

July 9, 2020

Mr. Ernie Perea Romo Planning Group, Inc 9431 Haven Avenue, Ste. 232 Rancho Cucamonga, CA 91730

SUBJECT: SUN LAKES VILLAGE NORTH SPECIFIC PLAN NOISE MONITORING

Dear Mr. Ernie Perea:

Urban Crossroads, Inc. is pleased to provide the following Noise Monitoring for the Sun Lakes Village North Specific Plan (Project). To describe the existing ambient noise conditions, 24-hour noise level measurements were taken at three locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, July 1, 2020. Appendix A includes study area photos

MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, hourly noise levels were measured during weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (1)

NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be

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determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (3)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (3) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix B provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise southeast of the Project site by Sun Lakes Boulevard adjacent to existing vacant lot. The noise levels at this location consist primarily of traffic noise from Sun Lakes Boulevard. The noise level measurements collected show an overall 24-hour exterior noise level of 60.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 59.0 dBA L_{eq} with an average nighttime noise level of 51.3 dBA L_{eq}.
- Location L2 represents the noise levels Located south of the Project site on Sun Lakes Boulevard near existing single-family residential homes at 5871 Oakmont Drive. The ambient noise levels at this location account for traffic on Sun Lakes Boulevard. The noise level measurements collected show an overall 24-hour exterior noise level of 66.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.2 dBA L_{eq} with an average nighttime noise level of 57.6 dBA L_{eq}.
- Location L3 represents the noise levels Located west of the Project site Behind Rite Aid at 300 South Highland Springs Avenue. The 24-hour CNEL indicates that the overall exterior noise level is 63.7 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 59.9 dBA L_{eq} with an average nighttime noise level of 56.4. dBA L_{eq}. Parking lot vehicle movements and truck activity represent the primary source of noise at this location.



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Table 1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix B provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1 , L_2 , L_5 , L_8 , L_{25} , L_{50} , L_{90} , L_{95} , and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with Sunset Lakes Boulevard and parking lot vehicle movements. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 1.

TABLE 1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location ¹	Description	Energy A Noise (dBA	CNEL	
		Daytime	Nighttime	
L1	Located southeast of the Project site by Sun Lakes Boulevard adjacent to existing vacant lot.	59.0	51.3	60.4
L2	Located south of the Project site on Sun Lakes Boulevard near existing single-family residential homes at 5871 Oakmont Drive.	64.2	57.6	66.3
L3	Located west of the Project site Behind Rite Aid at 300 South Highland Springs Avenue.	59.9	56.4	63.7

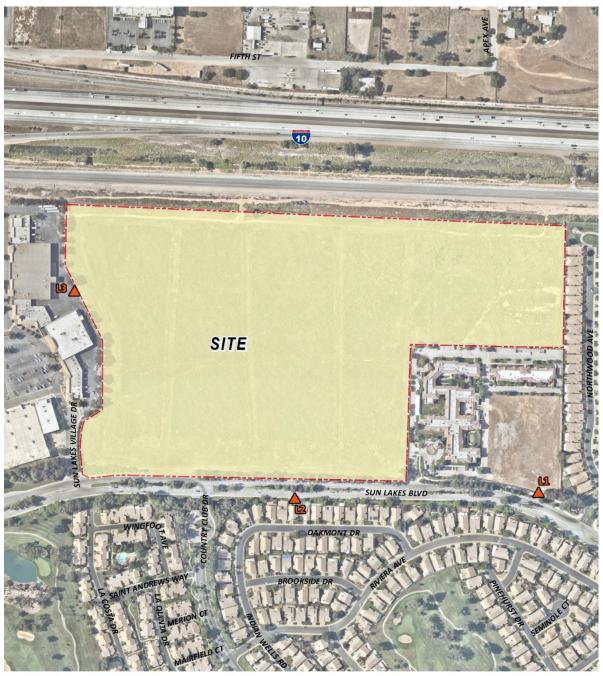
¹ See Exhibit A for the noise level measurement locations.



² Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix B.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT A: NOISE MEASUREMENT LOCATIONS







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AMBIENT CONDITIONS

This noise monitoring demonstrates the ambient noise conditions near potential receivers for the Project. The noise level measurements collected show an overall 24-hour exterior noise level ranging from 60.4 to 66.3 dBA CNEL. Daytime noise levels range from 59.0 to 64.0 dBA L_{eq} and nighttime noise levels range from 51.3 to 57.6 dBA L_{eq} . If you have any questions, please contact me directly at (949) 336-5979.

Respectfully submitted,

URBAN CROSSROADS, INC.

