

APPENDIX 6.11

Noise Measurements

St. John's Seminary Project – Noise Receptor Map



*Red markers indicate monitoring locations

- A. Castillo de Rosas Residences
- B. Woodcreek Road Residences
- C. Plata Rosa Court Residences
- D. Padre Serra Parish
- E. Via Secoya Residences
- F. Via Arandana Residences
- G. Del Rayo Court Residences
- H. Somis Road Residences

Castillo De Rosas Cul de Sac

7/7/2016

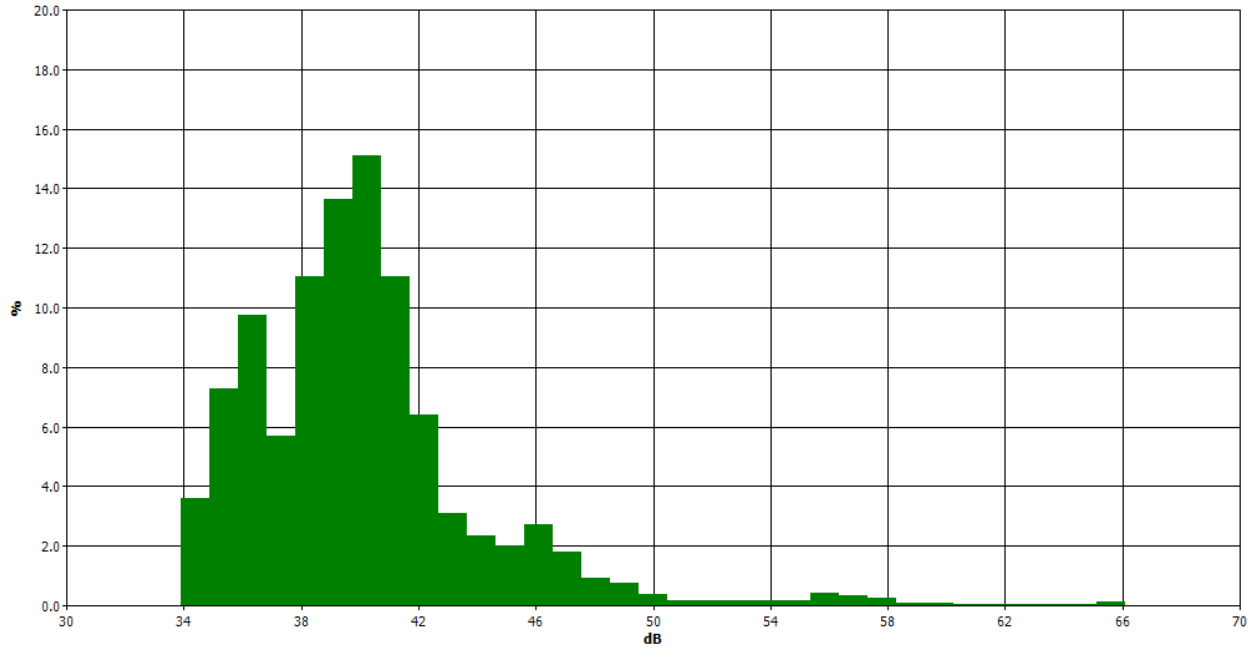
Information Panel

Name S306_BIJ050019_19092016_193730
Start Time Thursday, July 7, 2016, 5:10pm
Stop Time Thursday, July 7, 2016, 5:15pm
Device Model Type SoundPro DL

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	45.2dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

