



MEMORANDUM

To: Hannah Luevano, Project Manager
Kimley-Horn and Associates, Inc.

From: Ryan Chiene and Jacqueline Tran
Kimley-Horn and Associates, Inc.

Date: September 22, 2023

Subject: Raising Cane's C0843, Costa Mesa, CA – Drive-Thru Noise Analysis

PURPOSE

The purpose of this memorandum is to evaluate potential noise impacts from drive-thru operations associated with the proposed Raising Cane's Project (project), located in the City of Costa Mesa, California.

PROJECT DESCRIPTION

The project site is located at 1595 West Newport Boulevard west of the Newport Boulevard and 16th Street intersection in the City of Costa Mesa, California (City). The site is surrounded by commercial uses to the north, east and south, and a residential community to the west. The site is currently occupied by an existing furniture store and a surface parking lot. Raising Cane's proposes to demolish the existing store and develop a 2,913 -square-foot fast-food restaurant with two drive-through lanes; see [Exhibit 1: Site Plan](#).

NOISE BACKGROUND

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Exhibit 1: Site Plan



Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of various distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. For example, the equivalent continuous sound level (L_{eq}) is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. The Day-Night Sound level (L_{dn}) is a 24-hour average L_{eq} with a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. to account for noise sensitivity in the evening and nighttime.

REGULATORY SETTING

City of Costa Mesa General Plan

The Costa Mesa General Plan identifies goals, policies, and objectives in the Noise Element. The Noise Element provides standards and metrics to regulate environmental noise and protect citizens from excessive exposure. Table 1: Noise and Land Use Compatibility Matrix for Noise in Costa Mesa highlights land use categories and the community noise compatibility guidelines.

The Costa Mesa General Plan also includes the following policies for noise that are relevant to the Project:

- Policy N-2.4:** Require that all proposed projects are compatible with adopted noise/land use compatibility criteria.
- Policy N-2.5:** Enforce applicable interior and exterior noise standards.
- Policy N-2.9:** Limit hours and/or require attenuation of commercial/entertainment operations adjacent to residential and other noise sensitive uses in order to minimize excessive noise to these receptors.

Table 1: Noise and Land Use Compatibility Matrix for Noise in Costa Mesa				
Land-Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable¹	Conditionally Acceptable²	Normally Unacceptable³	Clearly Unacceptable⁴
Residential: Low Density	50-60	60-70	70-75	≥ 75
Residential: Multiple Family	50-65	65-70	70-75	≥ 75
Mixed use	50-65	65-70	70-75	≥ 75
Transient Lodging-Motel, Hotels	50-65	65-70	70-80	≥ 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-65	65-80	≥ 80
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	N/A	≥ 80
Sports Arenas, Outdoor Spectator Sports	N/A	50-75	N/A	≥ 80
Playgrounds, Neighborhood Parks	50-67.5	N/A	67.5-75	≥ 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	N/A	70-80	≥ 80
Office Buildings, Business Commercial and Professional	50-67.5	67.5-77.5	77.5-85	≥ 85 unless appropriately insulated
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	N/A
Notes: 1. Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. 2. Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Convention construction but with closed windows and fresh air supply systems or air conditioning will normally suffice. 3. Normally Acceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. 4. New construction or development should generally not be undertaken.				
Source: City of Costa Mesa, 2015-2035 General Plan, Chapter 7: Noise Element.				

City of Costa Mesa Municipal Code

The City of Costa Mesa has established citywide interior and exterior noise level standards in a comprehensive Noise Control chapter within the Costa Mesa Municipal Code (CMMC). The purpose of the Noise Control chapter is to prohibit unnecessary, excessive, and annoying noises that are detrimental to the health, comfort, safety, peace, enjoyment, and welfare of the citizenry. The Noise Control chapter establishes daytime and nighttime permissible sound limits or levels for all residentially zoned properties in the City as well as prohibited noises.¹

13-280. Exterior Noise Standards

The noise, sound, or vibration limits or levels imposed by this section shall apply to all residentially zoned properties in the City:

Table 2: Residential Exterior Noise Standards	
Noise Level	Time Period
55 dBA	7:00 A.M. – 11:00 p.m.
50 dBA	11:00 p.m. – 7:00 AM
Source: City of Costa Mesa, <i>Costa Mesa Municipal Code</i> , Title 13 Chapter 13: Noise Control.	