Bill Lawson, P.E., INCE

Principal

REFERENCES

- 1. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 2. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA: s.n., September 2013.
- 3. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment.* September 2018.



APPENDIX A:

STUDY AREA PHOTOS



JN: 12929 Study Area Photos



L1_E 33, 55' 19.780000", 116, 56' 14.890000"



L1_N 33, 55' 19.620000", 116, 56' 10.740000"



L1_S 33, 55' 19.340000", 116, 56' 14.840000"



L1_W 33, 55' 19.890000", 116, 56' 14.970000"

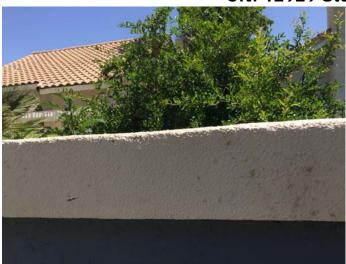


L2_E 33, 55' 19.710000", 116, 56' 27.690000"



L2_N 33, 55' 19.820000", 116, 56' 27.830000"

JN: 12929 Study Area Photos



L2_S 33, 55' 19.890000", 116, 56' 27.770000"



L2_W 33, 55' 19.640000", 116, 56' 27.660000"



L3_E 33, 55' 28.340000", 116, 56' 39.090000"



L3_N 33, 55' 28.510000", 116, 56' 39.250000"



L3_S 33, 55' 28.490000", 116, 56' 39.310000"



L3_W 33, 55' 28.310000", 116, 56' 39.060000"

APPENDIX B:

MEASUREMENT WORKSHEETS



24-Hour Noise Level Measurement Summary

Location: L1 - Located southeast of the Project site by Sun Lakes
Boulevard adjacent to existing vacant lot.

