talking. The average noise level is as high as 20.2, 22.0 and 15.0 dBA at Receptor locations NM1, ST1 and NM2, respectively. Table 4 summarizes the existing noise levels from the Bone Adventure at the nearest residential boundaries. Figure 4 shows the existing average noise level contour map for Bone Adventure operations.

Table 4. Existing Bone Adventure Noise Levels and Impact Assessment

Receptor	Existing Hourly Average Noise Level from 20 dogs & 2 Staff Members at Outdoor Area, L50, dBA	City of Costa Mesa Average Noise Level Standard, 7:00 AM – 11:00 PM L50, dBA	Range in Ambient Hourly Average Noise Level between 8:00 AM – 6:00 PM, L50, dBA	Assessment with City Standard/Ambient Background
NM1	20.2	55	53.9 – 57.4	Compliance/ Compliance
ST1	22.0	55	48.2 – 51.7 (estimated)	Compliance/ Compliance
NM2	15.0	55	52.0 – 58.0	Compliance/ Compliance

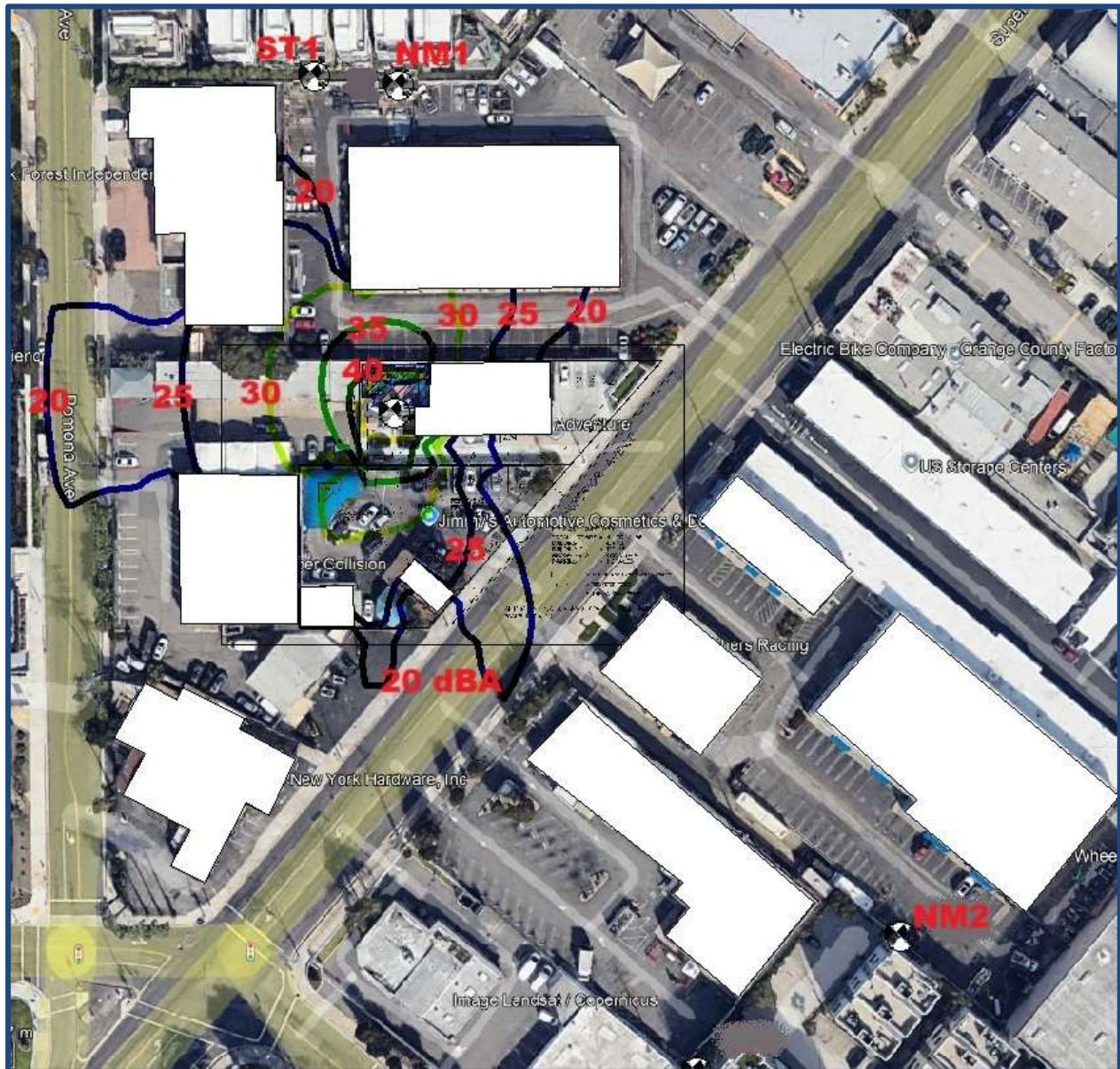


Figure 4. Noise Contour Map – Bone Adventure Existing Operations



Future noise levels from the Facility Expansion at the Bone Adventure was evaluated using the calculated sound power levels based on 145 dogs and 10+ staff members in the outdoor yard for any one hour period between the daytime hours beginning at 8:00 AM through the 6:00 PM hour. These operating parameters are considered to be the maximum capacity at the future facility as specified by Bone Adventure Management. The future average hourly noise levels from the Bone Adventure expanded facility will be as high as 39.2, 43.3 and 35.2 dBA at Receptors NM1, ST1 and NM2, respectively. Table 5 summarizes the future noise levels from the Bone Adventure at the nearest residential boundaries. Figure 5 shows the future hourly average noise level contour map for Bone Adventure operations.

Table 5. Future Bone Adventure Noise Levels with Facility Expansion and Impact Assessment

Receptor	Future Hourly Average Noise Level from 145 dogs & 10+ Staff Members at Outdoor Area, L50, dBA	City of Costa Mesa Average Noise Level Standard, 7:00 AM – 11:00 PM L50, dBA	Range in Ambient Hourly Average Noise Level between 8:00 AM – 6:00 PM, L50, dBA	Assessment with City Standard/Ambient Background
NM1	39.2	55	53.9 – 57.4	Compliance/ Compliance
ST1	43.3	55	48.2 – 51.7 (estimated)	Compliance/ Compliance
NM2	35.2	55	52.0 – 58.0	Compliance/ Compliance