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

Furthermore, it is unlawful for any persons to create or allow any noise at the residential receptor to exceed:

- 1) The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or
- 2) The noise standard plus five (5) dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
- 3) The noise standard plus ten (10) dB(A) for a cumulative period of more than five (5) minutes in any hour; or
- 4) The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one (1) minute in any hour; or
- 5) The noise standard plus twenty (20) dB(A) for any period of time.

In the event the ambient noise level exceeds either of the first two (2) 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.

¹ City of Costa Mesa, *Costa Mesa, California Municipal Code*, Title 13, Chapter 13: Noise Control, https://library.qcode.us/lib/costa_mesa_ca/pub/municipal_code/item/title_13-chapter_xiii?view=all, accessed September 2023.

13-281 Interior Noise Standards

The following interior noise standards, unless otherwise specifically indicated, shall apply to all residential property within the City:

Table 3: Residential Interior Noise Standards	
Noise Level	Time Period
55 dBA	7:00 a.m. – 11:00 p.m.
45 dBA	11:00 p.m. – 7:00 a.m.
City of Costa Mesa, <i>Costa Mesa Municipal Code</i> , Title 13 Chapter 13: Noise Control.	

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

Furthermore, it is unlawful for any persons to cause the noise level at a residential receptor to exceed:

- 1) The interior noise standard for a cumulative period of more than five (5) minutes in any hour; or
- 2) The interior noise standard plus five (5) dBA for a cumulative period of more than one (1) minute in any hour; or
- 3) The interior noise standard plus ten (10) dBA for any period of time.

EXISTING CONDITIONS

Existing Noise Sources

The project site is impacted by various noise sources. Mobile sources, especially cars and trucks, are the most common and significant sources of noise in the City. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise. Mobile sources of noise including traffic along SR-55 to the east and E 16th Street to the north are the most common and prominent sources of noise in the project vicinity. The primary sources of stationary noise near the project site include parking lot noise at the nearby commercial properties, mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units) operating at the nearby commercial and residential uses, and other urban-related activities (e.g., idling cars/trucks, pedestrians, car radios and music playing, dogs barking, etc.). The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

Noise Measurements

To quantify existing ambient noise levels in the project area, Kimley-Horn conducted four short-term (10-minute) measurements on September 13, 2023, and one long-term noise measurement (24 hours in duration) starting on September 14, 2023, and ending September 15, 2023; see [Appendix A: Noise Measurement Data](#). The noise measurement sites were representative of typical existing noise exposure

within and immediately adjacent to the project site. The 10-minute daytime measurements were taken between Measurements of L_{eq} are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in [Table 4: Existing Noise Measurements](#) and shown on [Exhibit 2: Noise Measurement Locations](#).

Table 4: Existing Noise Measurements					
Site	Location	Measurement Period	Duration	Daytime Average L _{eq} (dBA) ¹	Nighttime Average L _{eq} (dBA) ¹
Short-Term Noise Measurements (10-minute measurements)					
ST-1	Near the intersection of Newport Boulevard and Commercial Way	9:26 a.m., Thursday, September 14, 2023	10 min	61.2	-
ST-2	E 16 th Street at the northern corner of the residential mobile home park	9:59 a.m., Thursday, September 14, 2023	10 min	57.8	-
ST-3	E 16 th Street at the eastern corner of the residential mobile home park	10:12 a.m., Thursday, September 14, 2023	10 min	57.6	-
ST-4	Central portion of the project site in existing driveway/parking area adjacent to Newport Boulevard	10:41 a.m., Thursday, September 14, 2023	10 min	59.5	-
Long-Term Noise Measurements (continuous 24-hour measurement)					
LT-1	At the northern corner of the project site	Thursday, September 14, 2023, to Friday, September 15, 2023	24 hr	64.6	58.6
	Average L _{eq}			61.6	
Notes:					
1. Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m. The 15-hour daytime average (15-hour L _{eq}) and 9-hour nighttime average were calculated from 24-hour measurements take at LT-1. The 10-minute L _{eq} is listed from short-term measurement data.					
Source: Noise measurements taken by Kimlev-Horn and Associates, September 14-15, 2023. See Appendix A for noise measurement results.					