Meter: Piccolo II

Boulevard adjacent to existing vacant lot. Project: SUN LAKES VILLAGE NORTH Analyst: P. Mara Hourly L_{ea} dBA Readings (unadjusted) 80.0 75.0 80.0 75.0 70.0 65.0 Hourly 155.0 55.0 45.0 45.0 40.0 61. 9 8 <u>6</u> 54.9 59. 59. 29 59 54.0 27 48.2 35.0 5 7 8 9 10 13 18 19 20 21 23 0 1 3 Δ 6 11 12 14 15 16 17 22 **Hour Beginning** Adj. L _{eq} **Timeframe** L1% L2% L5% L8% L25% L50% L90% L95% L99% Adj. Hour L_{eq} L max L min L_{eq} 58.0 52.9 59.2 45.7 58.7 55.3 48.3 47.3 46.1 45.9 45.7 10.0 59.6 0 49.6 49.6 1 50.3 56.9 47.0 56.6 56.2 54.5 53.0 50.3 49.3 47.5 47.3 47.1 50.3 10.0 60.3 2 48.7 54.3 46.2 54.0 53.6 52.1 58.7 51.0 48.8 48.0 46.7 46.5 46.3 48.7 10.0 Night 3 62.2 46.7 58.8 51.9 61.8 61.2 56.6 49.4 48.3 47.2 47.0 46.8 51.9 10.0 61.9 50.7 61.7 45.2 61.1 60.3 57.3 55.0 48.3 46.9 45.7 45.5 45.3 50.7 10.0 60.7 5 52.9 63.7 46.9 63.2 62.3 57.3 62.9 59.7 50.6 48.7 47.4 47.2 47.0 52.9 10.0 6 54.9 66.1 46.7 65.6 64.7 61.9 59.6 53.2 48.9 47.2 47.0 46.8 54.9 10.0 64.9 57.9 68.8 47.9 68.2 67.5 65.0 63.2 56.6 51.6 48.5 48.2 47.9 57.9 0.0 57.9 8 59.0 68.8 48.8 68.3 67.6 65.6 64.2 59.1 53.7 49.6 49.2 48.9 59.0 0.0 59.0 9 60.4 70.1 49.3 69.6 69.0 67.0 65.3 60.6 56.0 50.3 49.9 49.4 0.0 60.4 60.4 10 60.4 70.0 48.5 69.6 69.1 67.1 65.7 60.5 54.8 49.5 49.1 48.7 60.4 0.0 60.4 11 61.5 72.6 48.6 72.1 71.4 68.6 66.4 60.8 55.7 49.7 49.2 48.7 61.5 0.0 61.5 12 59.0 68.9 46.7 68.4 67.6 65.5 64.2 59.5 54.2 47.9 47.3 46.9 59.0 0.0 59.0 Day 13 60.4 70.4 49.8 70.0 69.2 66.7 64.9 60.4 56.2 51.5 50.7 50.0 60.4 0.0 60.4 14 59.0 69.8 46.9 69.3 68.9 66.5 63.5 57.7 47.8 47.3 47.0 59.0 53.0 59.0 0.0 15 47.9 59.6 69.5 69.1 68.5 66.3 64.4 59.6 55.0 49.2 48.5 48.0 59.6 0.0 59.6 16 69.1 59.5 69.6 48.9 68.3 66.1 64.3 59.6 55.0 49.7 49.3 49.0 59.5 0.0 59.5 17 58.7 69.2 50.3 68.6 67.7 65.2 63.6 58.1 54.0 51.0 50.7 50.4 58.7 0.0 58.7 18 57.9 69.5 49.7 68.8 67.9 65.1 62.2 56.1 52.1 50.2 50.0 49.7 57.9 0.0 57.9 19 50.3 65.5 50.8 50.6 50.3 5.0 56.9 66.6 66.2 63.5 61.7 56.0 52.9 56.9 61.9 20 55.8 66.5 48.2 65.2 62.5 60.5 60.8 **Evening** 66.0 54.8 51.0 48.7 48.5 48.3 55.8 5.0 21 54.0 49.9 59.7 50.2 50.1 50.0 5.0 59.0 63.8 63.3 62.3 57.8 53.1 51.4 54.0 22 59.1 46.5 10.0 50.2 58.7 58.0 55.8 54.0 49.2 48.1 46.9 46.8 46.6 50.2 60.2 Night 23 48.2 55.1 45.6 54.6 54.0 52.1 50.8 47.9 47.2 46.1 45.9 45.7 48.2 10.0 58.2 L_{eq} (dBA) L2% L25% L50% L90% L95% L99% **Timeframe** Hour L1% L5% L8% 57.9 68.8 68.2 67.5 65.0 62.2 56.1 51.6 47.8 47.3 46.9 Min 46.7 24-Hour Daytime **Nighttime** Max 61.5 72.6 50.3 72.1 71.4 68.6 66.4 60.8 56.2 51.5 50.7 50.4 59.6 69.3 68.5 66.2 64.3 59.1 54.3 49.6 49.1 48.7 **Energy Average** Average 57.4 59.0 51.3 54.0 57.8 48.3 63.3 62.3 59.7 53.1 51.0 48.7 48.5 Min 63.8 48.2 **Evening** 24-Hour CNEL (dBA) Max 56.9 66.6 50.3 66.2 65.5 63.5 61.7 56.0 52.9 50.8 50.6 50.3 55.7 Average: 65.2 64.3 61.9 60.0 54.6 51.8 49.9 49.7 49.5 **Energy Average** 48.2 54.3 54.0 53.6 52.1 50.8 47.9 46.9 45.7 45.5 45.3 Min 45.2 60.4 Night 54.9 66.1 47.0 65.6 64.7 61.9 59.6 49.3 47.3 47.1 Max 53.2 47.5 51.3 59.4 58.7 56.4 54.5 49.5 48.1 46.8 46.6 46.4 Average: **Energy Average**



JN: 12929

Date: Wednesday, July 01, 2020

24-Hour Noise Level Measurement Summary

Location: L2 - Located south of the Project site on Sun Lakes Boulevard Date: Wednesday, July 01, 2020 near existing single-family residential homes at 5871 Project: SUN LAKES VILLAGE NORTH

Meter: Piccolo II

JN: 12929 Analyst: P. Mara

Oakmont Drive. Hourly L eq dBA Readings (unadjusted) 85.0 80.0 775.0 70.0 65.0 660.0 45.0 40.0 35.0 65.5 65.0 67. 60.5 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 **Hour Beginning** Timeframe Hour L eq L max L_{min} L1% L2% L5% L8% L25% L50% L90% L95% L99% Adj. Adj. L eq L_{eq} 57.3 64.7 54.5 64.4 63.9 61.9 60.1 56.9 56.0 55.0 54.8 54.7 57.3 10.0 67.3