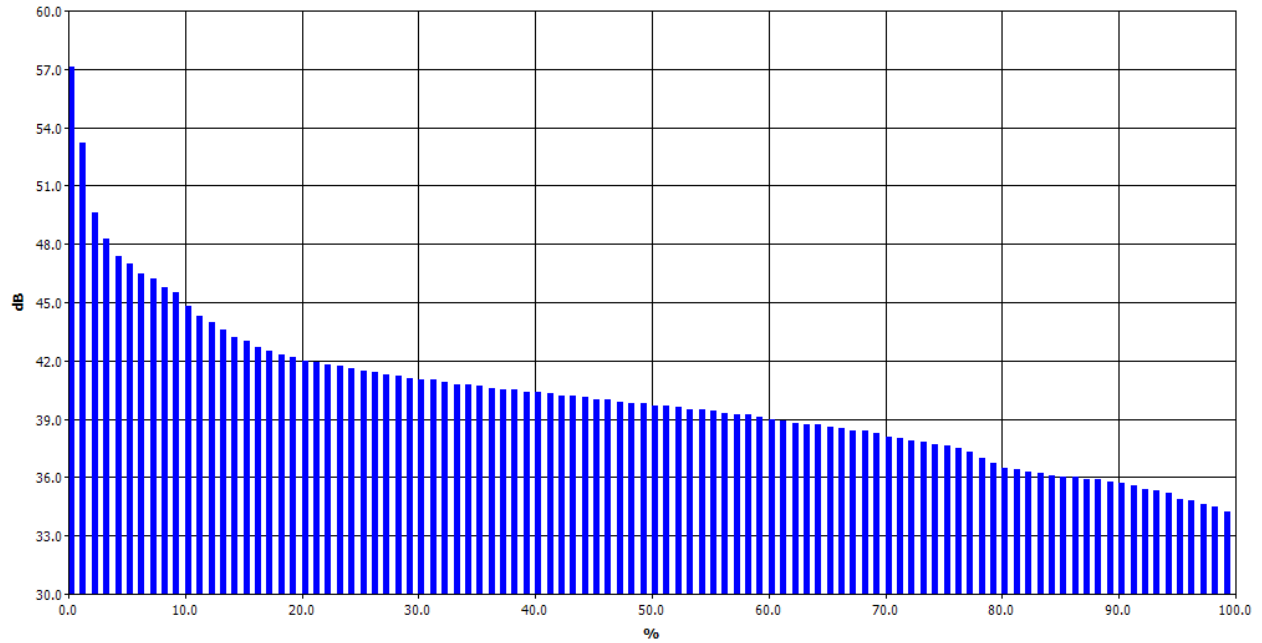
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	0.00	0.00	0.00	0.06	0.17	0.49	0.60	0.71	0.48	1.07	3.59
35	0.60	0.37	0.41	0.50	0.92	0.62	0.67	0.80	0.80	1.57	7.28
36	1.44	1.79	1.45	1.27	0.76	0.95	0.63	0.48	0.53	0.48	9.77
37	0.35	0.26	0.27	0.37	0.37	0.66	0.65	0.62	0.96	1.19	5.71
38	1.10	1.12	0.69	0.72	0.97	1.20	1.34	1.17	1.42	1.33	11.05
39	1.17	1.20	1.15	1.15	1.21	1.50	1.50	1.50	1.61	1.64	13.63
40	1.46	1.75	1.47	1.37	1.39	1.82	1.74	1.34	1.38	1.37	15.09
41	1.55	1.53	0.97	1.22	1.05	0.76	1.10	0.97	0.94	0.95	11.04
42	0.91	0.96	0.81	0.75	0.44	0.52	0.53	0.49	0.48	0.52	6.42
43	0.40	0.31	0.36	0.35	0.22	0.29	0.28	0.26	0.34	0.29	3.11
44	0.28	0.37	0.25	0.34	0.31	0.22	0.15	0.16	0.13	0.14	2.35
45	0.14	0.13	0.11	0.11	0.18	0.20	0.32	0.30	0.22	0.31	2.03
46	0.30	0.25	0.25	0.32	0.35	0.26	0.22	0.23	0.31	0.22	2.70
47	0.21	0.26	0.18	0.25	0.23	0.17	0.19	0.11	0.09	0.08	1.78
48	0.12	0.11	0.11	0.11	0.08	0.08	0.10	0.10	0.05	0.07	0.93
49	0.08	0.06	0.06	0.07	0.07	0.08	0.07	0.11	0.07	0.09	0.77
50	0.11	0.07	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.02	0.38
51	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.15
52	0.01	0.02	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.16
53	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.17
54	0.02	0.01	0.02	0.02	0.03	0.02	0.02	0.01	0.02	0.02	0.19
55	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.17
56	0.02	0.02	0.05	0.05	0.04	0.03	0.07	0.07	0.05	0.04	0.44
57	0.06	0.04	0.04	0.03	0.02	0.03	0.02	0.03	0.02	0.05	0.34
58	0.03	0.02	0.03	0.02	0.01	0.02	0.02	0.02	0.03	0.05	0.25
59	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.02	0.09
60	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.07
61	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.02	0.00	0.06
62	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.05
63	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04
64	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.04
65	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.05
66	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.02	0.00	0.00	0.12
67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

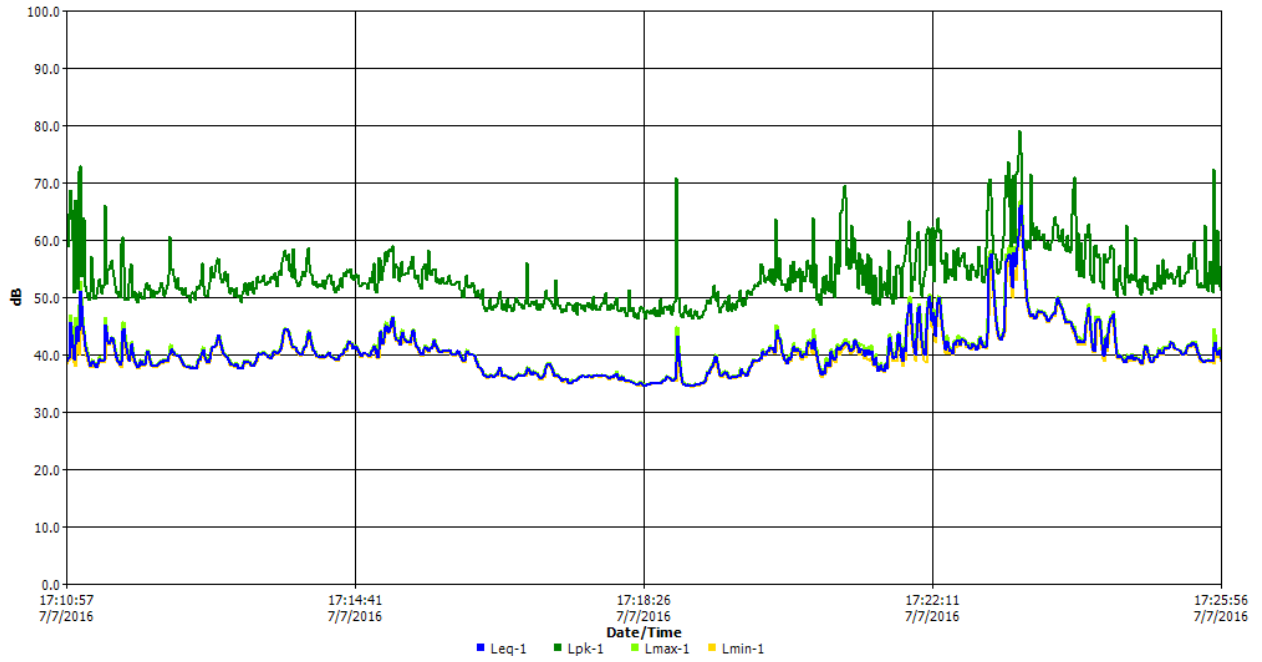
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		57.1	53.2	49.6	48.3	47.4	47	46.5	46.2	45.8
10%	45.5	44.8	44.3	44	43.6	43.2	43	42.7	42.5	42.3
20%	42.2	42	41.9	41.8	41.7	41.6	41.5	41.4	41.3	41.2
30%	41.1	41	41	40.9	40.8	40.8	40.7	40.6	40.5	40.5
40%	40.4	40.4	40.3	40.2	40.2	40.1	40	40	39.9	39.8
50%	39.8	39.7	39.7	39.6	39.5	39.5	39.4	39.3	39.2	39.2
60%	39.1	39	38.9	38.8	38.7	38.7	38.6	38.5	38.4	38.4
70%	38.3	38.1	38	37.9	37.8	37.7	37.6	37.5	37.3	37
80%	36.7	36.5	36.4	36.3	36.2	36.1	36	36	35.9	35.9
90%	35.8	35.7	35.6	35.4	35.3	35.2	34.9	34.8	34.6	34.5
100%	34.2									

Logged Data Chart



Woodcreek Rd. Bend

7/7/2016

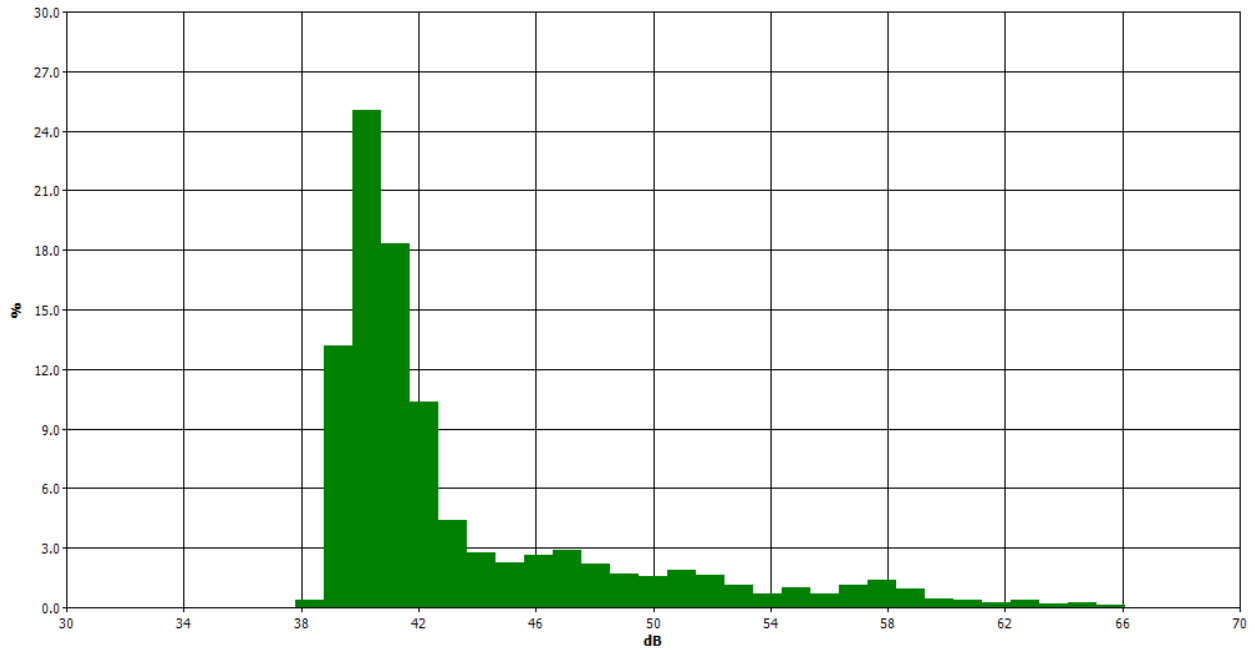
Information Panel

Name S305_BIJ050019_19092016_193729
Start Time Thursday, July 7, 2016, 4:49pm
Stop Time Thursday, July 7, 2016, 5:05pm
Device Model Type SoundPro DL

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	49.9dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

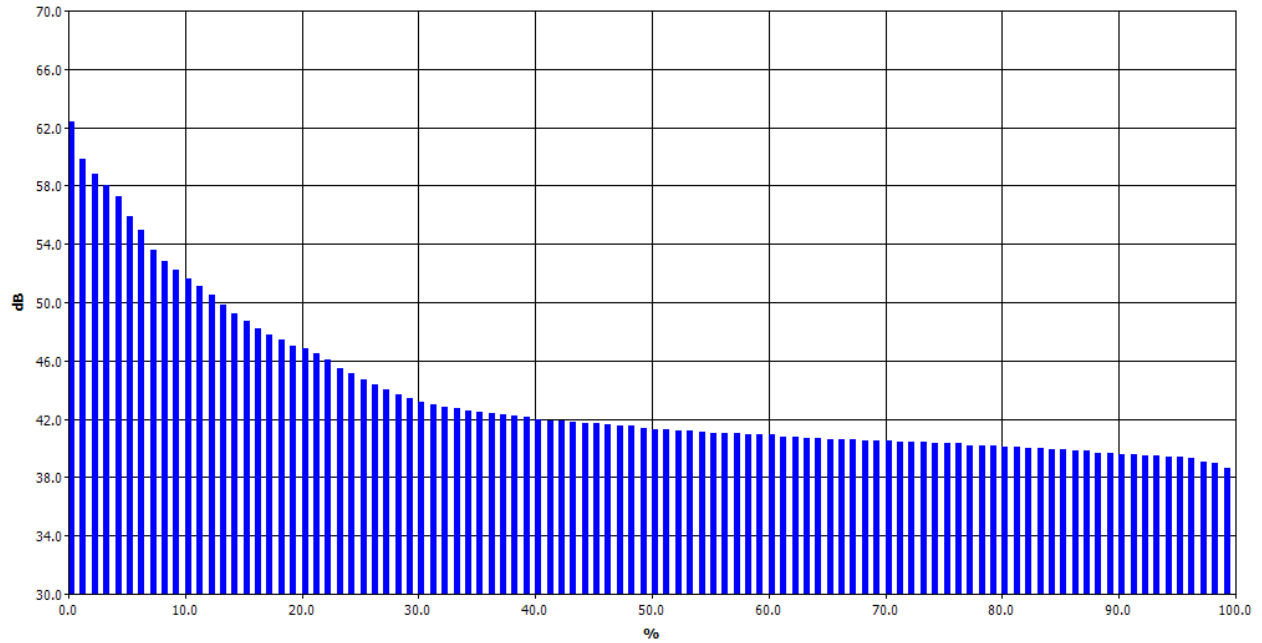
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.20	0.16	0.39
39	0.37	0.39	0.89	0.94	0.78	1.59	2.02	2.31	2.11	1.76	13.17
40	2.06	1.81	2.22	2.61	3.57	3.04	2.85	2.51	1.93	2.42	25.02
41	2.73	3.16	1.42	1.94	1.56	1.26	1.42	1.65	1.62	1.58	18.34
42	1.44	1.12	0.98	1.20	0.94	0.77	1.01	1.06	0.92	0.91	10.35
43	0.73	0.48	0.42	0.42	0.34	0.44	0.38	0.44	0.40	0.32	4.36
44	0.29	0.28	0.19	0.23	0.27	0.23	0.26	0.28	0.44	0.27	2.74
45	0.26	0.24	0.20	0.35	0.21	0.25	0.18	0.18	0.22	0.16	2.26
46	0.15	0.17	0.17	0.19	0.27	0.32	0.37	0.34	0.31	0.35	2.64
47	0.44	0.37	0.18	0.29	0.40	0.29	0.26	0.21	0.23	0.19	2.86
48	0.20	0.26	0.24	0.21	0.21	0.22	0.20	0.20	0.22	0.23	2.18
49	0.19	0.19	0.22	0.17	0.24	0.19	0.14	0.12	0.11	0.13	1.70
50	0.14	0.17	0.10	0.16	0.15	0.16	0.19	0.18	0.17	0.13	1.56
51	0.16	0.16	0.17	0.22	0.25	0.18	0.22	0.22	0.17	0.11	1.87
52	0.14	0.17	0.18	0.18	0.22	0.17	0.12	0.12	0.12	0.17	1.61
53	0.16	0.17	0.09	0.15	0.19	0.11	0.07	0.07	0.07	0.07	1.15
54	0.07	0.09	0.06	0.06	0.09	0.06	0.07	0.06	0.06	0.08	0.71
55	0.09	0.12	0.08	0.12	0.09	0.09	0.10	0.12	0.11	0.09	1.01
56	0.11	0.08	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.67
57	0.06	0.07	0.14	0.14	0.13	0.12	0.12	0.10	0.10	0.15	1.11
58	0.18	0.20	0.19	0.17	0.18	0.10	0.09	0.09	0.08	0.12	1.40
59	0.18	0.17	0.10	0.10	0.07	0.06	0.05	0.07	0.06	0.06	0.91
60	0.07	0.06	0.05	0.04	0.03	0.03	0.04	0.03	0.04	0.05	0.45
61	0.03	0.03	0.02	0.03	0.03	0.03	0.04	0.05	0.04	0.07	0.38
62	0.03	0.03	0.02	0.01	0.02	0.02	0.02	0.03	0.03	0.02	0.24
63	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.07	0.03	0.36
64	0.03	0.02	0.02	0.04	0.01	0.02	0.01	0.01	0.01	0.01	0.21
65	0.02	0.03	0.04	0.02	0.05	0.01	0.01	0.01	0.02	0.01	0.22
66	0.02	0.01	0.02	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.11
67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