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. The nearest sensitive receptors are the residential mobile homes located approximately 100 feet to the west of the project site.

Exhibit 2: Noise Measurement Locations



NOISE IMPACTS

Drive-Thru Operations

The project proposes to construct a Raising Cane's restaurant with drive-thru access and an outdoor seating area. The primary noise source associated with the proposed Raising Cane's restaurant would consist of drive-thru operations (i.e., sound from the ordering intercom and vehicles idling/queuing in the drive-thru lanes). Standard operating hours for the proposed restaurant are 9:00 a.m. to 3:00 a.m. One drive-thru menu board and intercom would be located on the western side of the drive-thru lane, to the west of the proposed restaurant building. Project noise sources from drive-thru operations include amplified speech from the intercom, idling vehicles, and vehicles circulating along the drive-thru lanes. The measured noise level associated with active drive-thru operations is 64 dBA at a distance of 20 feet.² The closest sensitive receptors (mobile homes to the northwest) would be located approximately 105 feet northwest of the menu board and intercom. At this distance and not accounting for attenuation from intervening walls or structures, drive-thru noise levels from the project would be approximately 49.6 dBA³ at the exterior and 39.6 dBA⁴ at the interior of the residential mobile homes to the west. As such, project drive-thru noise levels would not exceed the City's nighttime exterior and interior noise standards of 50 dBA and 45 dBA, respectively, for residential uses.

Composite Noise Levels

Table 5: Composite Project Operational Noise shows the levels from project drive-thru operations combined with existing ambient levels at the residential mobile homes to the west. As shown in Table 5, the maximum noise level increase at the nearest residential uses from project drive-thru operations would be 2.1 dBA during nighttime hours and would be below the 3 dBA barely perceptible noise increase standard.⁵ Therefore, noise from drive-thru operations at the project site would be imperceptible at the nearest residential uses. A less than significant impact would occur in this regard.

Table 5: Composite Project Operational Noise									
Receptor/ Land Use	Direction from Drive- Thru Area	Distance to Drive-Thru Area (feet)	Drive-Thru Noise Level at Receptor (dBA)	Daytime			Nighttime		
				Ambient Noise Level (dBA L _{eq}) ¹	Ambient + Project Operations ²	Increase	Ambient Noise Level (dBA L _{eq}) ¹	Ambient + Project Operations ²	Increase
Residential	West	105	49.6	57.6	58.2	0.6	51.6 ³	53.7	2.1
Notes:									
1. See Table 4 for ambient noise level data.									
2. Calculated using the logarithmic addition of decibels.									
3. The measured ambient nighttime noise level for LT-1 (see Table 4) was adjusted to represent the nighttime level at the residential mobile homes to the west.									

² Drive-thru noise sample collected at Raising Cane's restaurant by Kimley-Horn on August 17, 2018.

³ Based on the logarithmic addition of noise levels from one drive-thru lane and one menu board, the noise level would be approximately 49.0 dBA at 113 feet from the source. Noise levels were calculated based on sound prorogation characteristics of 6 dBA per doubling of distance.

⁴ Noise attenuation from exterior to interior is reduced by 10 dBA for open doors or windows of residential homes.

⁵ According to the California Department of Transportation (Caltrans) *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), a noise level increase of 3 dBA is regarded as barely perceivable and a 5 dBA is readily noticeable.

CONCLUSION

As discussed above, noise levels from drive-thru operations at the proposed project site would not exceed the City's most stringent exterior or interior noise standards and would result in an imperceptible noise increase at the nearest residential uses. Therefore, noise impacts from project drive-thru operations would be less than significant. No mitigation or noise abatement features are necessary.