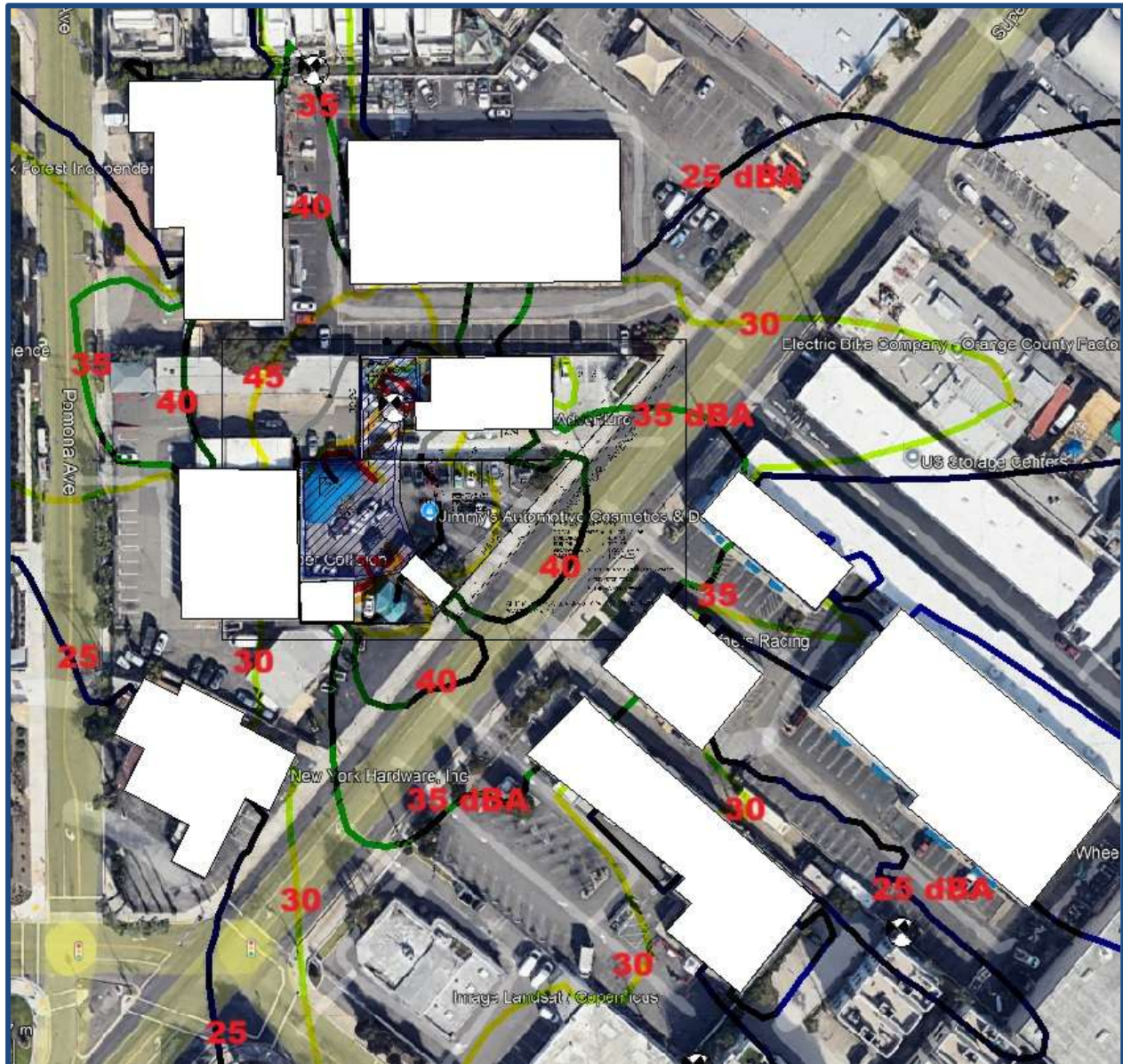


Figure 5. Noise Contour Map – Bone Adventure Future Operations



IMPACT ASSESSMENT

When the existing operations noise levels are compared to the City of Costa Mesa Daytime Noise Standard of 55 dBA for Residential Land Uses, the existing noise from the Bone Adventure Operations is in full compliance with the City's exterior noise standard during the daytime hours. When compared with the hourly range in ambient daytime average noise level, the noise from the Bone Adventure is well below the daytime average noise levels. There are no outdoor operations at the Bone Adventure during the nighttime and therefore no nighttime noise events related to the facility. Refer to previous Table 4 for the impact assessment with the City of Costa Mesa Noise Standards and comparison with ambient background noise levels.

When the future noise from the Bone Adventure Operations is compared to the City of Costa Mesa Daytime Noise Standard of 55 dBA for Residential Land Uses, the future noise will be in full compliance with the City's exterior noise standard during the daytime hours. When compared with the hourly range in ambient daytime average noise level, the noise from the Bone Adventure will also be below the daytime average noise levels. However, even though the projected noise levels from the Project will be below the ambient background, dog barking may still be occasionally audible especially when there are lulls in traffic or industrial activity. There are no outdoor operations at the Bone Adventure during the nighttime and therefore no nighttime noise events related to the facility. Refer to previous Table 5 for the impact assessment with the City of Costa Mesa Noise Standards and comparison with ambient background noise levels.

NOISE CONTROL RECOMMENDATIONS

The following noise control measures are recommended to maintain compliance with the City of Costa Mesa Noise Standards:

1. Outdoor Area capacity shall be limited to 145 dogs and 10 staff members in any hour.
2. Outdoor Area operations shall be limited to the daytime hours beginning at 8:00 AM and ending at 7:00 PM with dogs starting to be moved inside at 6:00 PM.
3. Staff should be instructed to minimize activities that encourage dog barking.
4. A 6-ft high perimeter wall shall be maintained around the entire outdoor area.
5. All exterior doors should be maintained in the closed position during daytime and nighttime hours.
6. All exterior doors shall feature drop down compression threshold seals and perimeter seals to minimize noise transfer.
7. All mechanical equipment shall be selected to fully comply with the City's noise standards at the property boundaries.



8. The final project design should be reviewed to ensure compliance with the City's Noise Standards.

CONCLUSION

Acoustics Group, Inc., (AGI) was retained by The Bone Adventure to evaluate the future noise level from their proposed Facility Expansion Project at 1619 Superior Avenue in Costa Mesa, CA. AGI has reviewed the City of Costa Mesa Noise Ordinance Standards, conducted an ambient and operations noise survey, analyzed the future Project Layout and Operations, assessed the impact, and identified noise control measures.

The future average hourly noise levels from the Bone Adventure expanded facility will be as high as 39.2, 43.3 and 35.2 dBA at Receptors NM1, ST1 and NM2, respectively. When the future noise from the Bone Adventure Operations is compared to the City of Costa Mesa Daytime Noise Standard of 55 dBA for Residential Land Uses, the future noise will be in full compliance with the City's exterior noise standard during the daytime hours. When compared with the hourly range in ambient daytime average noise level, the noise from the Bone Adventure will also be below the daytime average noise levels. There are no outdoor operations at the Bone Adventure during the nighttime and therefore no nighttime noise events related to the facility.

Implementation of the recommended noise control measures will ensure compliance with the City's Noise Standards. The acoustical design should be reviewed by a qualified acoustical consultant to ensure compliance with City Noise Standards.



