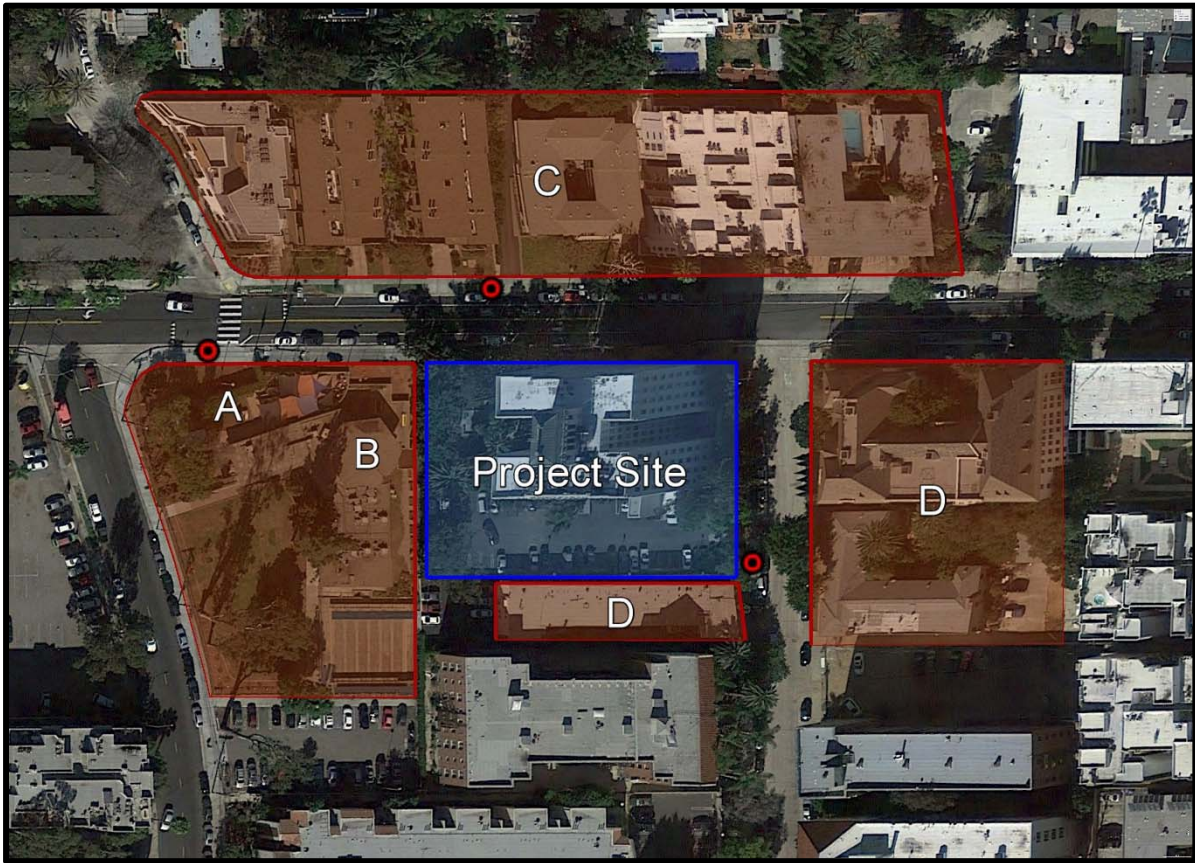


Montecito Apartments – Noise Receptor Map



*Red markers indicate monitoring locations

- A. Canyon Co-Op School
- B. Las Palmas Senior Citizen Center
- C. Franklin Avenue Residences
- D. Cherokee Avenue Residences

Franklin Avenue - Near Las Palmas Avenue

12/5/2016

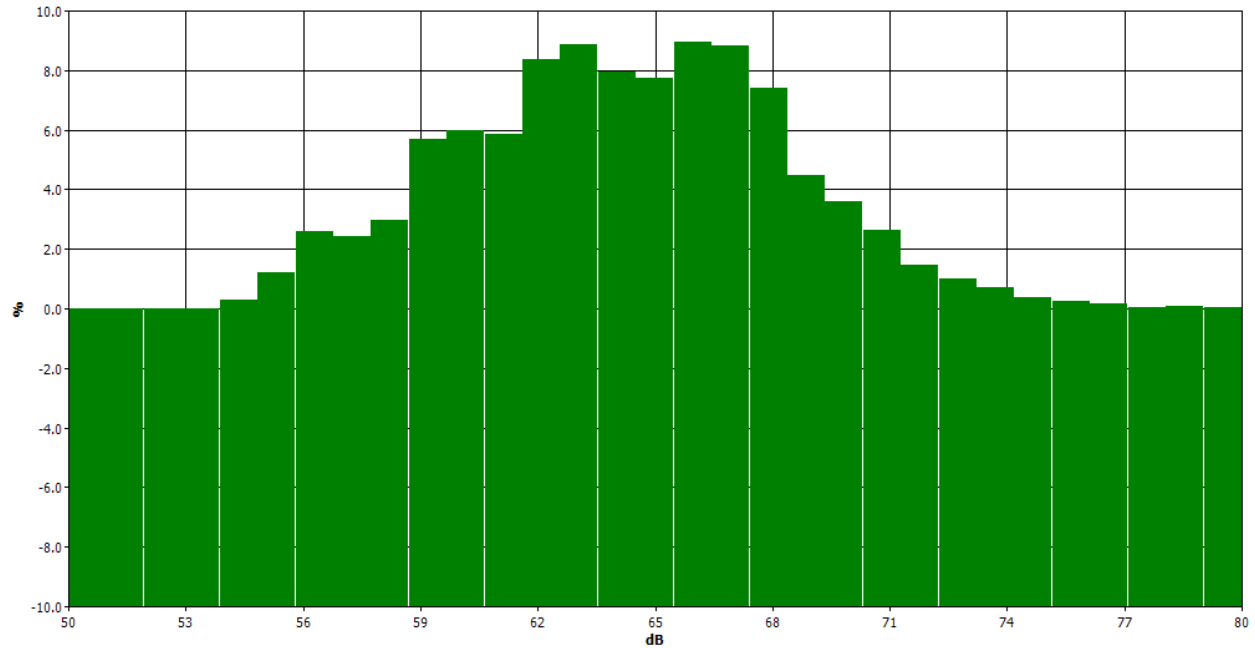
Information Panel

Name S381_BIJ050019_05122016_142632
Start Time Monday, December 5, 2016, 11:46am
Stop Time Monday, December 5, 2016, 12:01pm
Device Model Type SoundPro DL

General Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Leq	1	66.7dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

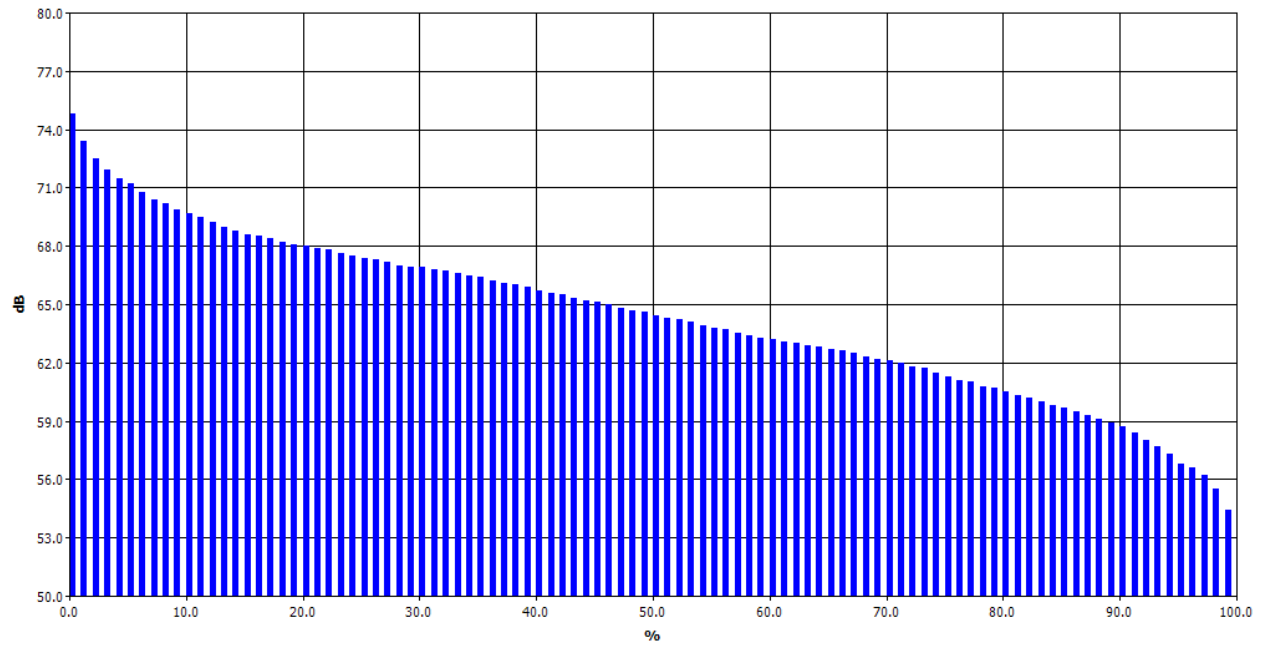
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.03	0.02	0.20	0.31
55	0.14	0.10	0.06	0.07	0.07	0.08	0.19	0.16	0.21	0.11	1.19
56	0.07	0.09	0.13	0.25	0.41	0.25	0.28	0.44	0.35	0.33	2.61
57	0.22	0.21	0.13	0.24	0.24	0.25	0.21	0.25	0.40	0.29	2.44
58	0.30	0.23	0.30	0.27	0.24	0.28	0.26	0.28	0.39	0.43	2.98
59	0.58	0.60	0.50	0.51	0.46	0.51	0.55	0.61	0.65	0.72	5.69
60	0.60	0.67	0.39	0.58	0.55	0.55	0.59	0.59	0.71	0.74	5.97
61	0.57	0.61	0.64	0.59	0.70	0.56	0.55	0.58	0.48	0.57	5.86
62	0.68	0.75	0.91	0.84	0.83	0.82	0.79	0.94	0.89	0.92	8.38
63	1.10	1.23	0.72	1.00	0.90	0.78	0.86	0.69	0.77	0.83	8.88
64	0.76	0.88	0.80	0.91	0.78	0.78	0.66	0.70	0.89	0.76	7.93
65	0.72	0.67	0.70	0.79	0.90	0.85	0.79	0.77	0.79	0.76	7.76
66	0.80	0.89	0.56	0.79	0.76	1.00	0.95	1.01	1.06	1.12	8.95
67	1.07	0.99	0.91	0.82	0.99	0.81	0.88	0.80	0.76	0.79	8.82
68	0.80	0.78	0.89	0.91	0.81	0.67	0.70	0.66	0.62	0.57	7.42
69	0.52	0.54	0.36	0.44	0.53	0.42	0.47	0.46	0.37	0.35	4.46
70	0.36	0.41	0.46	0.47	0.40	0.36	0.34	0.27	0.26	0.26	3.59
71	0.23	0.23	0.26	0.23	0.26	0.31	0.32	0.24	0.23	0.31	2.62
72	0.29	0.20	0.19	0.09	0.15	0.13	0.13	0.12	0.09	0.10	1.48
73	0.12	0.13	0.15	0.13	0.12	0.08	0.08	0.07	0.06	0.06	1.01
74	0.06	0.05	0.06	0.07	0.06	0.06	0.07	0.07	0.11	0.09	0.69
75	0.04	0.03	0.03	0.02	0.04	0.04	0.03	0.04	0.05	0.06	0.38
76	0.03	0.03	0.03	0.04	0.05	0.02	0.02	0.02	0.02	0.02	0.26
77	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.03	0.01	0.18
78	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06
79	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07
80	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

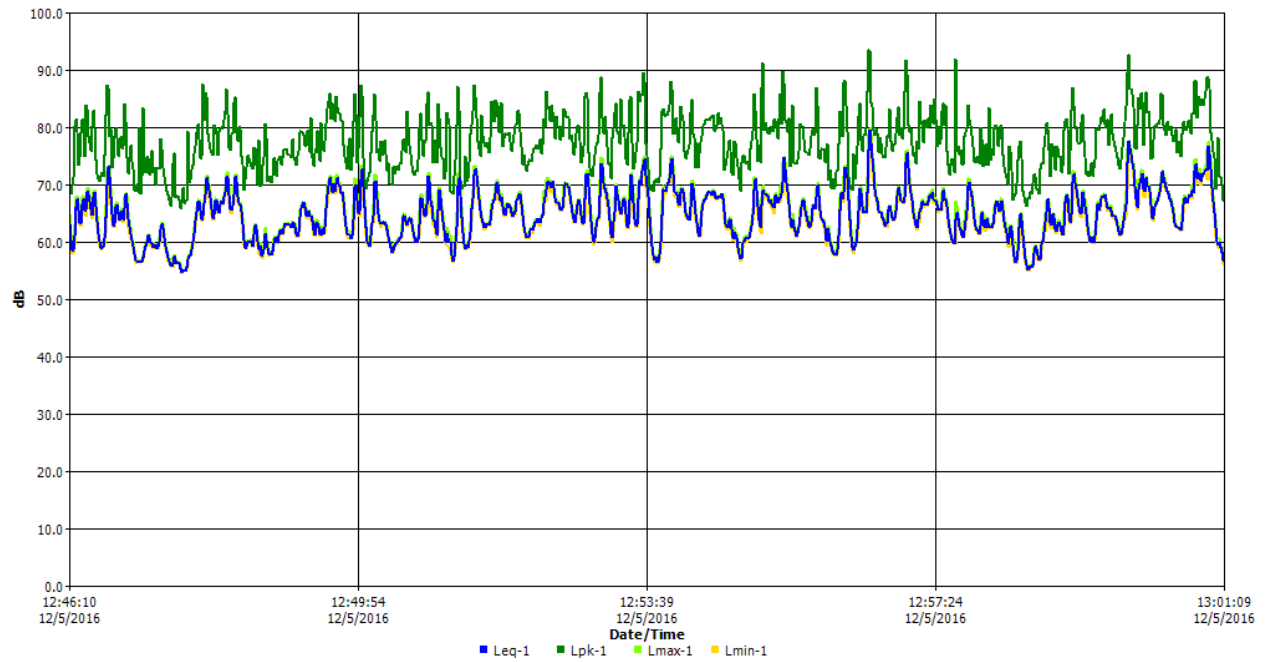
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		74.8	73.4	72.5	71.9	71.5	71.2	70.8	70.4	70.2
10%	69.9	69.7	69.5	69.2	69	68.8	68.6	68.5	68.4	68.2
20%	68.1	68	67.9	67.8	67.6	67.5	67.4	67.3	67.2	67
30%	66.9	66.9	66.8	66.7	66.6	66.5	66.4	66.2	66.1	66
40%	65.9	65.7	65.6	65.5	65.3	65.2	65.1	65	64.8	64.7
50%	64.6	64.4	64.3	64.2	64.1	63.9	63.8	63.7	63.5	63.4
60%	63.3	63.2	63.1	63	62.9	62.8	62.7	62.6	62.5	62.3
70%	62.2	62.1	62	61.8	61.7	61.5	61.3	61.1	61	60.8
80%	60.7	60.5	60.3	60.2	60	59.8	59.7	59.5	59.3	59.1
90%	58.9	58.7	58.4	58	57.7	57.3	56.8	56.6	56.2	55.5
100%	54.4									

Logged Data Chart



Franklin Avenue - Near Cherokee Avenue

12/5/2016

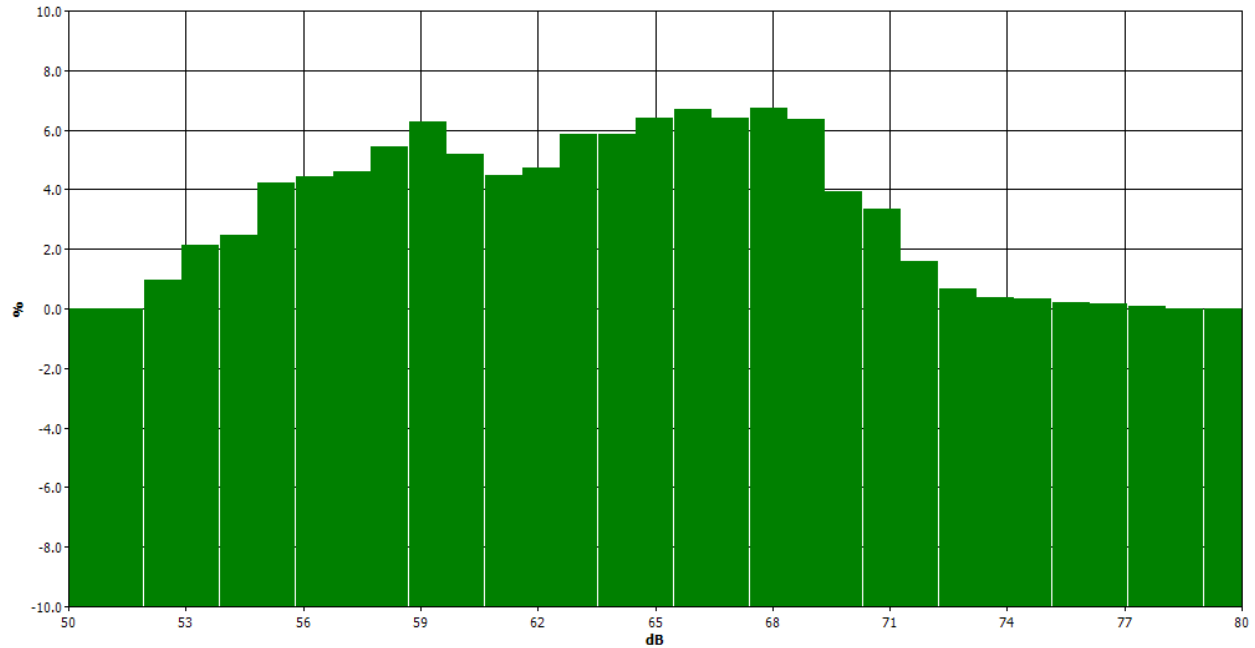
Information Panel

Name S382_BIJ050019_05122016_142633
Start Time Monday, December 5, 2016, 12:04pm
Stop Time Monday, December 5, 2016, 12:19pm
Device Model Type SoundPro DL

General Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Leq	1	66.3dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

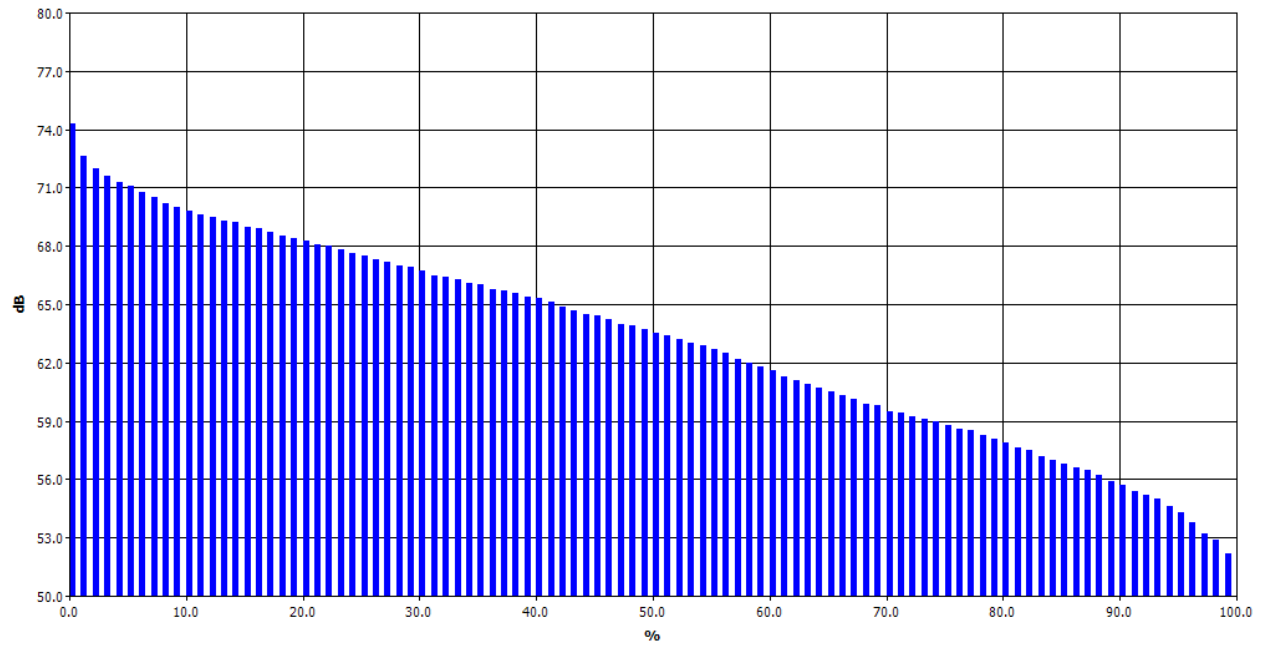
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	0.00	0.00	0.00	0.01	0.04	0.08	0.11	0.13	0.27	0.34	0.98
53	0.42	0.29	0.21	0.15	0.13	0.17	0.18	0.20	0.21	0.17	2.14
54	0.16	0.22	0.14	0.30	0.27	0.23	0.25	0.37	0.28	0.25	2.47
55	0.32	0.45	0.45	0.46	0.40	0.47	0.43	0.43	0.48	0.36	4.24
56	0.36	0.28	0.28	0.40	0.36	0.44	0.47	0.64	0.67	0.54	4.45
57	0.53	0.53	0.29	0.41	0.47	0.47	0.50	0.56	0.43	0.42	4.61
58	0.53	0.47	0.39	0.51	0.58	0.55	0.56	0.58	0.73	0.53	5.43
59	0.66	0.81	0.67	0.63	0.70	0.66	0.56	0.45	0.48	0.66	6.29
60	0.71	0.68	0.38	0.56	0.47	0.47	0.42	0.55	0.55	0.43	5.20
61	0.46	0.38	0.43	0.47	0.46	0.42	0.43	0.41	0.49	0.51	4.47
62	0.41	0.43	0.45	0.43	0.45	0.44	0.49	0.48	0.59	0.55	4.72
63	0.57	0.60	0.47	0.68	0.64	0.59	0.59	0.61	0.59	0.54	5.88
64	0.60	0.63	0.67	0.59	0.58	0.60	0.55	0.56	0.56	0.55	5.88
65	0.56	0.49	0.56	0.59	0.58	0.69	0.66	0.73	0.82	0.73	6.40
66	0.76	0.79	0.47	0.72	0.76	0.72	0.74	0.63	0.56	0.54	6.69
67	0.65	0.69	0.70	0.66	0.64	0.61	0.61	0.62	0.60	0.60	6.40
68	0.60	0.57	0.67	0.71	0.78	0.77	0.72	0.62	0.63	0.65	6.72
69	0.77	0.73	0.54	0.61	0.63	0.72	0.62	0.56	0.58	0.63	6.37
70	0.48	0.45	0.36	0.42	0.38	0.37	0.32	0.35	0.45	0.36	3.95
71	0.33	0.33	0.42	0.40	0.35	0.36	0.26	0.32	0.26	0.28	3.33
72	0.23	0.23	0.15	0.12	0.22	0.17	0.17	0.11	0.10	0.08	1.57
73	0.09	0.08	0.07	0.07	0.09	0.09	0.06	0.04	0.02	0.04	0.65
74	0.03	0.03	0.03	0.03	0.03	0.04	0.05	0.03	0.04	0.05	0.37
75	0.05	0.06	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.32
76	0.02	0.03	0.03	0.04	0.02	0.02	0.02	0.03	0.01	0.01	0.22
77	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.03	0.02	0.16
78	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.00	0.00	0.10
79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

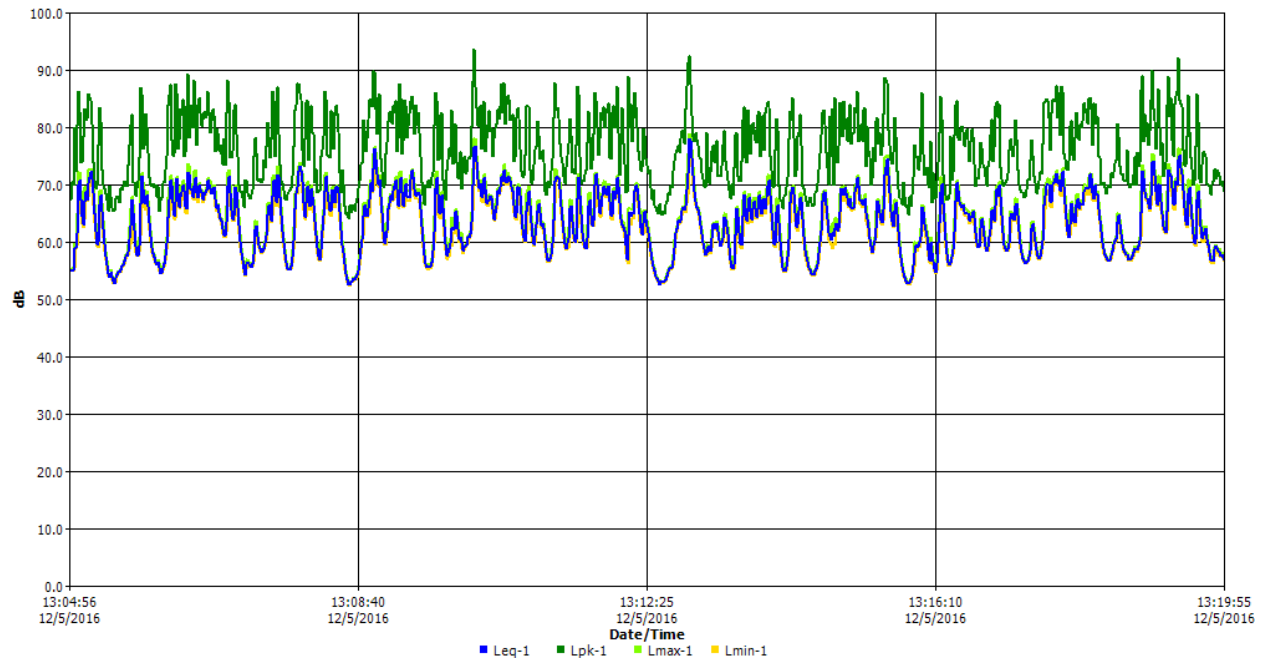
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		74.3	72.6	72	71.6	71.3	71.1	70.8	70.5	70.2
10%	70	69.8	69.6	69.5	69.3	69.2	69	68.9	68.7	68.5
20%	68.4	68.3	68.1	68	67.8	67.6	67.5	67.3	67.2	67
30%	66.9	66.7	66.5	66.4	66.3	66.1	66	65.8	65.7	65.6
40%	65.4	65.3	65.1	64.9	64.7	64.5	64.4	64.2	64	63.9
50%	63.7	63.5	63.4	63.2	63	62.9	62.7	62.5	62.2	62
60%	61.8	61.6	61.3	61.1	60.9	60.7	60.5	60.3	60.1	59.9
70%	59.8	59.5	59.4	59.2	59.1	59	58.8	58.6	58.5	58.3
80%	58.1	57.9	57.6	57.5	57.2	57	56.8	56.6	56.5	56.2
90%	55.9	55.7	55.4	55.2	55	54.6	54.3	53.8	53.2	52.9
100%	52.2									

Logged Data Chart



Cherokee Avenue

12/5/2016

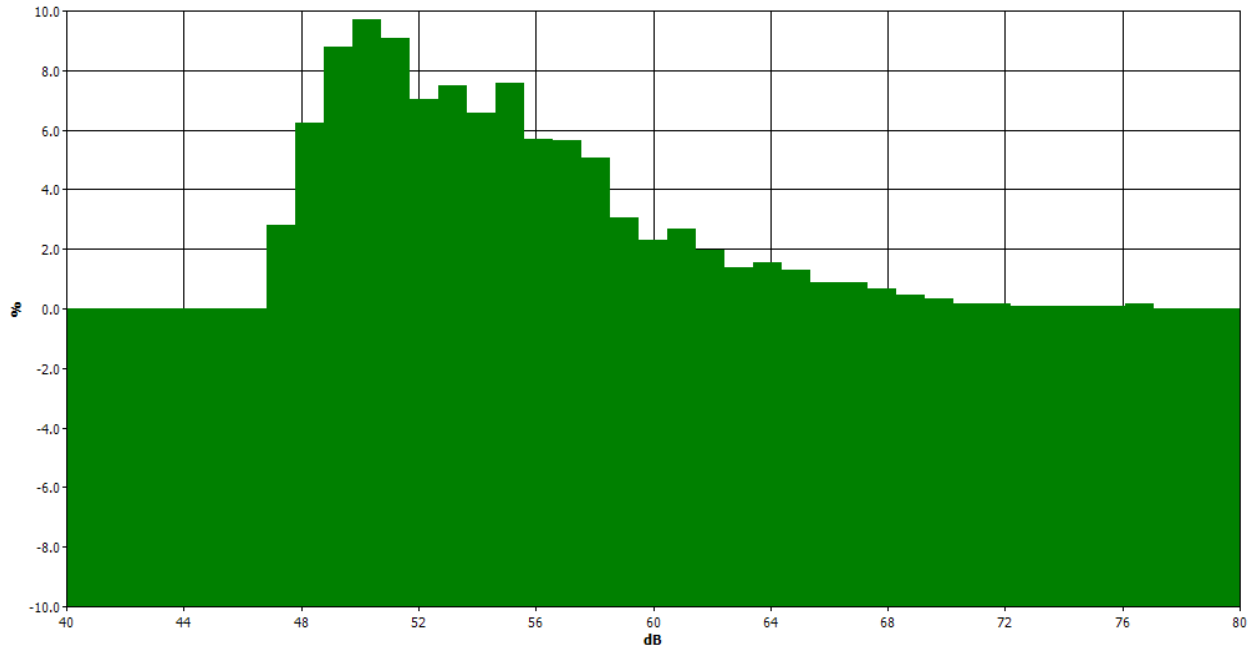
Information Panel

Name S383_BIJ050019_05122016_142633
Start Time Monday, December 5, 2016, 12:23pm
Stop Time Monday, December 5, 2016, 12:36pm
Device Model Type SoundPro DL

General Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Leq	1	59.5dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

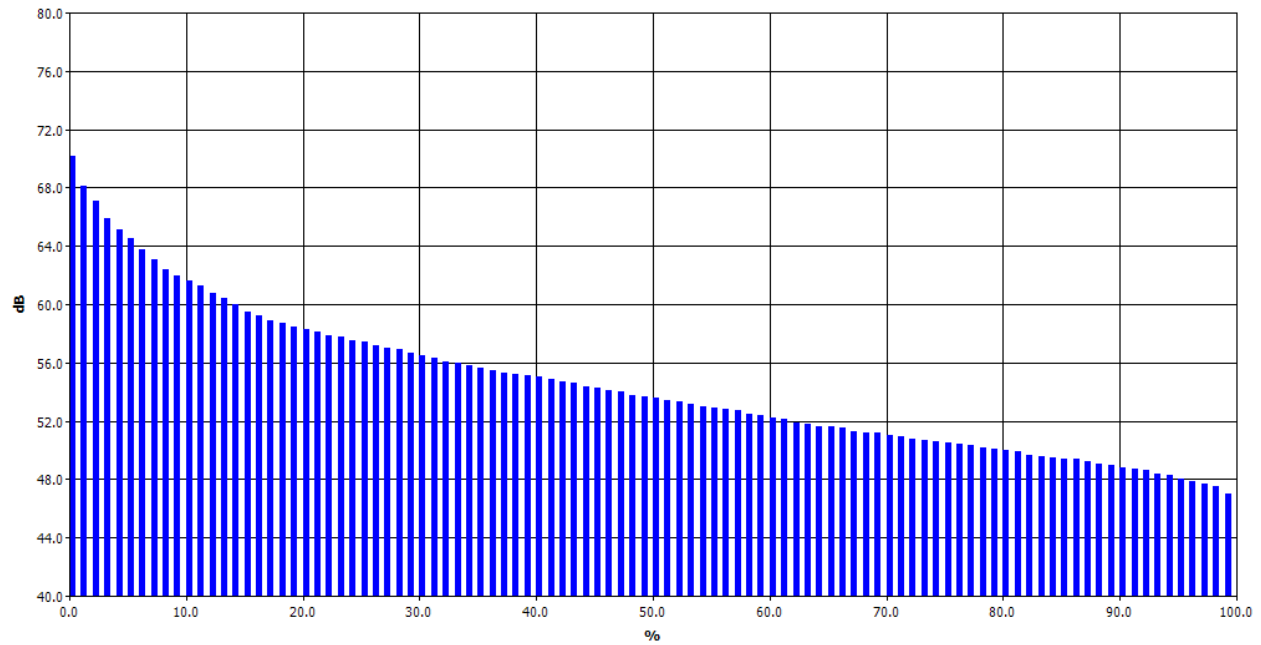
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	0.00	0.01	0.15	0.14	0.20	0.34	0.60	0.38	0.46	0.50	2.78
48	0.57	0.71	0.38	0.55	0.55	0.77	0.53	0.74	0.68	0.77	6.25
49	0.89	0.83	0.78	0.76	0.66	1.12	1.06	0.96	0.95	0.77	8.78
50	0.79	0.74	1.03	1.01	0.94	0.97	0.90	1.05	1.19	1.07	9.69
51	1.00	0.90	0.56	1.07	1.01	0.93	0.95	1.07	0.85	0.76	9.10
52	0.58	0.54	0.58	0.73	0.87	0.75	0.71	0.64	0.75	0.90	7.05
53	0.70	0.67	0.69	0.81	0.80	0.69	0.73	0.76	0.77	0.88	7.50
54	0.76	0.88	0.51	0.69	0.70	0.65	0.62	0.56	0.63	0.57	6.57
55	0.88	1.01	0.88	0.76	0.83	0.79	0.71	0.65	0.52	0.52	7.55
56	0.72	0.61	0.52	0.56	0.62	0.52	0.52	0.54	0.53	0.56	5.71
57	0.69	0.61	0.38	0.61	0.56	0.60	0.63	0.49	0.45	0.66	5.67
58	0.55	0.57	0.44	0.48	0.55	0.43	0.47	0.46	0.57	0.55	5.06
59	0.41	0.34	0.36	0.35	0.30	0.31	0.30	0.28	0.20	0.19	3.05
60	0.22	0.29	0.18	0.23	0.23	0.23	0.23	0.21	0.24	0.23	2.29
61	0.20	0.20	0.21	0.19	0.21	0.30	0.36	0.32	0.38	0.29	2.66
62	0.24	0.22	0.23	0.20	0.20	0.22	0.18	0.15	0.18	0.16	1.98
63	0.16	0.15	0.11	0.15	0.16	0.14	0.13	0.15	0.13	0.13	1.40
64	0.15	0.14	0.14	0.14	0.14	0.12	0.16	0.19	0.18	0.20	1.56
65	0.16	0.14	0.17	0.21	0.11	0.12	0.11	0.11	0.09	0.10	1.31
66	0.09	0.12	0.06	0.10	0.11	0.10	0.07	0.05	0.07	0.09	0.87
67	0.06	0.07	0.08	0.07	0.10	0.11	0.11	0.12	0.08	0.07	0.88
68	0.10	0.11	0.10	0.11	0.05	0.05	0.04	0.03	0.05	0.04	0.68
69	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.09	0.03	0.05	0.46
70	0.05	0.05	0.04	0.05	0.03	0.04	0.04	0.02	0.01	0.01	0.33
71	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.01	0.02	0.16
72	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.17
73	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
74	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08
75	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.08
76	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.10
77	0.01	0.01	0.01	0.01	0.02	0.02	0.05	0.03	0.00	0.00	0.15
78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

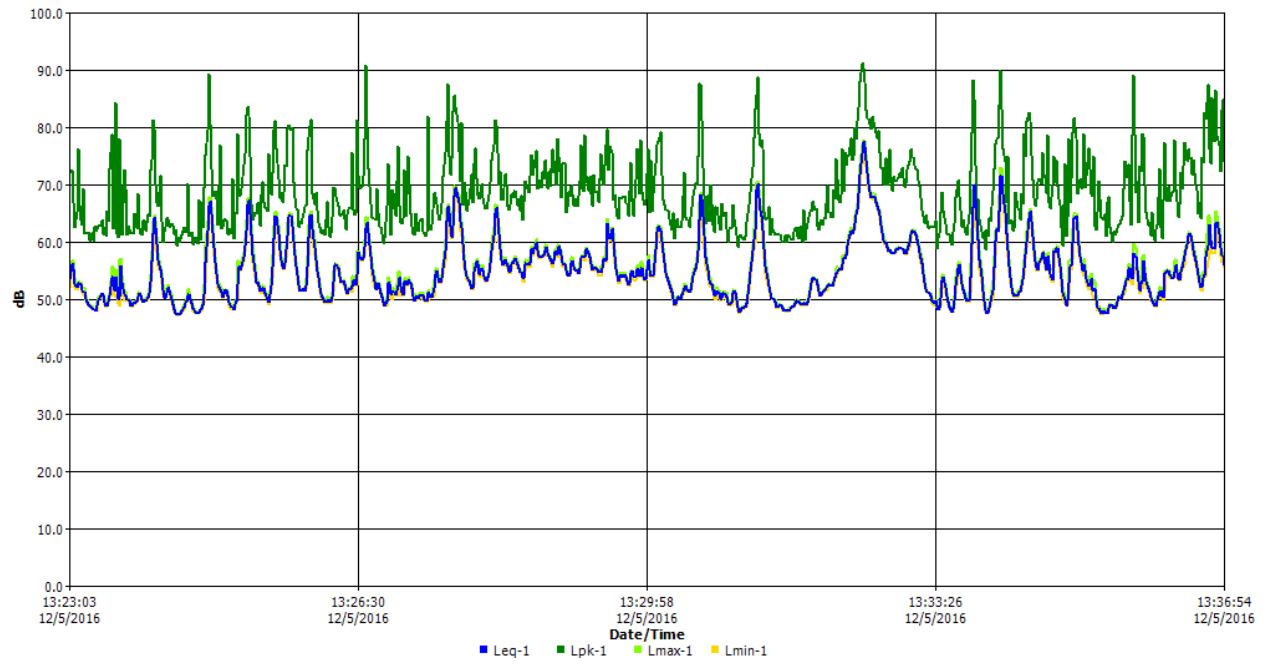
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		70.2	68.1	67.1	65.9	65.1	64.5	63.8	63.1	62.4
10%	62	61.6	61.3	60.8	60.4	60	59.5	59.2	58.9	58.7
20%	58.5	58.3	58.1	57.9	57.8	57.5	57.4	57.2	57	56.9
30%	56.7	56.5	56.3	56.1	56	55.8	55.6	55.5	55.3	55.2
40%	55.1	55	54.9	54.7	54.6	54.4	54.3	54.1	54	53.8
50%	53.7	53.6	53.4	53.3	53.2	53	52.9	52.8	52.7	52.5
60%	52.4	52.2	52.1	51.9	51.8	51.6	51.6	51.5	51.3	51.2
70%	51.2	51	50.9	50.8	50.7	50.6	50.5	50.4	50.3	50.2
80%	50.1	50	49.9	49.7	49.6	49.5	49.4	49.4	49.2	49.1
90%	49	48.8	48.7	48.6	48.4	48.3	48	47.9	47.7	47.5
100%	47									

Logged Data Chart



Construction Noise Impact Analysis

Construction Noise - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Excavator	81	0.4	77.0
Loader	79	0.4	75.0
Combined dBA			79.1

Housing Row Shielding

If gaps in the row of buildings constitute less than 35% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows1)	0	

If gaps in the row of buildings constitute between 35-65% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows2)	0	

If gaps in the row of buildings constitute more than 65% of the length of the row:		
A(rows3)	0	

Tree Zone Shielding

Where at least 100 feet of trees intervene between source and receiver, and if no clear line of sight exists between source and receiver, and if the trees extend 15 feet or more above the line of sight:		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Existing Building	5
Axxx	0
Axxx	0
A(rows1)	0
A(rows2)	0
A(trees)	0
A(cumulative)	5

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1
Cumulative Shielding (A)	5
G	0
Distance	50
Unmitigated Construction Noise	74.1

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	74.1
Existing Ambient Noise Level	66.7
Unmitigated Ambient Noise	74.9
Unmitigated Increase	8.2

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1
Cumulative Shielding (A)	5
Sound Barrier Shielding	10.0
G	0.0
Distance	50
Mitigated Construction Noise	61.1

Mitigated Receptor Noise Level

Mitigated Construction Noise	61.1
Existing Ambient Noise Level	66.7
Mitigated Ambient Noise	67.8
Mitigated Increase	1.1

Sources

Federal Highway Administration (FHWA), *Construction Noise Handbook*, August 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Assessment*, May 2006.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Construction Noise Impact Analysis

Construction Noise - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Excavator	81	0.4	77.0
Loader	79	0.4	75.0
Combined dBA			79.1

Housing Row Shielding

If gaps in the row of buildings constitute less than 35% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows1)	0	

If gaps in the row of buildings constitute between 35-65% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows2)	0	

If gaps in the row of buildings constitute more than 65% of the length of the row:		
A(rows3)	0	

Tree Zone Shielding

Where at least 100 feet of trees intervene between source and receiver, and if no clear line of sight exists between source and receiver, and if the trees extend 15 feet or more above the line of sight:		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Existing Wall	5
Axxx	0
Axxx	0
A(rows1)	0
A(rows2)	0
A(trees)	0
A(cumulative)	5

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1
Cumulative Shielding (A)	5
G	0
Distance	15
Unmitigated Construction Noise	74.1

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	74.1
Existing Ambient Noise Level	66.7
Unmitigated Ambient Noise	74.9
Unmitigated Increase	8.2

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1
Cumulative Shielding (A)	0
Sound Barrier Shielding	10.0
G	0.0
Distance	15
Mitigated Construction Noise	66.1

Mitigated Receptor Noise Level

Mitigated Construction Noise	66.1
Existing Ambient Noise Level	66.7
Mitigated Ambient Noise	69.4
Mitigated Increase	2.7

Sources

Federal Highway Administration (FHWA), *Construction Noise Handbook*, August 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Assessment*, May 2006.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Construction Noise Impact Analysis

Construction Noise - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Excavator	81	0.4	77.0
Loader	79	0.4	75.0
Combined dBA			79.1

Housing Row Shielding

If gaps in the row of buildings constitute less than 35% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows1)	0	

If gaps in the row of buildings constitute between 35-65% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows2)	0	

If gaps in the row of buildings constitute more than 65% of the length of the row:		
A(rows3)	0	

Tree Zone Shielding

Where at least 100 feet of trees intervene between source and receiver, and if no clear line of sight exists between source and receiver, and if the trees extend 15 feet or more above the line of sight:		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Axxx	0
Axxx	0
Axxx	0
A(rows1)	0
A(rows2)	0
A(trees)	0
A(cumulative)	0

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1
Cumulative Shielding (A)	0
G	0
Distance	80
Unmitigated Construction Noise	75.1

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	75.1
Existing Ambient Noise Level	66.3
Unmitigated Ambient Noise	75.6
Unmitigated Increase	9.3

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1
Cumulative Shielding (A)	0
Sound Barrier Shielding	10.0
G	0.0
Distance	80
Mitigated Construction Noise	62.1

Mitigated Receptor Noise Level

Mitigated Construction Noise	62.1
Existing Ambient Noise Level	66.3
Mitigated Ambient Noise	67.7
Mitigated Increase	1.4

Sources

Federal Highway Administration (FHWA), *Construction Noise Handbook*, August 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Assessment*, May 2006.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Construction Noise Impact Analysis

Construction Noise - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Excavator	81	0.4	77.0
Loader	79	0.4	75.0
Combined dBA			79.1

Housing Row Shielding

If gaps in the row of buildings constitute less than 35% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows1)	0	

If gaps in the row of buildings constitute between 35-65% of the length of the row:		
R	0	*number of rows of houses between source and receiver
A(rows2)	0	

If gaps in the row of buildings constitute more than 65% of the length of the row:		
A(rows3)	0	

Tree Zone Shielding

Where at least 100 feet of trees intervene between source and receiver, and if no clear line of sight exists between source and receiver, and if the trees extend 15 feet or more above the line of sight:		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Axxx	0
Axxx	0
Axxx	0
A(rows1)	0
A(rows2)	0
A(trees)	0
A(cumulative)	0

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1
Cumulative Shielding (A)	0
G	0
Distance	5
Unmitigated Construction Noise	79.1

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	79.1
Existing Ambient Noise Level	59.5
Unmitigated Ambient Noise	79.2
Unmitigated Increase	19.7

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1
Cumulative Shielding (A)	0
Sound Barrier Shielding	15.0
G	0.0
Distance	5
Mitigated Construction Noise	61.1

Mitigated Receptor Noise Level

Mitigated Construction Noise	61.1
Existing Ambient Noise Level	59.5
Mitigated Ambient Noise	63.4
Mitigated Increase	3.9

Sources

Federal Highway Administration (FHWA), *Construction Noise Handbook*, August 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Assessment*, May 2006.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Construction Vibration - PPV: UNMITIGATED

Receptor: Canyon Co-Op School

Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	50
Unmitigated Vibration Level (in/sec)	0.045

Receptor: Las Palmas Senior Citizen Center

Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	15
Unmitigated Vibration Level (in/sec)	0.148

Receptor: Franklin Avenue Residences

Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	80
Unmitigated Vibration Level (in/sec)	0.028

Receptor: 1847 N Cherokee Avenue Residences

Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	5
Unmitigated Vibration Level (in/sec)	0.445

SourcesCalifornia Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance Manual*, September 2013.Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, May 2006