Night	1	56.6	64.7	52.1	64.4	63.9	61.7	59.9	56.3	55.0	52.8	52.5	52.2	56.6	10.0	66.6
	2	54.9	61.9	50.9	61.6	61.2	59.4	57.8	55.0	53.7	51.7	51.3	51.0	54.9	10.0	64.9
	3	58.4	66.4	55.3	66.0	65.5	63.0	60.9	57.8	57.0	55.8	55.6	55.3	58.4	10.0	68.4
	4	56.6	67.9	49.7	67.5	66.7	63.5	60.4	54.2	52.5	50.5	50.2	49.8	56.6	10.0	66.6
	5	58.9	67.3	53.9	67.1	66.7	65.1	63.2	58.3	56.1	54.5	54.2	54.0	58.9	10.0	68.9
	6	60.5	71.4	53.4	71.1	70.5	67.6	65.0	58.2	55.8	54.0	53.7	53.5	60.5	10.0	70.5
	7	62.5	73.3	51.8	73.0	72.4	69.9	67.9	61.0	55.5	52.6	52.2	51.9	62.5	0.0	62.5
	8	63.7	74.4	52.5	74.0	73.3	70.6	68.7	62.8	58.3	53.5	53.0	52.6	63.7	0.0	63.7
	9	64.2	74.6	50.9	74.3	73.6	71.4	69.9	63.3	57.9	51.9	51.4	51.0	64.2	0.0	64.2
	10	64.2	74.4	51.5	74.0	73.4	71.3	69.7	63.4	58.7	52.8	52.2	51.6	64.2	0.0	64.2
	11	66.0	76.9	50.8	76.5	75.7	73.0	71.0	65.6	59.7	51.9	51.3	50.9	66.0	0.0	66.0
Day	12	63.9	74.2	50.5	73.8	73.2	70.9	69.3	63.3	57.5	51.5	51.0	50.6	63.9	0.0	63.9
Day	13	65.5	75.6	51.9	75.2	74.5	72.3	70.6	65.4	60.4	53.5	52.7	52.0	65.5	0.0	65.5
	14	64.0	74.7	51.1	74.3	73.5	70.9	69.5	63.2	57.5	52.0	51.5	51.2	64.0	0.0	64.0
	15	67.7	82.0	51.9	80.7	78.9	74.3	71.4	64.9	59.2	52.9	52.4	52.0	67.7	0.0	67.7
	16	65.0	74.7	52.7	74.4	73.7	71.9	70.6	65.0	59.0	53.7	53.2	52.7	65.0	0.0	65.0
	17	64.0	73.8	54.2	73.5	72.9	70.9	69.5	63.6	58.4	55.0	54.6	54.3	64.0	0.0	64.0
	18	62.7	72.7	54.1	72.4	71.9	69.5	68.0	61.5	57.2	54.8	54.5	54.2	62.7	0.0	62.7
	19	62.8	73.2	55.2	72.9	72.2	69.5	67.5	61.3	58.3	55.8	55.6	55.3	62.8	5.0	67.8
Evening	20	62.5	73.7	53.3	73.3	72.6	69.9	67.6	60.2	56.2	54.1	53.7	53.4	62.5	5.0	67.5
	21	59.4	69.9	51.7	69.6	69.0	66.6	64.5	57.3	54.3	52.4	52.1	51.8	59.4	5.0	64.4
Night	22	55.8	66.8	50.5	66.3	65.2	61.7	58.9	54.2	52.7	51.1	50.8	50.6	55.8	10.0	65.8
IVIGITO	23	56.5	63.5	54.0	63.3	63.0	61.1	59.3	56.2	55.2	54.3	54.2	54.1	56.5	10.0	66.5
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L_{eq} (dBA)	
Day	Min	62.5	72.7	50.5	72.4	71.9	69.5	67.9	61.0	55.5	51.5	51.0	50.6	24-Hour	Daytime	Nighttime
•	Max	67.7	82.0	54.2	80.7	78.9	74.3	71.4	65.6	60.4	55.0	54.6	54.3			
Energy	Average	64.7		rage:	74.7	73.9	71.4	69.7	63.6	58.3	53.0	52.5	52.1	62.7	64.2	57.6
Evening	Min	59.4	69.9	51.7	69.6	69.0	66.6	64.5	57.3	54.3	52.4	52.1	51.8			
	Max	62.8	73.7	55.2	73.3	72.6	69.9	67.6	61.3	58.3	55.8	55.6	55.3	24-	Hour CNEL (d	dBA)
Energy Average		61.8		rage:	71.9	71.3	68.7	66.5	59.6	56.3	54.1	53.8	53.5			
Night	Min	54.9	61.9	49.7	61.6	61.2	59.4	57.8	54.2	52.5	50.5	50.2	49.8		66.3	
	Max	60.5	71.4	55.3	71.1	70.5	67.6	65.0	58.3	57.0	55.8	55.6	55.3		5 0.5	
Energy Average		57.6	Ave	rage:	65.8	65.2	62.8	60.6	56.3	54.9	53.3	53.0	52.8			



24-Hour Noise Level Measurement Summary

L3 - Located west of the Project site Behind Rite Aid at 300 Location:

