

**Appendix G:
Noise Supporting Information**

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Project Number: 5788.0002 Sheet of
 Project Name: Walnut Boulevard Residential Project
 Test Personnel: Maddie Dolan, Henrique Zhu

NOISE MEASUREMENT SURVEY

Site Number: 1 Date: 09-28-22 Time: From 16:13 To 16:27

Site Location: Directly opposite 3175 Walnut Boulevard driveway, approximately 15 feet from Walnut Boulevard into the project site.

Primary Noise Sources: Traffic, lawnmowing and leafblowing.

Measurement Results

	dBA
L _{eq}	62.4
L _{max}	75.9
L _{min}	41.5
L _{peak}	91.8
L ₅	69.4
L ₁₀	67.7
L ₅₀	54.8
L ₉₀	49.1
SEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
16:15	Hammering noises	61
16:19	Hammering	63

Comments: leafblowing going on entire time, hammering from nearby roofing

Equipment: LxT 2 Measured Difference: 0.16 dBA
 Settings: A-Weighted Other Slow Fast Windscreen

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)
4	2.7	85.1	
Comments: <u>Kestrel instrument failure, measurements uncertain.</u>			





Photos Taken:

Photo Number	Location/Description
1	
2	
3	
4	

Traffic Description:

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts
Walnut Boulevard	2	25	30	21	21

Diagram/Further Comments:





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Diagram/Further Comments:



Mobile Construction Activity Noise Calculation

Receptor:		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
Receiving residential property line		Reference (dBA) 50 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
No.	Equipment Description	Lmax						Lmax	Leq		
1	Scraper	85	1	40	60	1	0	83.4	78.6	73200871.76	
2	Dozer	85	1	40	60	1	0	83.4	78.6	73200871.76	
3	Grader	85	1	40	60	1	0	83.4	78.6	73200871.76	
4											
5											
6											
7											
8											
9											
10											
								Lmax[4]	83	Leq	83

Notes:

- [1] Percentage of time activity occurs each hour
- [2] Soft ground terrain between project site and receptor.
- [3] Shielding due to terrain or structures
- [4] Calculated Lmax is the Loudest value.

CNEL Calculations					
	Time	Hourly Leq	Leq'	0.1*Leq	antiLog
Night	12:00 AM	45.0	55.0	5.5	316227.766
	1:00 AM	45.0	55.0	5.5	316227.766
	2:00 AM	45.0	55.0	5.5	316227.766
	3:00 AM	45.0	55.0	5.5	316227.766
	4:00 AM	45.0	55.0	5.5	316227.766
	5:00 AM	45.0	55.0	5.5	316227.766
Day	6:00 AM	45.0	55.0	5.5	316227.766
	7:00 AM	83.4	83.4	8.341637508	219602615.3
	8:00 AM	83.4	83.4	8.341637508	219602615.3
	9:00 AM	83.4	83.4	8.341637508	219602615.3
	10:00 AM	83.4	83.4	8.341637508	219602615.3
	11:00 AM	83.4	83.4	8.341637508	219602615.3
	12:00 PM	65.0	65.0	6.5	316227.766
	1:00 PM	83.4	83.4	8.341637508	219602615.3
	2:00 PM	83.4	83.4	8.341637508	219602615.3
	3:00 PM	83.4	83.4	8.341637508	219602615.3
Evening	4:00 PM	83.4	83.4	8.341637508	219602615.3
	5:00 PM	83.4	83.4	8.341637508	219602615.3
	6:00 PM	83.4	83.4	8.341637508	219602615.3
	7:00 PM	45.0	50.0	5	100000
Night	8:00 PM	45.0	50.0	5	100000
	9:00 PM	45.0	50.0	5	100000
Night	10:00 PM	45.0	55.0	5.5	316227.766
	11:00 PM	45.0	55.0	5.5	316227.766
Sum					2421937096
Sum/24					100914045.7
Log10(Sum/24)					8.003951617
10*Log10(Sum/24)					80.03951617
24 Hour CNEL					80

Mechanical Equipment Noise Calculation

Receptor:	Nearest receiving residential receptor	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
		Reference (dBA) 3 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
No.	Equipment Description	Lmax						Lmax	Leq		
1	Commercial grade mechanical ventilation equipment	70	1	100	70	0.5	0	42.6	35.8	3802.402062	
2	Commercial grade mechanical ventilation equipment	70	1	100	90	0.5	0	40.5	33.1	2028.602065	
3	Commercial grade mechanical ventilation equipment	70	1	100	115	0.5	0	38.3	30.4	1099.153978	
4	Commercial grade mechanical ventilation equipment	70	1	100	175	0.5	0	34.7	25.9	384.776035	
5											
6											
7											
8											
9											
10											
								Lmax[4]	43	Leq	39

Notes:

- [1] Percentage of time activity occurs each hour
- [2] Soft ground terrain between project site and receptor.
- [3] Shielding due to intervening structures
- [4] Calculated Lmax is the Loudest value.

CNEL Calculations					
	Time	Hourly Leq	Leq'	0.1*Leq	antiLog
Night	12:00 AM	38.6	48.6	4.86421042	73149.34139
	1:00 AM	38.6	48.6	4.86421042	73149.34139
	2:00 AM	38.6	48.6	4.86421042	73149.34139
	3:00 AM	38.6	48.6	4.86421042	73149.34139
	4:00 AM	38.6	48.6	4.86421042	73149.34139
	5:00 AM	38.6	48.6	4.86421042	73149.34139
Day	6:00 AM	38.6	48.6	4.86421042	73149.34139
	7:00 AM	38.6	38.6	3.86421042	7314.934139
	8:00 AM	38.6	38.6	3.86421042	7314.934139
	9:00 AM	38.6	38.6	3.86421042	7314.934139
	10:00 AM	38.6	38.6	3.86421042	7314.934139
	11:00 AM	38.6	38.6	3.86421042	7314.934139
	12:00 PM	38.6	38.6	3.86421042	7314.934139
	1:00 PM	38.6	38.6	3.86421042	7314.934139
	2:00 PM	38.6	38.6	3.86421042	7314.934139
	3:00 PM	38.6	38.6	3.86421042	7314.934139
Evening	4:00 PM	38.6	38.6	3.86421042	7314.934139
	5:00 PM	38.6	38.6	3.86421042	7314.934139
	6:00 PM	38.6	38.6	3.86421042	7314.934139
	7:00 PM	38.6	43.6	4.36421042	23131.85281
Night	8:00 PM	38.6	43.6	4.36421042	23131.85281
	9:00 PM	38.6	43.6	4.36421042	23131.85281
Night	10:00 PM	38.6	48.6	4.86421042	73149.34139
	11:00 PM	38.6	48.6	4.86421042	73149.34139
Sum					815518.8406
Sum/24					33979.95169
Log10(Sum/24)					4.531222757
10*Log10(Sum/24)					45.31222757
24 Hour CNEL					45