Appendix A

NOISE MEASUREMENT DATA

Noise Measurement Field Data

Project:	Cane's Costa Mesa	Job Number:	094797132
Site No.:	LT-1	Date:	9/14/23-9/15/23
Analyst:	Daisy Pineda and Damian Arnaiz	Time:	11:18 AM-11:20
Location:	At the northern corner of the project site		

Noise Sources:	nearby traffic
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Comments:	
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Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
63.2	37.0	99.1	114.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	73°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	29.96"
Humidity:	79%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	ST-1.009.s	Computer's File Name	LxTse_0007061-20230914 092647-ST-1.009.ldbin		
Meter	LxT SE 0007061	Firmware	2.404		
User		Location			
Job Description					
Note					
Start Time	2023-09-14 09:26:47	Duration	0:10:00.0		
End Time	2023-09-14 09:36:47	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-09-14 09:22:32	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA _{eq}	61.2 dB		
LAE	89.0 dB	SEA	--- dB
EA	87.9 µPa²h		
LA _{peak}	108.1 dB		2023-09-14 09:36:04
LAS _{max}	80.3 dB		2023-09-14 09:36:04
LAS _{min}	50.3 dB		2023-09-14 09:33:22
LA _{eq}	61.2 dB		
LC _{eq}	79.0 dB	LC _{eq} - LA _{eq}	17.8 dB
LA _l _{eq}	68.4 dB	LA _l _{eq} - LA _{eq}	7.2 dB

Exceedances

Count Duration

LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApk > 135.0 dB	0	0:00:00.0
LApk > 137.0 dB	0	0:00:00.0
LApk > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
61.2 dB	61.2 dB	0.0 dB	
LDEN	LDay	LEve	LNight
61.2 dB	61.2 dB	--- dB	--- dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	61.2 dB		79.0 dB		--- dB	
L _q (max)	80.3 dB	2023-09-14 09:36:04	--- dB	None	--- dB	None
L _q (min)	50.3 dB	2023-09-14 09:33:22	--- dB	None	--- dB	None
L _{Peak} (max)	108.1 dB	2023-09-14 09:36:04	--- dB	None	--- dB	None

Overloads

Count

Duration

OBA Count

OBA Duration

0	0:00:00.0	0	0:00:00.0
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Statistics

LAS 5.0	66.6 dB
LAS 10.0	63.9 dB
LAS 33.3	60.1 dB
LAS 50.0	58.0 dB
LAS 66.6	56.2 dB
LAS 90.0	52.7 dB

Time History



Noise Measurement Field Data

Project:	Cane's Costa Mesa	Job Number:	094797132
Site No.:	ST-2	Date:	9/14/2023
Analyst:	Daisy Pineda and Damian Arnaiz	Time:	9:59AM
Location:	E 16th Street at the northern corner of the residential mobile home park		

Noise Sources:	Nearby traffic
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Comments:	
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Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
57.8	42.1	72.3	85.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	71°
Wind (mph):	< 5
Sky:	Partly Cloudy
Bar. Pressure:	29.96"
Humidity:	73%

Photo:**Kimley»Horn**

Measurement Report

Report Summary

Meter's File Name	ST-1.010.s	Computer's File Name	LxTse_0007061-20230914 095938-ST-1.010.ldbin		
Meter	LxT SE 0007061	Firmware	2.404		
User		Location			
Job Description					
Note					
Start Time	2023-09-14 09:59:38	Duration	0:10:00.0		
End Time	2023-09-14 10:09:38	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-09-14 09:22:27	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA _{eq}	57.8 dB		
LAE	85.6 dB	SEA	--- dB
EA	40.2 µPa²h		
LA _{peak}	85.7 dB	2023-09-14 10:00:53	
LAS _{max}	72.3 dB	2023-09-14 10:04:24	
LAS _{min}	42.1 dB	2023-09-14 10:08:06	
LA _{eq}	57.8 dB		
LC _{eq}	68.5 dB	LC _{eq} - LA _{eq}	10.7 dB
LA _l _{eq}	59.5 dB	LA _l _{eq} - LA _{eq}	1.7 dB

Exceedances

Count Duration

LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApk > 135.0 dB	0	0:00:00.0
LApk > 137.0 dB	0	0:00:00.0
LApk > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
57.8 dB	57.8 dB	0.0 dB	
LDEN	LDay	LEve	LNight
57.8 dB	57.8 dB	--- dB	--- dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	57.8 dB		68.5 dB		--- dB	
L _q (max)	72.3 dB	2023-09-14 10:04:24	--- dB	None	--- dB	None
L _q (min)	42.1 dB	2023-09-14 10:08:06	--- dB	None	--- dB	None
L _{Peak} (max)	85.7 dB	2023-09-14 10:00:53	--- dB	None	--- dB	None

Overloads

Count

Duration

OBA Count

OBA Duration

0	0:00:00.0	0	0:00:00.0
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Statistics

LAS 5.0	63.3 dB
LAS 10.0	60.5 dB
LAS 33.3	56.9 dB
LAS 50.0	55.3 dB
LAS 66.6	53.5 dB
LAS 90.0	48.5 dB

Time History



Noise Measurement Field Data

Project:	Cane's Costa Mesa	Job Number:	094797132
Site No.:	ST-3	Date:	9/14/2023
Analyst:	Daisy Pineda and Damian Arnaiz	Time:	10:12 AM
Location:	E 16th Street at the eastern corner of the residential mobile home park		

Noise Sources:	nearby traffic, cars
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Comments:	
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Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
57.6	43.7	70.3	86.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	69°
Wind (mph):	< 5
Sky:	Partly Cloudy
Bar. Pressure:	29.96"
Humidity:	79%

Photo:**Kimley»Horn**

Measurement Report

Report Summary

Meter's File Name	ST-1.011.s	Computer's File Name	LxTse_0007061-20230914 101254-ST-1.011.ldbin		
Meter	LxT SE 0007061	Firmware	2.404		
User		Location			
Job Description					
Note					
Start Time	2023-09-14 10:12:54	Duration	0:10:00.0		
End Time	2023-09-14 10:22:54	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-09-14 09:22:27	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA _{eq}	57.6 dB		
LAE	85.4 dB	SEA	--- dB
EA	38.4 µPa²h		
LA _{peak}	86.7 dB		2023-09-14 10:21:34
LAS _{max}	70.3 dB		2023-09-14 10:17:44
LAS _{min}	43.7 dB		2023-09-14 10:20:34
LA _{eq}	57.6 dB		
LC _{eq}	69.4 dB	LC _{eq} - LA _{eq}	11.8 dB
LA _l _{eq}	59.9 dB	LA _l _{eq} - LA _{eq}	2.3 dB

Exceedances

Count Duration

LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApk > 135.0 dB	0	0:00:00.0
LApk > 137.0 dB	0	0:00:00.0
LApk > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
57.6 dB	57.6 dB	0.0 dB	
LDEN	LDay	LEve	LNight
57.6 dB	57.6 dB	--- dB	--- dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	57.6 dB		69.4 dB		--- dB	
L _{q(max)}	70.3 dB	2023-09-14 10:17:44	--- dB	None	--- dB	None
L _{q(min)}	43.7 dB	2023-09-14 10:20:34	--- dB	None	--- dB	None
L _{Peak(max)}	86.7 dB	2023-09-14 10:21:34	--- dB	None	--- dB	None

