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Appendix G:

## **Noise Supporting Information**

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### Mobile Construction Activity Noise Calculation

Receptor:	Receiving residential property line	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
		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	Grader	85	1	40	25	1	6	85.0	84.1	254185035.1	
2	Excavator	85	1	40	75	1	6	75.5	69.7	9414260.56	
3	Dozer	85	1	40	75	1	6	75.5	69.7	9414260.56	
4	Front End Loader	80	1	40	75	1	6	70.5	64.7	2977050.585	
5	Backhoe	80	1	40	75	1	6	70.5	64.7	2977050.585	
6											
7											
8											
9											
10											

Notes:

Lmax[4]	85	Leq	84
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- [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.

Average Daily Noise Level Calculation					
	Time	Hourly Leq	Leq'	0.1*Leq	antiLog
Night	12:00 AM	0.0	10.0	1	10
	1:00 AM	0.0	10.0	1	10
	2:00 AM	0.0	10.0	1	10
	3:00 AM	0.0	10.0	1	10
	4:00 AM	0.0	10.0	1	10
	5:00 AM	0.0	10.0	1	10
Day	6:00 AM	0.0	10.0	1	10
	7:00 AM	84.5	84.5	8.445553856	278967657.4
	8:00 AM	84.5	84.5	8.445553856	278967657.4
	9:00 AM	84.5	84.5	8.445553856	278967657.4
	10:00 AM	81.0	81.0	8.1	125892541.2
	11:00 AM	81.0	81.0	8.1	125892541.2
	12:00 PM	0.0	0.0	0	1
	1:00 PM	81.0	81.0	8.1	125892541.2
	2:00 PM	81.0	81.0	8.1	125892541.2
	3:00 PM	75.0	75.0	7.5	31622776.6
4:00 PM	75.0	75.0	7.5	31622776.6	
5:00 PM	75.0	75.0	7.5	31622776.6	
6:00 PM	75.0	75.0	7.5	31622776.6	
Evening	7:00 PM	0.0	5.0	0.5	3.16227766
	8:00 PM	0.0	5.0	0.5	3.16227766
	9:00 PM	0.0	5.0	0.5	3.16227766
Night	10:00 PM	0.0	10.0	1	10
	11:00 PM	0.0	10.0	1	10
Sum					1466964344
Sum/24					61123514.33
Log10(Sum/24)					7.786208316
10*Log10(Sum/24)					77.86208316
<b>24 Hour CNEL</b>					<b>78</b>

Assuming equipment operates at least 50-feet from the nearest receptor.  
 Assuming equipment operates at least 50-feet from the nearest receptor.  
 Lunch break  
 Assuming equipment operates at least 50-feet from the nearest receptor.  
 Assuming equipment operates at least 50-feet from the nearest receptor.  
 Assuming equipment operates at least 75-feet from the nearest receptor.  
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### Residential-Grade Mechanical Equipment

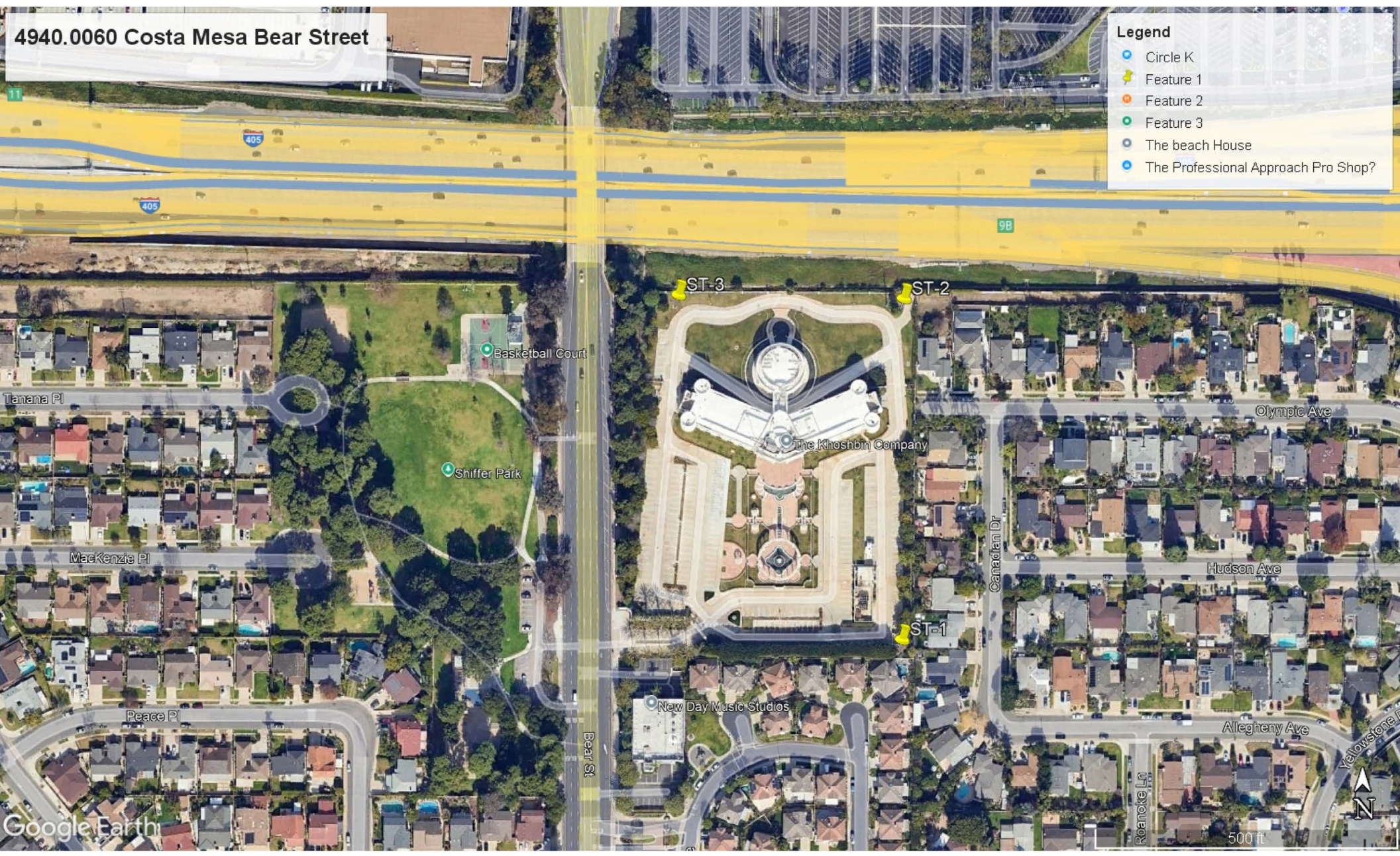
Receptor: Nearest Residential Receptor		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 3 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
		Lmax						Leq	Lmax		Leq
1	Residential grade mechanical ventilation equipment	70	1	80	130	1	0	37.3	19.9	98.3158853	
2	Residential grade mechanical ventilation equipment	70	1	80	140	1	0	36.6	19.0	78.71720117	
3	Residential grade mechanical ventilation equipment	70	1	80	150	1	0	36.0	18.1	64	
4	Residential grade mechanical ventilation equipment	70	1	80	160	1	0	35.5	17.2	52.734375	
5											
6											
7											
8											
9											
10											
Notes:										<b>Leq</b>	<b>25</b>

- [1] Percentage of time activity occurs each hour
- [2] Soft ground terrain between project site and receptor
- [3] Shielding due to structural/soundwall shielding

4940.0060 Costa Mesa Bear Street

**Legend**

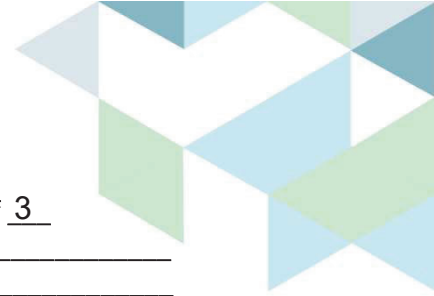
- Circle K
- ★ Feature 1
- Feature 2
- Feature 3
- The beach House
- The Professional Approach Pro Shop?