REFERENCES

1. Project Floor Plan
2. Melville Branch and R. Beland, 1970. EPA/ONAC 550/9-74-004, March 1974.
3. Leo Beranek, Noise Reduction, McGraw-Hill Book Co., NY, 1960.
4. Cyril M. Harris, Handbook of Acoustical Measurements and Noise Control Third Edition, Acoustical Society of America, NY, 1998.



APPENDIX

NOISE STANDARDS

MODELING INPUT & OUTPUT

FIELD DATA

SITE PLAN



NOISE STANDARDS

CHAPTER XIII NOISE CONTROL

§ 13-277. Purpose.

It is the city's purpose to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health, comfort, safety, peace and enjoyment and welfare of the citizenry, and in the public interest shall be regulated and systematically proscribed.

(Ord. No. 97-11, § 2, 5-5-97)

§ 13-278. Definitions.

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

Cumulative period. An additive period of time composed of individual time segments which may be continuous or interrupted.

Decibel (dB). A unit which denotes the ratio between two quantities which are proportional to power: The number of decibels corresponding to the ratio of two amounts of power is 10 times the logarithm to the base 10 of this ratio.

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

Exterior residential noise environment. The exterior environs of a residential development which include private yard of single-family residence, multi-family private patio or balcony which is served by means of exit from inside the dwelling, private balconies greater than six feet in depth, and common open space areas containing resident-serving amenities (i.e. pool, spa, tennis courts). Exception: For multi-family residential development or live/work units approved pursuant to a master plan in a mixed-use overlay district where the base zoning district is nonresidential, the exterior residential noise environment does not include the following areas: Private balconies or patios regardless of size, private or community roof decks/roof terraces, internal courtyards and landscaped walkways that do not include resident-serving, active recreational uses such as community pool, spa, tennis courts, barbeque, and picnic areas.

Fixed noise source. A stationary device which creates sounds while fixed or motionless, including but not limited to industrial and commercial machinery and equipment, pumps, fans, compressors, generators, air conditioners and refrigeration equipment.

Grading. Any excavating or filling of earth material, or any combination thereof, conducted at a site to prepare the site for construction or other improvements.

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

Interior residential noise environment. The interior environs of a residential dwelling unit or live/work unit which includes all interior spaces such as, but not limited to, bathrooms, closets, corridors, kitchen, living room/family room, bedrooms, playroom, and office.

Mobile noise source. Any noise source other than a fixed noise source.

Noise level. The "A" weighted sound pressure level in decibels obtained by using a sound level meter at slow response with a reference pressure of 20 micronewtons per square meter. The unit of measurement shall be designated as dB(A).

Person. A person, firm, association, copartnership, joint venture, corporation or any entity, public or private in nature.

Residential property. A lot 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.

Simple tone noise. A noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

Sound pressure level of a sound, in decibels. Twenty times the logarithm to the base 10 of the ratio of the pressure of the sound to a reference pressure, which reference pressure shall be explicitly stated.

(Ord. No. 97-11, § 2, 5-5-97; Ord. No. 06-9, § 1j., 4-18-06)

§ 13-279. Exceptions for construction.

The provisions of this chapter shall not apply to the following:

- (a) Emergency machinery, vehicles, or work; or
- (b) Construction equipment, vehicles, or work between the following approved hours, provided that all required permits for such construction, repair, or remodeling have been obtained from the appropriate city departments.

HOURS FOR CONSTRUCTION ACTIVITIES	
7:00 a.m. through 7:00 p.m.	Mondays through Fridays
9:00 a.m. through 6:00 p.m.	Saturdays
Prohibited all hours	Sundays and the following specified federal holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day

- (c) *Waiver procedure.* An applicant may request approval of a minor modification for a temporary waiver for construction equipment, vehicles, or work outside these permitted hours. The minor modification may be granted by the development services director or his/her designee. Any temporary waiver shall take into consideration the unusual circumstances requiring construction activity outside the permitted hours and the short-term impacts upon nearby residential and business communities.

Minor modification findings shall indicate whether or not the extended construction hours will be materially detrimental to the health, safety, and general welfare of persons residing or working within the immediate vicinity of the construction site.

Unless a temporary waiver is approved, construction activity outside the permitted hours

shall still be subject to the city's noise regulations.
(Ord. No. 97-11, § 2, 5-5-97; Ord. No. 10-3, § 1a., 2-16-10)

§ 13-280. Exterior noise standards.

- (a) The following noise standards, unless otherwise specifically indicated, shall apply to all residential property within the city:

RESIDENTIAL EXTERIOR NOISE STANDARDS	
Noise Level	Time Period
55 dB(A)	7:00 a.m.—11:00 p.m.
50 dB(A)	11:00 p.m.—7:00 a.m.

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

- (b) 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, when the foregoing causes the noise level, when measured on any other residential property, either within or outside the city, to exceed:
- (1) The noise standard for a cumulative period of more than 30 minutes in any hour;
 - (2) The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour;
 - (3) The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour;
 - (4) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour; or
 - (5) The noise standard plus 20 dB(A) for any period of time.
- (c) In the event the ambient noise level exceeds any of the first four noise limit categories above, 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 fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- (d) The exterior noise standards shown in subsection (a) shall not apply to the following exterior areas of multi-family residential development or live/work units located within a mixed-use overlay district where the base zoning district is nonresidential, approved pursuant to a master plan, and subject to the land use regulations of an urban plan:
- (1) Private balconies or patios regardless of size;
 - (2) Private or community roof decks/roof terraces;

- (3) Internal courtyards and landscaped walkways that do not include resident-serving, active recreational uses such as community pool, spa, tennis courts, barbeque, and picnic areas.
- (e) In high-rise residential developments in the North Costa Mesa Specific Plan, the exterior noise standards shown in subsection (a) shall only apply to the common outdoor recreational amenity areas located on the ground level. Recreational amenity areas located above the ground level and private balconies and patios shall be exempt from this standard.
- (Ord. No. 97-11, § 2, 5-5-97; Ord. No. 06-9, § 1k., 4-18-06; Ord. No. 07-2, § 1m., 2-6-07)

§ 13-281. Interior noise standards.

- (a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all residential property within the city:

RESIDENTIAL INTERIOR NOISE STANDARDS	
Noise Level	Time Period
55 dB(A)	7:00 a.m.—11:00 p.m.
45 dB(A)	11:00 p.m.—7:00 a.m.

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

- (b) 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, when the foregoing causes the noise level when measured within any other dwelling unit on any residential property, either within or outside the city, to exceed:
- (1) The interior noise standard for a cumulative period of more than five minutes in any hour;
 - (2) The interior noise standard plus five dB(A) for a cumulative period of more than one minute in any hour; or
 - (3) The interior noise standard plus 10 dB(A) for any period of time.
- (c) In the event the ambient noise level exceeds either of the first two noise limit categories above, 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 third noise limit category the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-282. Noise near schools, hospitals, churches.

It is unlawful for any person to create, maintain or cause to be created or maintained any noise or sound which:

- (a) Exceeds the noise standards specified in section 13-280, Exterior noise standards, near any school, hospital or church while it is in use, regardless of the zone within which it is located; or
 - (b) The noise level unreasonably interferes with the working of such installations or which disturbs or unduly annoys patients in a hospital, provided conspicuous signs are displayed in three separate locations within one-tenth of a mile indicating the presence of a school, church or hospital.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-283. Loud, unnecessary noise.

It is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area, regardless of whether the noise level exceeds the standards specified in section 13-280, Exterior noise standards, and section 13-281, Interior noise standards. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

- (a) The level of noise;
 - (b) Whether the nature of the noise is usual or unusual;
 - (c) Whether the origin of the noise is natural or unnatural;
 - (d) The level and intensity of the background noise, if any;
 - (e) The proximity of the noise to residential sleeping facilities;
 - (f) The nature and zoning of the area within which the noise emanates;
 - (g) The density of the inhabitation of the area within which the noise emanates;
 - (h) The time of the day and night the noise occurs;
 - (i) The duration of the noise;
 - (j) Whether the noise is recurrent, intermittent or constant;
 - (k) Whether the noise is produced by a commercial or noncommercial activity; and
 - (l) The density of the inhabitation of the area affected.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-284. Noise level measurement.

- (a) Any noise level measurement shall be performed using a sound level meter meeting American National Standard Institute's Standard S1.4-1971 for Type 1 or Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

- (b) Exterior measurements: The location selected for measuring exterior noise levels shall be at any point on the affected property.
 - (c) Interior measurements: Interior noise measurements shall be made within the affected dwelling unit. The measurement shall be made at a point at least four feet from the wall, ceiling, or floor nearest the alleged offensive noise source and may be made with the windows of the affected unit open.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-285. Variance procedure.

- (a) The owner or operator of a noise source which violates any provision of this chapter may file an application with the development services director for a variance from the provisions of this chapter. Variance applications shall be processed according to procedures set forth in Chapter III, Planning Applications. The application shall set forth all actions taken to comply with this chapter, the reasons immediate compliance cannot be achieved, a proposed method and time schedule for achieving compliance, and any other information requested by the director.
 - (b) An applicant shall remain subject to prosecution under the terms of this chapter until a variance is granted.
 - (c) All applications shall be evaluated with respect to time for compliance, subject to any conditions deemed reasonable to achieve maximum compliance with this chapter. Each variance granted shall set forth the approved method and time schedule for achieving compliance. Evaluation of the variance request shall include consideration of the magnitude of the noise nuisance; the uses of property affected by the noise; the time factors related to 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.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-286. Violations.

- (a) Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in an amount not exceeding \$1,000 and/or be imprisoned in the county jail for a period not exceeding six months. Each violation may instead be charged as an infraction.
 - (b) Each time an offensive noise exceeds any one of the standards set forth in this chapter shall constitute a separate offense and be punishable as such.
- (Ord. No. 97-11, § 2, 5-5-97)

§ 13-287. Nuisance declared.

It is determined that certain noise levels are detrimental to the public health, welfare and safety and contrary to public interest, and therefore the city council does ordain and declare that the creating or maintaining or causing or allowing to be created or maintained any noise in a manner prohibited by or not in conformity with the terms of this chapter is a public nuisance and shall be punishable as such and may be subject to abatement pursuant to Chapter I, General, Article 4,

Enforcement.

(Ord. No. 97-11, § 2, 5-5-97)



MODELING INPUT & OUTPUT

THE BONE ADVENTURE INPUT OUTPUT

RECEIVERS

Name	Height		Coordinates		
	(m)		X (m)	Y (m)	Z (m)
NM1	6.1	r	159.6	201.89	2.44
ST1	7	r	140.32	203.88	7
NM2	7	r	259.28	29.42	7
SE2	7	r	218	1.91	7
CAL	2.44	r	156.66	135.71	2.44

Name	M.	ID	Result. PWL Day (dBA)
------	----	----	-----------------------------

EX PLAY AF			83.5
x (m)	y (m)	z (m)	Ground (m)
164.53	144.42	0.6	0
151	144.55	0.6	0
151	137.68	0.6	0
153.4	137.75	0.6	0
153.4	136.15	0.6	0
164.6	136.15	0.6	0
164.6	144.69	0.6	0

Name	M.	ID	Result. PWL Day (dBA)
------	----	----	-----------------------------

FUT PLAY A			100
x (m)	y (m)	z (m)	Ground (m)
139.45	100.62	0.6	0
149.46	100.48	0.6	0
158.12	101.82	0.6	0
161.32	105.42	0.6	0
157.32	115.15	0.6	0
157.72	124.22	0.6	0
158.66	131.29	0.6	0
159.06	136.36	0.6	0
162.26	136.36	0.6	0
161.99	144.76	0.6	0
151.06	144.49	0.6	0
151.19	123.82	0.6	0
139.32	123.29	0.6	0
139.59	100.62	0.6	0

Freq, Hz	31.5	63	125	250	500	1000	2000	4000	8000	LAeq	LAS50.0
Lp	65	64	60	57	64	63	57	49	43	66	58
Lw	70	69	65	62	69	68	62	54	48	LAeq 66	

										LAS50.0	
Lw	62	61	57	54	61	60	54	46	42	58	20 dogs
Lw	62	61	57	54	61	60	54	46	42		8.6 145 dogs Future Exterior & Interior Areas

BARRIERS

Name

6 FT PROP WALL				
x (m)	y (m)	z (m)	Ground (m)	
202.59	145.24	1.83	0	
150.46	145.18	1.83	0	
150.52	124.11	1.83	0	
138.26	123.97	1.83	0	
138.46	99.84	1.83	0	
138.53	90.9	1.83	0	

	160.4	90.8	1.83	0
6 FT PKLT WALL				
	x (m)	y (m)	z (m)	Ground (m)
	187.79	123.84	1.83	0
	158.39	123.91	1.83	0

6 FT NU WALL				
	x (m)	y (m)	z (m)	Ground (m)
	159.59	135.59	1.83	0
	159.46	129.93	1.83	0
	158.59	123.79	1.83	0
	158.79	115.73	1.83	0
	161.99	105.46	1.83	0
	158.39	101.19	1.83	0
	149.99	99.59	1.83	0

Name	M.	ID	RB	Residents	Absorption Height Begin (m)
------	----	----	----	-----------	-----------------------------------

1635 Bldg			x		0
	x (m)	y (m)	z (m)	Ground (m)	
	148.12	188.47	6	0	
	148.66	159.53	6	0	
	203.46	160.2	6	0	
	203.33	189	6	0	
	148.26	188.6	6	0	

1638 Bldg			x		0
	x (m)	y (m)	z (m)	Ground (m)	
	104.12	200.74	6	0	
	133.45	201.01	6	0	
	133.85	181.8	6	0	
	135.05	181.8	6	0	
	135.19	152.47	6	0	
	115.05	152.47	6	0	
	115.05	171	6	0	
	108.92	170.74	6	0	
	108.78	190.34	6	0	
	103.72	190.34	6	0	
	103.85	200.74	6	0	

EXBA Bldg					
	x (m)	y (m)	z (m)	Ground (m)	
	162.39	144.6	4	0	
	189.33	144.87	4	0	
	189.59	130.33	4	0	
	161.86	130.06	4	0	
	161.72	135.93	4	0	
	164.79	135.93	4	0	
	164.92	144.73	4	0	

1622 PA Bldg					
	x (m)	y (m)	z (m)	Ground (m)	
	113.98	122.16	6	0	
	137.99	121.9	6	0	
	138.12	91.89	6	0	
	114.38	91.76	6	0	
	113.85	122.56	6	0	

1603 Bldg					
	x (m)	y (m)	z (m)	Ground (m)	
	114.92	78.82	5	0	
	127.32	72.69	5	0	
	126.39	70.42	5	0	
	137.59	64.29	5	0	
	132.25	52.95	5	0	
	127.59	55.49	5	0	
	119.18	39.22	5	0	
	112.25	42.82	5	0	
	116.12	49.89	5	0	
	102.65	57.09	5	0	

107.05	65.36	5	0
100.78	68.56	5	0
107.05	79.76	5	0
113.58	76.29	5	0
114.78	78.96	5	0

1560 3Bro Bldg

x (m)	y (m)	z (m)	Ground (m)
199.99	82.69	5	0
212.13	97.23	5	0
232.13	80.69	5	0
219.73	65.09	5	0
199.46	82.29	5	0

1560 N Bldg

x (m)	y (m)	z (m)	Ground (m)
227.2	121.76	6	0
219.6	112.56	6	0
242.67	93.76	6	0
250.53	102.56	6	0
227.33	121.76	6	0

1560 3Bro WRHS Bldg

x (m)	y (m)	z (m)	Ground (m)
260.14	93.89	6	0
304.67	56.82	6	0
285.87	33.48	6	0
261.34	53.75	6	0
263.6	56.02	6	0
243.2	74.29	6	0
260.14	93.76	6	0

1550 Bldg

x (m)	y (m)	z (m)	Ground (m)
198.03	73.74	5	0
242.7	35.34	5	0
227.37	16.27	5	0
212.57	28.8	5	0
217.5	34.27	5	0
214.17	37.2	5	0
216.17	39.34	5	0
184.3	64.41	5	0
195.9	76.14	5	0

Nu IPA Bldg

x (m)	y (m)	z (m)	Ground (m)
138.56	99.42	5	0
149.23	99.55	5	0
149.36	91.28	5	0
138.56	91.42	5	0
138.29	98.62	5	0

Nu Ofc Bldg

x (m)	y (m)	z (m)	Ground (m)
158.69	101.42	4	0
161.76	104.88	4	0
169.63	98.08	4	0
166.29	94.35	4	0
158.56	101.15	4	0

EXISTING NATURAL BARRIER

Receiv+A2! Lr w/o Noise Control

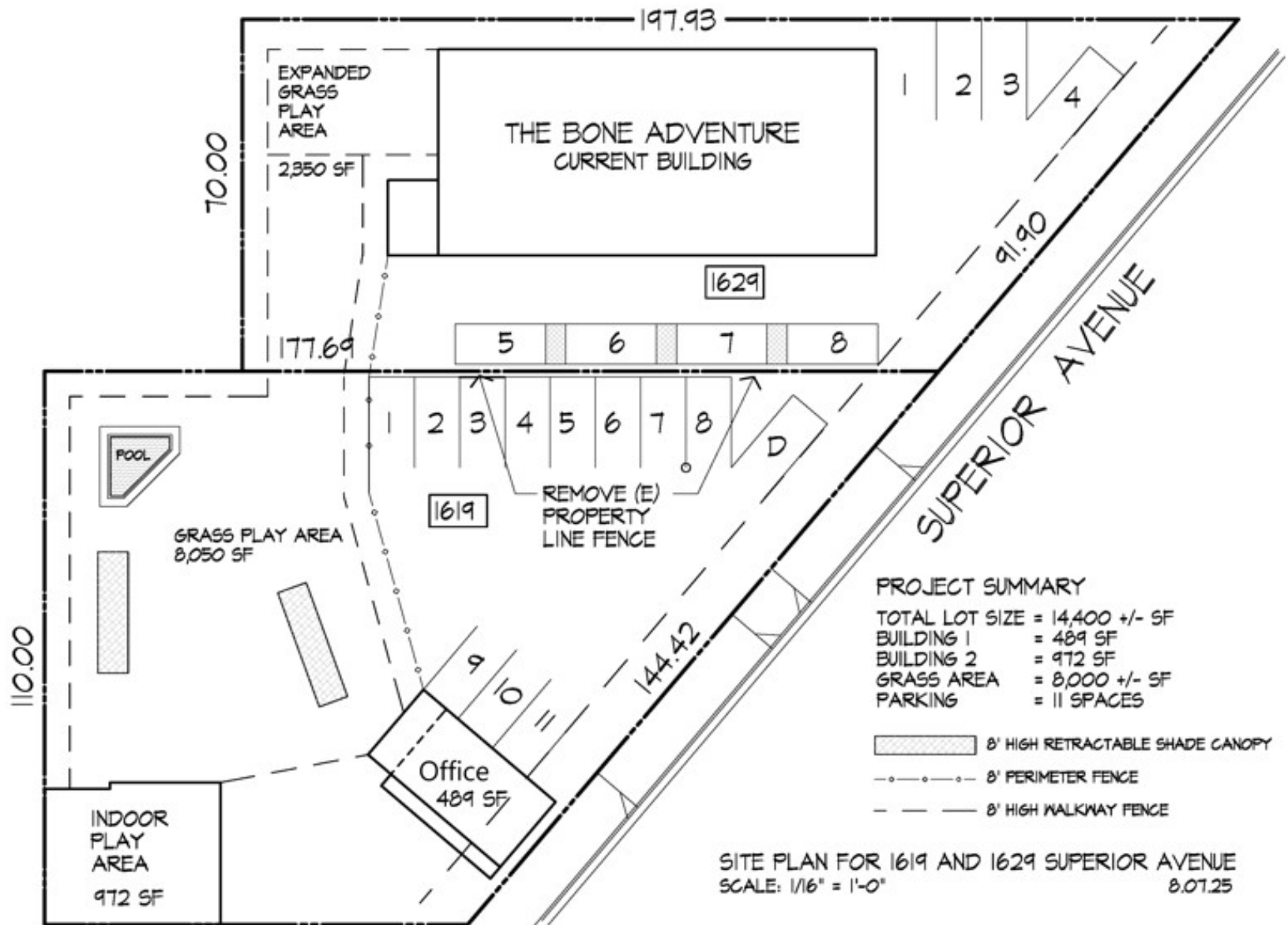
Name	Day dB(A)
NM1	20.2
ST1	22
NM2	15
SE2	18.1
CAL	57.7

FUTURE NATURAL BARRIER

Receiver Name	Lr w/o Noise Control Day dB(A)
NM1	39.2
ST1	43.3
NM2	35.2
SE2	36.7
CAL	70.1



SITE PLAN





FIELD DATA SHEETS

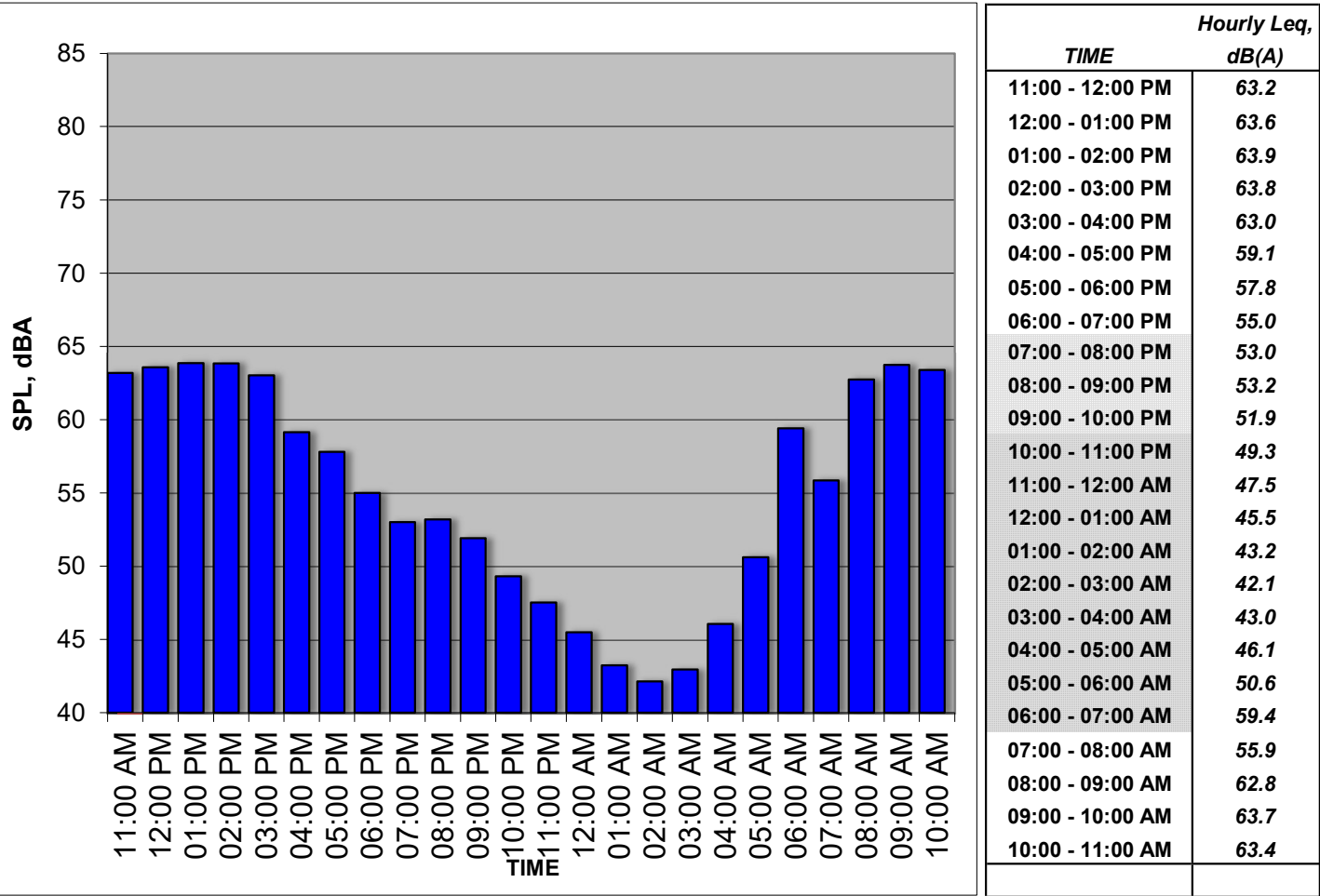
MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:
Address:
Location:
Noise Sources:

The Bone Adventure
1619 and 1629 Superior Ave, Costa Mesa CA 92627
North of 1635 Superior Ave, Costa Mesa, CA 92627
Vehicular Traffic, Car Wash & Industrial Activities

Date:
Position:

8/25/2025
- 8/26/2025
NM1



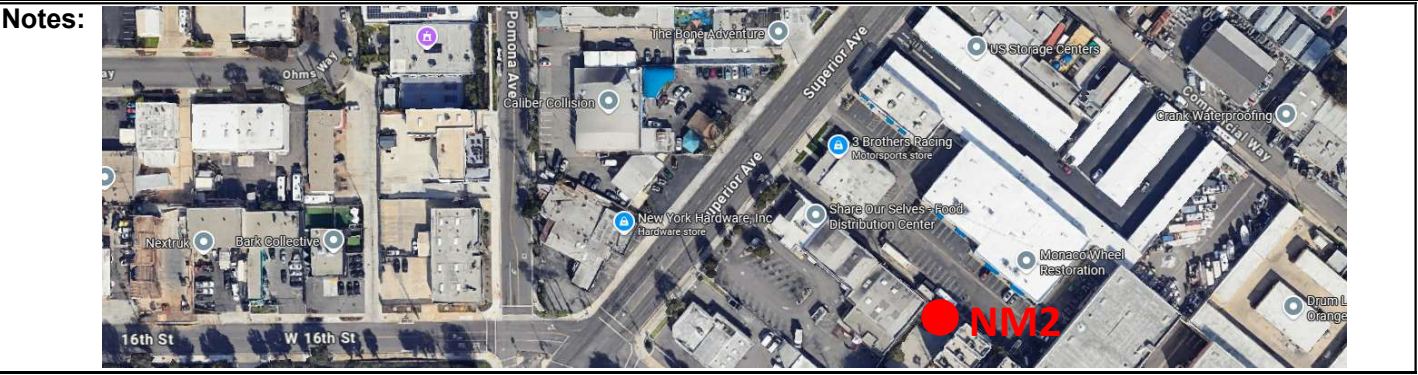
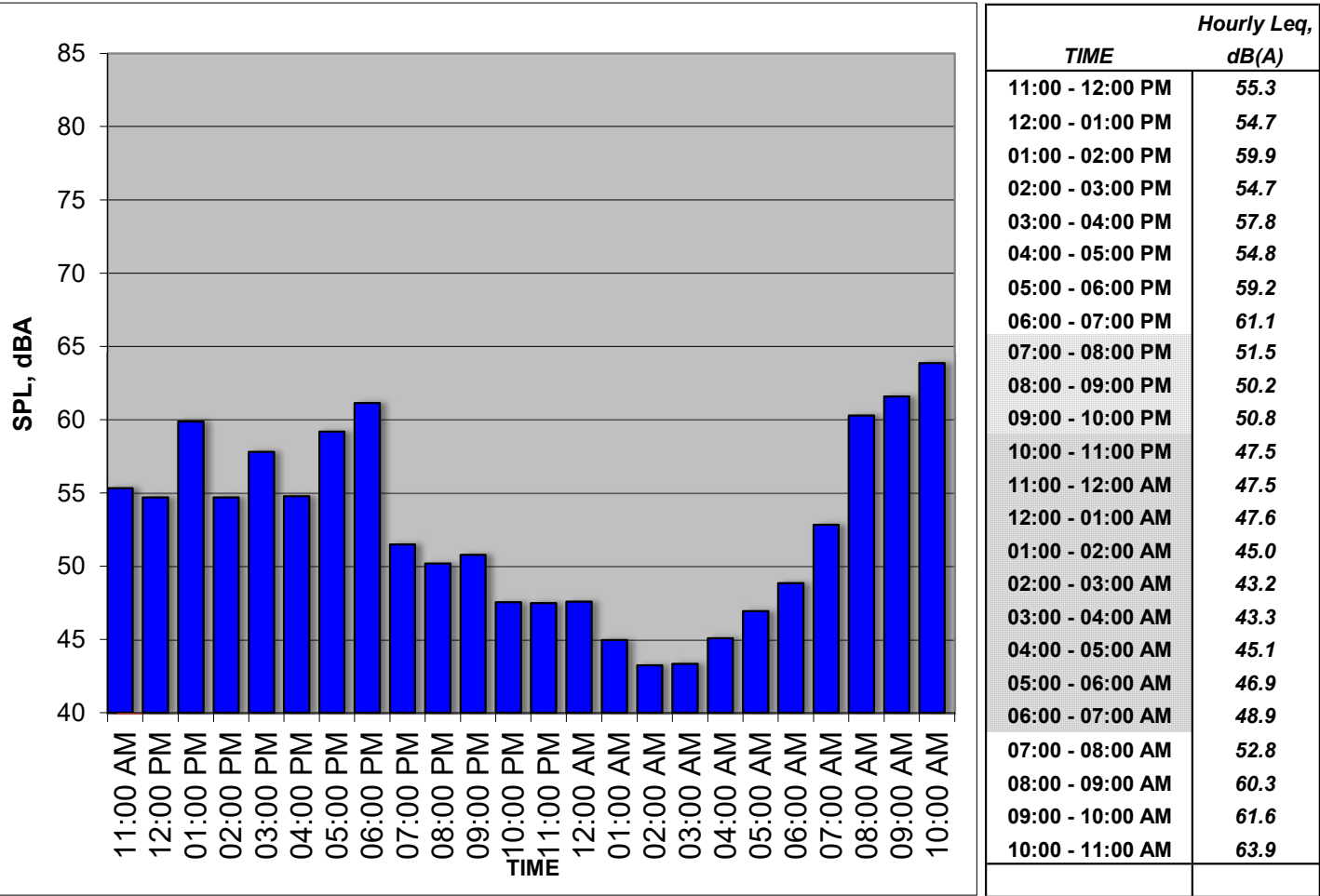
MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:
Address:
Location:
Noise Sources:

The Bone Adventure
1619 and 1629 Superior Ave, Costa Mesa CA 92627
East of 1550 Superior Ave, Costa Mesa, CA 92627
Vehicular Traffic and Industrial Activities

Date:
Position:

8/25/2025
- 8/26/2025
NM2



NOISE MONITORING FIELD DATA SHEET

Project:	The Bone Adventure - 1629 Superior Ave, Costa Mesa CA 92627		Date:	8/25/2025 - 8/26/2025
Loc:	ST1 - Northwest of 1635 Superior Ave, Costa Mesa, CA 92627			
	ST2 - 1629 Superior Ave, Costa Mesa CA 92627			
	NM1 - North of 1635 Superior Ave, Costa Mesa, CA 92627			
SLM:	Brüel & Kjær 2270	SN:	3023677	
Mic:	Brüel & Kjær 4189	SN:	3100242	
P/A:	Brüel & Kjær ZC0032	SN:	26386	
SLM:	Brüel & Kjær 2250	SN:	3011736	
Mic:	Brüel & Kjær 4189	SN:	3099878	
P/A:	Brüel & Kjær ZC0032	SN:	26056	
SLM:	Brüel & Kjær 2250	SN:	3011736	
Mic:	Brüel & Kjær 4189	SN:	3099878	
P/A:	Brüel & Kjær ZC0032	SN:	26056	

Start	End	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
8/26/2025 9:15 AM	8/26/2025 9:45 AM	75.8	70.0	61.6	57.8	55.8	54.9	84.7	54.2	65.9	ST1 - Vehicular Traffic, Car Wash, and Industrial Activities
8/26/2025 1:05 PM	8/26/2025 1:33 PM	62.9	60.6	53.9	51.3	48.5	47.1	73.9	45.7	55.3	ST2 - Vehicular Traffic, Car Wash, and Industrial Activities
8/26/2025 9:15 AM	8/26/2025 9:45 AM	72.5	70.4	60.0	57.0	54.0	52.3	73.7	51.3	63.7	NM1 - Vehicular Traffic, Car Wash, and Industrial Activities



Project Name	Date	Start Time	Elapsed Time	LAeq	LASmin	LASmax	LAS2.0	LAS8.0	LAS25.0	LAS50.0	LAS90.0	LAS99.0	Overload
BK4.003	26-Aug-25	8:00:00 AM	01:00:00	62.75	48.27	75.92	73	69.55	57.88	56.12	52.23	49.47	0
BK4.003	26-Aug-25	9:00:00 AM	01:00:00	63.74	50.22	73.96	72.57	70.73	59.85	57.43	54.33	52.25	0
BK4.003	26-Aug-25	10:00:00 AM	01:00:00	63.39	50.21	79.26	72.79	70.74	58.24	56.18	53.3	51.43	0
BK4.003	26-Aug-25	11:00:00 AM	01:00:00	62.82	50.53	84.47	72.45	69.79	57.98	56.12	53.29	51.67	0
BK4.002	25-Aug-25	11:00:00 AM	01:00:00	63.18	51.78	74.99	72.49	70.18	58.55	56.75	54.19	52.67	0
BK4.002	25-Aug-25	12:00:00 PM	01:00:00	63.58	49.5	74.75	72.72	70.98	58.32	56.32	53.42	51.43	0
BK4.002	25-Aug-25	1:00:00 PM	01:00:00	63.86	50.34	79.22	72.28	70.58	60.63	56.91	53.91	51.85	0
BK4.002	25-Aug-25	2:00:00 PM	01:00:00	63.84	51.07	79.7	72.16	70.71	58.51	56.23	53.8	52.21	0
BK4.002	25-Aug-25	3:00:00 PM	01:00:00	63.03	49.65	79.4	72.28	70.38	58.11	56	53.33	51.08	0
BK4.002	25-Aug-25	4:00:00 PM	01:00:00	59.14	50.43	76.97	69.58	59.82	56.82	55.32	53.19	51.79	0
BK4.002	25-Aug-25	5:00:00 PM	01:00:00	57.81	51.47	75.89	62.78	59.81	57.77	56.48	54.45	52.98	0
BK4.002	25-Aug-25	6:00:00 PM	01:00:00	54.99	43.99	70.19	60.36	57.89	56.02	53.91	48.53	45.59	0
			min		43.99	70.19				53.91			
			max		51.78	84.47				57.43			

Project Na	Start Time	Elapsed Ti	Persistent	LAFteq	LAFmax	LASmax	LAlmax	LZFmax	LZSmax	LZlmax	LAFmin	LASmin	LAlmin	LZFmin	LZSmin	LZlmin	LZpeak	LAeq	LZeq	LAeq	Lep,d	Lep,d,v	LZeq	LAE	LZE	LAeq-LAE	LCeq-LAE	LAFteq-LAE	Overload	LAS2.0	LAS8.0	LAS25.0	LAS50.0	LAS90.0	LAS99.0	LAS75.0
BK3.006	8/25/2025 11:27	12:32:48	0	61.07	86.08	81.38	90.68	97.09	93.26	98.32	37.44	37.94	38.12	50.58	52.12	52.73	109.93	59.33	70.31	56.22	55.94	55.94	67.43	102.76	113.97	3.11	4.85	0	63.96	58.09	53.82	51.62	45.31	41.1	49.53	
BK3.006	8/25/2025 11:27	00:32:48		65.4	85.65	77.08	90.68	87.15	81.98	90.99	45.29	45.63	46.27	58.13	59.6	60.39	107.99	64.84	70.89	55.33	55.05	55.05	65.82	88.26	98.76	9.51	10.07	0	63.56	56.66	52.72	51.12	48.73	47.42	49.92	
BK3.007	8/26/2025 8:00	01:00:00		64.18	87.44	85.75	89.25	92.3	90.94	93.84	43.12	43.69	43.58	55.57	57.45	58.08	106.89	62.19	70.66	60.29	60.01	60.01	68.3	95.85	103.86	1.9	3.89	0	65.77	61.04	56.04	52.75	47.75	45.44	49.54	
BK3.007	8/26/2025 9:00	01:00:00		65.08	77.09	72.91	78.96	85.47	80.77	89.04	44.93	46.61	46.64	57.61	58.98	59.61	95.45	63.18	69.65	61.57	61.29	61.29	67.13	97.13	102.69	1.61	3.51	0	68.99	66.11	62.86	58.03	50.8	48.19	53.31	
BK3.007	8/26/2025 10:00	01:00:00		69.79	90.26	84.93	94.01	93.87	89.01	97.1	47.37	48.09	47.72	57.29	59.31	60.03	109.29	68.13	73.48	63.85	63.57	63.57	69.28	99.41	104.84	4.28	5.94	0	74.16	63.12	55.64	53.72	51.45	49.82	52.42	
BK3.007	8/26/2025 11:00	01:00:00		56.22	72.4	69.78	75.43	80.79	78.05	84.25	46.69	47.57	47.2	57.61	58.92	59.66	91.11	54.83	67.25	53.23	52.95	52.95	64.47	88.79	100.03	1.6	2.99	0	58.18	55.13	53.26	52.02	49.75	48.49	50.86	
BK3.006	8/25/2025 12:00	01:00:00		57.61	71.8	67.47	73.5	83.55	78.56	86.27	49.18	49.65	49.56	59.91	61.29	61.74	91.29	55.88	69.62	54.71	54.43	54.43	66.29	90.27	101.85	1.17	2.9	0	69.43	56.89	54.66	53.63	51.82	50.4	52.66	
BK3.006	8/25/2025 13:00	01:00:00		63.67	86.08	81.35	88.93	97.04	93.11	98.32	49.42	50.09	49.87	59.92	61.43	62.1	109.93	61.76	72.87	59.88	59.6	59.6	70.05	95.44	105.61	1.88	3.79	0	66.98	61.2	57.39	54.74	51.89	50.7	53.19	
BK3.006	8/25/2025 14:00	01:00:00		59.31	81.65	77.22	83.09	89.09	86.11	91.15	49.01	49.65	49.38	59.1	60.56	60.89	100.88	57.23	69.63	54.71	54.43	54.43	66.48	90.27	102.04	2.52	4.6	0	61.19	56.02	53.53	52.31	50.93	50.23	51.44	
BK3.006	8/25/2025 15:00	01:00:00		64.44	78.74	74.98	80.88	87.95	83.29	90.4	49.4	50.09	49.99	59.05	60.59	61.04	97.19	61.97	72.65	57.8	57.52	57.52	68.47	93.36	104.03	4.17	6.64	0	65.9	61.07	57.44	54.47	51.86	50.79	52.77	
BK3.006	8/25/2025 16:00	01:00:00		60.54	82.2	75.94	84.81	89.26	82.48	92.1	48.71	49.37	49.19	58.03	59.09	59.39	100.75	58.3	70.37	54.78	54.5	54.5	66.58	90.34	102.14	3.52	5.76	0	61.09	57.62	53.97	52.14	50.46	49.81	51.1	
BK3.006	8/25/2025 17:00	01:00:00		64.59	84.04	78.5	87.02	84.82	79.6	87.18	49.19	49.62	49.53	57.97	59.42	59.58	100.42	62.61	69.79	59.17	58.89	58.89	66.89	94.72	102.45	3.44	5.42	0	68.15	66.68	54.14	52.39	50.61	50.05	51.22	
BK3.006	8/25/2025 18:00	01:00:00		64.41	85.88	81.38	87.23	97.09	93.26	98.31	42.52	43.63	42.8	55.54	57	58.06	106.87	62.94	75.98	61.13	60.85	60.85	73.99	96.69	109.55	1.81	3.28	0	71.35	61.65	56.59	53.21	49.93	46.27	51.46	
				min		67.5						43.6																				52.0				
				max		85.8						50.1																				58.0				