Overloads

Count

Duration

OBA Count

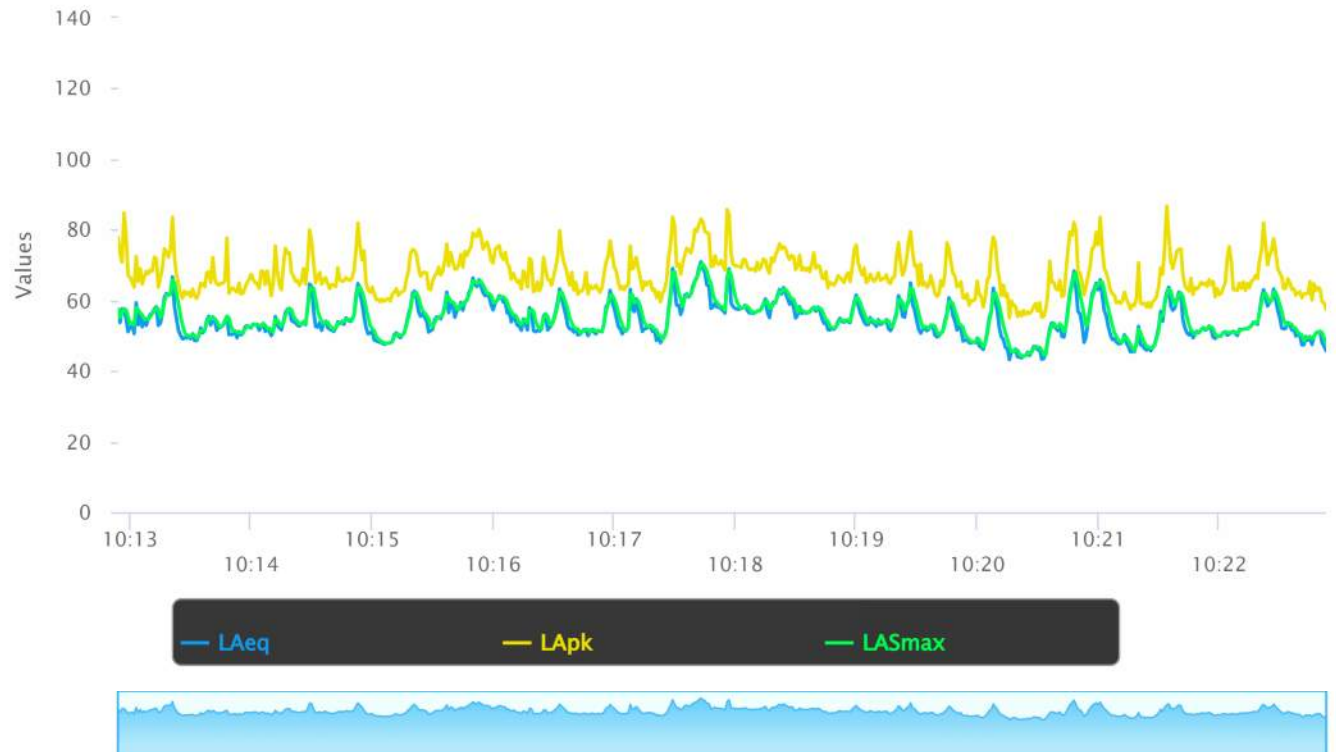
OBA Duration

0	0:00:00.0	0	0:00:00.0
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Statistics

LAS 5.0	63.1 dB
LAS 10.0	61.4 dB
LAS 33.3	56.7 dB
LAS 50.0	53.8 dB
LAS 66.6	52.1 dB
LAS 90.0	48.8 dB

Time History



Noise Measurement Field Data

Project:	Cane's Costa Mesa	Job Number:	094797132	
Site No.:	ST-4	Date:	9/14/2023	
Analyst:	Daisy Pineda and Damian Arnaiz	Time:	10:41 AM	
Location:	Central portion of the project site in existing driveway/parking area adjacent to Newport Boulevard			
Noise Sources:	nearby traffic, people talking, trucks being loaded			
Comments:				
Results (dBA):				
	Leq:	Lmin:	Lmax:	Peak:
	59.5	44.6	70.9	88.0

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	73°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	29.96"
Humidity:	79%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	ST-1.013.s	Computer's File Name	LxTse_0007061-20230914 104112-ST-1.013.ldbin		
Meter	LxT SE 0007061	Firmware	2.404		
User		Location			
Job Description					
Note					
Start Time	2023-09-14 10:41:12	Duration	0:10:00.0		
End Time	2023-09-14 10:51:12	Run Time	0:10:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-09-14 09:22:27	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA _{eq}	59.5 dB		
LAE	87.3 dB	SEA	--- dB
EA	59.4 µPa²h		
LA _{peak}	88.0 dB	2023-09-14 10:44:19	
LAS _{max}	70.9 dB	2023-09-14 10:44:30	
LAS _{min}	44.6 dB	2023-09-14 10:45:25	
LA _{eq}	59.5 dB		
LC _{eq}	70.9 dB	LC _{eq} - LA _{eq}	11.4 dB
LA _l _{eq}	60.6 dB	LA _l _{eq} - LA _{eq}	1.1 dB