Google Earth

500 ft





Project Number: 4940.0060  
Project Name: Bear Street Residential Project  
Test Personnel: Alex Ortiz

Sheet 1 of 3

## NOISE MEASUREMENT SURVEY

Site Number: 1      Date: 10/29/2024      Time: From 12:06 To 12:21

Site Location: Southeast corner of the project site

Primary Noise Sources: Traffic from Bear Street and the I-405 Freeway, fountains, rustling leaves, birds

### Measurement Results

	dBA
L <sub>eq</sub>	60.0
L <sub>max</sub>	64.2
L <sub>min</sub>	57.3
L <sub>peak</sub>	97.9
L <sub>5</sub>	61.5
L <sub>10</sub>	61.1
L <sub>50</sub>	59.9
L <sub>90</sub>	58.6
SEL	

### Observed Noise Sources/Events

Time	Noise Source/Event	dBA

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Equipment: LXT2      Measured Difference: -0.1 dBA  
Settings: A-Weighted  Other  \_\_\_\_\_      Slow  Fast       Windscreen

### Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
14	7	68	46	
Comments: _____				



*Photos Taken:*

Photo Number	Location/Description
1	Facing North
2	Facing East
3	Facing South
4	Facing West

*Traffic Description:*

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts

*Diagram/Further Comments:*





Project Number: 4940.0060  
Project Name: Bear Street Residential Project  
Test Personnel: Alex Ortiz

Sheet 2 of 3

**NOISE MEASUREMENT SURVEY**

Site Number: 2      Date: 10/29/2024      Time: From 12:38 To 12:53

Site Location: Northeast corner of the project site

Primary Noise Sources: Traffic from the I-405 Freeway

*Measurement Results*

	dB(A)
L <sub>eq</sub>	73.1
L <sub>max</sub>	77.3
L <sub>min</sub>	69.2
L <sub>peak</sub>	101.0
L <sub>5</sub>	75.2
L <sub>10</sub>	74.8
L <sub>50</sub>	72.9
L <sub>90</sub>	71.2
SEL	

*Observed Noise Sources/Events*

Time	Noise Source/Event	dB(A)

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Equipment: LXT2      Measured Difference: -0.06 dB(A)  
Settings: A-Weighted  Other  \_\_\_\_\_      Slow  Fast       Windscreen

*Atmospheric Conditions:*

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
14	8	68	47	
Comments: _____				
_____				
_____				







*Photos Taken:*

Photo Number	Location/Description
1	Facing North
2	Facing East
3	Facing South
4	Facing West

*Traffic Description:*

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts
I-405 Freeway	12	55	55	1,536	1,770

*Diagram/Further Comments:*





Project Number: 4940.0060  
Project Name: Bear Street Residential Project  
Test Personnel: Alex Ortiz

Sheet 3 of 3

**NOISE MEASUREMENT SURVEY**

Site Number: 3      Date: 10/29/2024      Time: From 13:07 To 13:22

Site Location: Northwest corner of the project site

Primary Noise Sources: Traffic from the I-405 Freeway

*Measurement Results*

	dBA
L <sub>eq</sub>	73.9
L <sub>max</sub>	83.4
L <sub>min</sub>	70.7
L <sub>peak</sub>	100.4
L <sub>5</sub>	75.3
L <sub>10</sub>	75.0
L <sub>50</sub>	73.8
L <sub>90</sub>	72.3
SEL	

*Observed Noise Sources/Events*

Time	Noise Source/Event	dBA

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Equipment: LXT2      Measured Difference: -0.02 dBA  
Settings: A-Weighted  Other  \_\_\_\_\_      Slow  Fast       Windscreen

*Atmospheric Conditions:*

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
15	9	69	47	
Comments: _____				
_____				
_____				





*Photos Taken:*

Photo Number	Location/Description
1	Facing North
2	Facing East
3	Facing South
4	Facing West

*Traffic Description:*

Roadway	# Lanes	Posted Speed	Average Speed	NB/EB Counts	SB/WB Counts
I-405 Freeway	12	55	55	1,806	1,752
Bear Street	6	40	35	258	294

*Diagram/Further Comments:*



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