Exceedances

Count Duration

LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApk > 135.0 dB	0	0:00:00.0
LApk > 137.0 dB	0	0:00:00.0
LApk > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
59.5 dB	59.5 dB	0.0 dB	
LDEN	LDay	LEve	LNight
59.5 dB	59.5 dB	--- dB	--- dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	59.5 dB		70.9 dB		--- dB	
L _q (max)	70.9 dB	2023-09-14 10:44:30	--- dB	None	--- dB	None
L _q (min)	44.6 dB	2023-09-14 10:45:25	--- dB	None	--- dB	None
L _{Peak} (max)	88.0 dB	2023-09-14 10:44:19	--- dB	None	--- dB	None

Overloads

Count

Duration

OBA Count

OBA Duration

0	0:00:00.0	0	0:00:00.0
---	-----------	---	-----------

Statistics

LAS 5.0	64.5 dB
LAS 10.0	62.0 dB
LAS 33.3	59.7 dB
LAS 50.0	57.9 dB
LAS 66.6	54.2 dB
LAS 90.0	48.9 dB

Time History



Noise Measurement Field Data

Project:	Cane's Costa Mesa	Job Number:	094797132
Site No.:	LT-1	Date:	9/14/23-9/15/23
Analyst:	Daisy Pineda and Damian Arnaiz	Time:	11:18 AM-11:20
Location:	At the northern corner of the project site		

Noise Sources:	nearby traffic
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Comments:	
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Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
63.2	37.0	99.1	114.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	73°
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	29.96"
Humidity:	79%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	LT_1.006.s	Computer's File Name	LxTse_0007061-20230914 111813-LT_1.006.ldbin
Meter	LxT SE 0007061	Firmware	2.404
User		Location	
Job Description			
Note			
Start Time	2023-09-14 11:18:13	Duration	24:02:32.3
End Time	2023-09-15 11:20:45	Run Time	24:02:32.3
Pre-Calibration	2023-09-14 11:07:03	Post-Calibration	None
		Pause Time	0:00:00.0
		Calibration Deviation	---

Results

Overall Metrics

LA _{eq}	63.2 dB		
LAE	112.6 dB	SEA	--- dB
EA	20.1 mPa²h		
LA _{peak}	114.3 dB		2023-09-14 13:12:25
LAS _{max}	99.1 dB		2023-09-14 13:12:25
LAS _{min}	37.0 dB		2023-09-15 02:46:56
LA _{eq}	63.2 dB		
LC _{eq}	72.4 dB	LC _{eq} - LA _{eq}	9.2 dB
LA _l _{eq}	66.2 dB	LA _l _{eq} - LA _{eq}	3.0 dB

Exceedances

Count Duration

LAS > 85.0 dB	15	0:01:01.7
LAS > 115.0 dB	0	0:00:00.0
LApk > 135.0 dB	0	0:00:00.0
LApk > 137.0 dB	0	0:00:00.0
LApk > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
66.6 dB	64.6 dB	0.0 dB	
LDEN	LDay	LEve	LNight
67.0 dB	64.9 dB	62.9 dB	58.6 dB

Any Data

A

C

Z

	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	63.2 dB		72.4 dB		--- dB	
L _q (max)	99.1 dB	2023-09-14 13:12:25	--- dB	None	--- dB	None
L _q (min)	37.0 dB	2023-09-15 02:46:56	--- dB	None	--- dB	None
L _{Peak} (max)	114.3 dB	2023-09-14 13:12:25	--- dB	None	--- dB	None

Overloads

Count

Duration

OBA Count

OBA Duration

0	0:00:00.0	0	0:00:00.0
---	-----------	---	-----------

Statistics

LAS 5.0	65.9 dB
LAS 10.0	64.2 dB
LAS 33.3	60.4 dB
LAS 50.0	57.7 dB
LAS 66.6	54.3 dB
LAS 90.0	44.9 dB

Time History