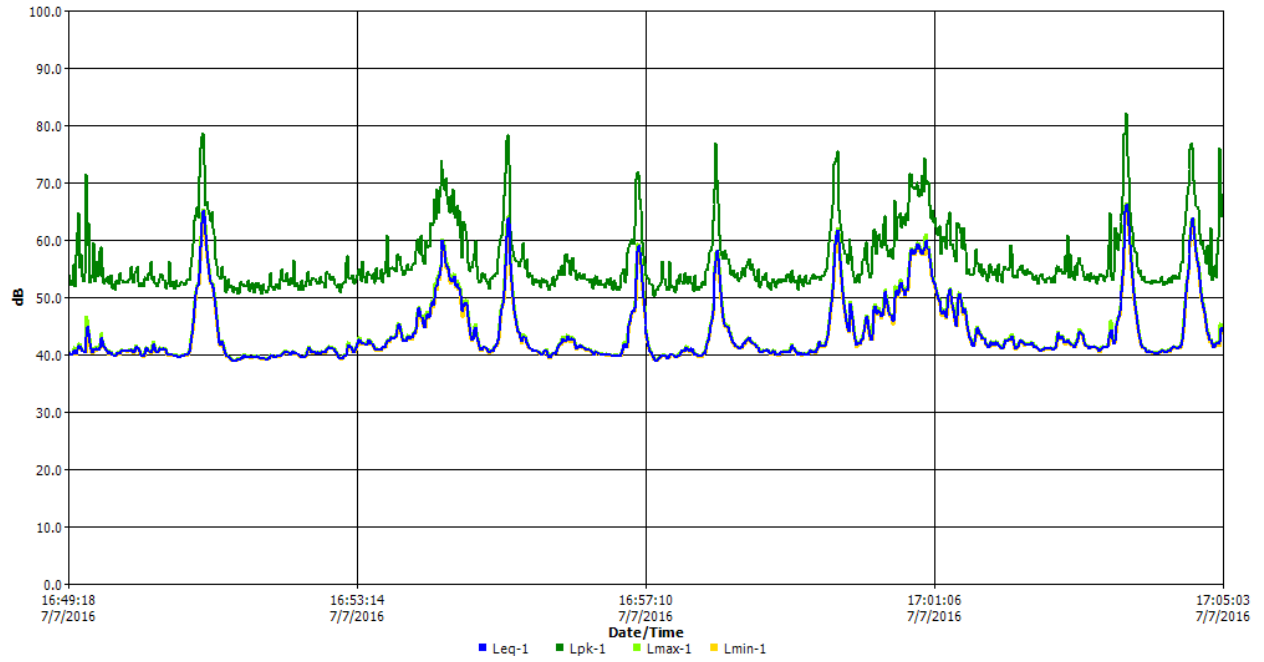
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%	62.4	59.8	58.8	58	57.3	55.9	55	53.6	52.8	
10%	52.2	51.6	51.1	50.5	49.8	49.2	48.7	48.2	47.8	47.4
20%	47	46.8	46.5	46.1	45.5	45.1	44.7	44.4	44	43.7
30%	43.4	43.2	43	42.8	42.7	42.6	42.5	42.4	42.3	42.2
40%	42.1	42	41.9	41.9	41.8	41.7	41.7	41.6	41.5	41.5
50%	41.4	41.3	41.3	41.2	41.2	41.1	41	41	41	40.9
60%	40.9	40.9	40.8	40.8	40.7	40.7	40.6	40.6	40.6	40.5
70%	40.5	40.5	40.4	40.4	40.4	40.3	40.3	40.3	40.2	40.2
80%	40.2	40.1	40.1	40	40	39.9	39.9	39.8	39.8	39.7
90%	39.7	39.6	39.6	39.5	39.5	39.4	39.4	39.3	39.1	39
100%	38.6									

Logged Data Chart



Intersection of Upland Rd. and Flynn Rd.

7/7/2016

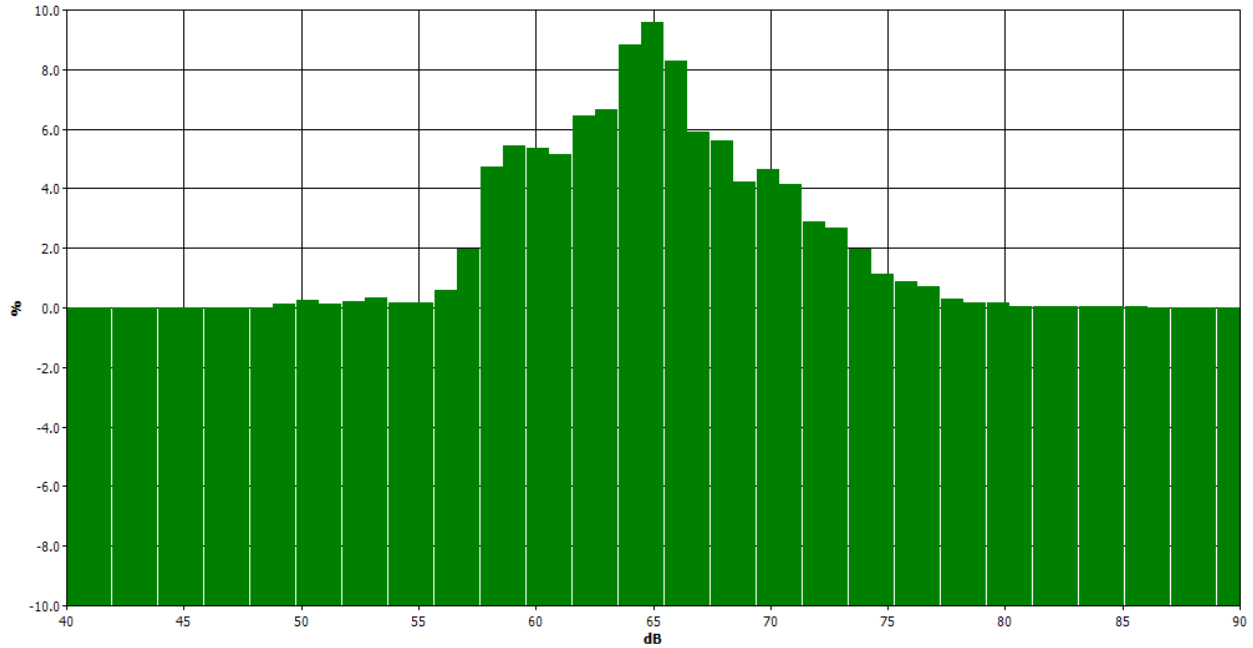
Information Panel

Name S304_BIJ050019_19092016_193729
 Start Time Thursday, July 7, 2016, 4:00pm
 Stop Time Thursday, July 7, 2016, 4:15pm
 Device Model Type SoundPro DL

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	68.7dB	Exchange Rate	1	3dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3dB
Weighting	2	C	Response	2	SLOW

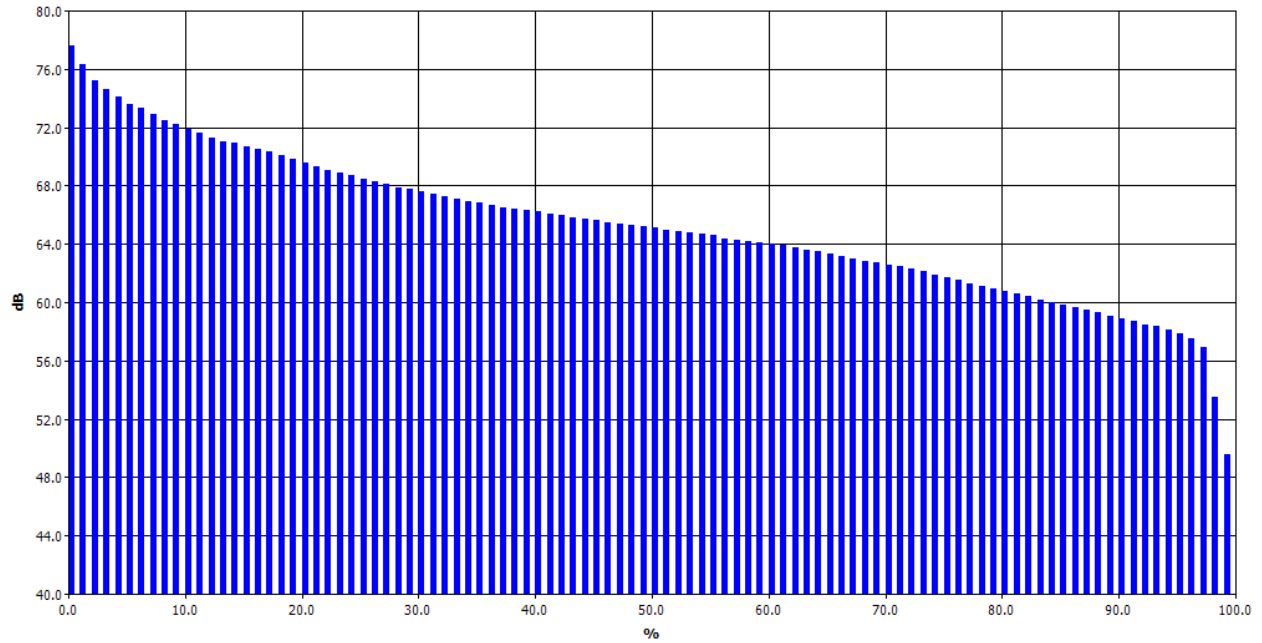
Statistics Chart



Statistics Table

dB	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.05	0.14
50	0.06	0.04	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.27
51	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.13
52	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.08	0.21
53	0.09	0.03	0.02	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.33
54	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.18
55	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.17
56	0.05	0.05	0.03	0.06	0.07	0.05	0.06	0.06	0.06	0.09	0.57
57	0.07	0.08	0.11	0.19	0.15	0.24	0.23	0.24	0.34	0.32	1.97
58	0.37	0.36	0.45	0.34	0.50	0.49	0.59	0.58	0.54	0.49	4.72
59	0.44	0.47	0.52	0.61	0.63	0.53	0.58	0.53	0.44	0.67	5.43
60	0.49	0.42	0.45	0.57	0.57	0.69	0.55	0.53	0.51	0.55	5.34
61	0.66	0.50	0.57	0.54	0.58	0.44	0.42	0.40	0.52	0.50	5.14
62	0.59	0.56	0.50	0.38	0.65	0.71	0.91	0.74	0.74	0.65	6.44
63	0.59	0.63	0.73	0.74	0.73	0.55	0.54	0.72	0.76	0.68	6.66
64	0.79	0.95	0.90	0.88	1.00	0.83	0.72	0.74	0.86	1.14	8.81
65	1.06	1.03	1.18	0.71	1.25	1.02	0.77	0.88	0.82	0.88	9.60
66	0.89	0.84	0.84	0.81	0.87	0.97	0.84	0.86	0.70	0.69	8.30
67	0.64	0.63	0.56	0.62	0.63	0.55	0.50	0.59	0.60	0.57	5.89
68	0.73	0.72	0.80	0.42	0.48	0.44	0.48	0.42	0.52	0.59	5.60
69	0.45	0.45	0.49	0.44	0.39	0.52	0.36	0.39	0.36	0.38	4.23
70	0.40	0.36	0.37	0.38	0.48	0.51	0.57	0.60	0.51	0.48	4.64
71	0.57	0.70	0.47	0.28	0.45	0.39	0.34	0.31	0.34	0.32	4.15
72	0.35	0.33	0.36	0.39	0.26	0.26	0.24	0.22	0.20	0.28	2.89
73	0.24	0.23	0.31	0.31	0.32	0.31	0.32	0.22	0.18	0.23	2.69
74	0.17	0.18	0.26	0.18	0.17	0.28	0.28	0.23	0.14	0.09	1.99
75	0.11	0.18	0.13	0.18	0.10	0.09	0.08	0.07	0.07	0.11	1.13
76	0.11	0.09	0.08	0.09	0.09	0.07	0.09	0.06	0.10	0.08	0.87
77	0.06	0.15	0.11	0.09	0.04	0.03	0.03	0.04	0.07	0.09	0.72
78	0.06	0.10	0.03	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.31
79	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.16
80	0.02	0.02	0.02	0.02	0.04	0.03	0.00	0.00	0.00	0.00	0.15
81	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03
82	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03
83	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
85	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03
86	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03
87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

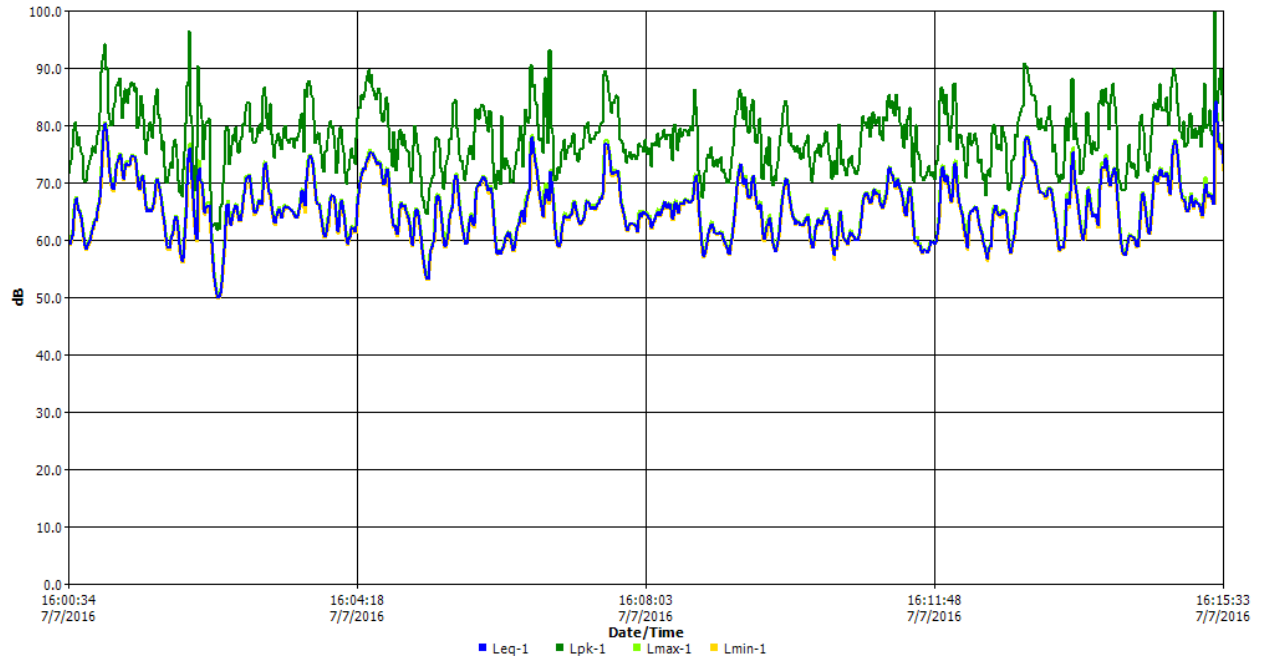
Exceedance Chart



Exceedance Table

	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		77.6	76.3	75.2	74.6	74.1	73.6	73.3	72.9	72.5
10%	72.2	71.9	71.6	71.3	71	70.9	70.7	70.5	70.3	70.1
20%	69.8	69.6	69.3	69.1	68.9	68.7	68.5	68.3	68.1	67.9
30%	67.8	67.6	67.4	67.3	67.1	66.9	66.8	66.7	66.5	66.4
40%	66.3	66.2	66.1	66	65.8	65.7	65.6	65.5	65.4	65.3
50%	65.2	65.1	65	64.9	64.8	64.7	64.6	64.4	64.3	64.2
60%	64.1	64	63.9	63.8	63.6	63.5	63.3	63.2	63	62.8
70%	62.7	62.6	62.5	62.3	62.1	61.9	61.7	61.5	61.3	61.1
80%	60.9	60.8	60.6	60.4	60.2	60	59.8	59.7	59.5	59.3
90%	59.1	58.9	58.7	58.5	58.4	58.1	57.9	57.5	56.9	53.5
100%	49.6									

Logged Data Chart



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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	0	
G	0	
D	100	*Distance from source to receptor
Unmitigated Construction Noise	73.1	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	73.1	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	73.1	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	27.9	

Construction Noise - Mitigated

Construction Equipment Mitigation

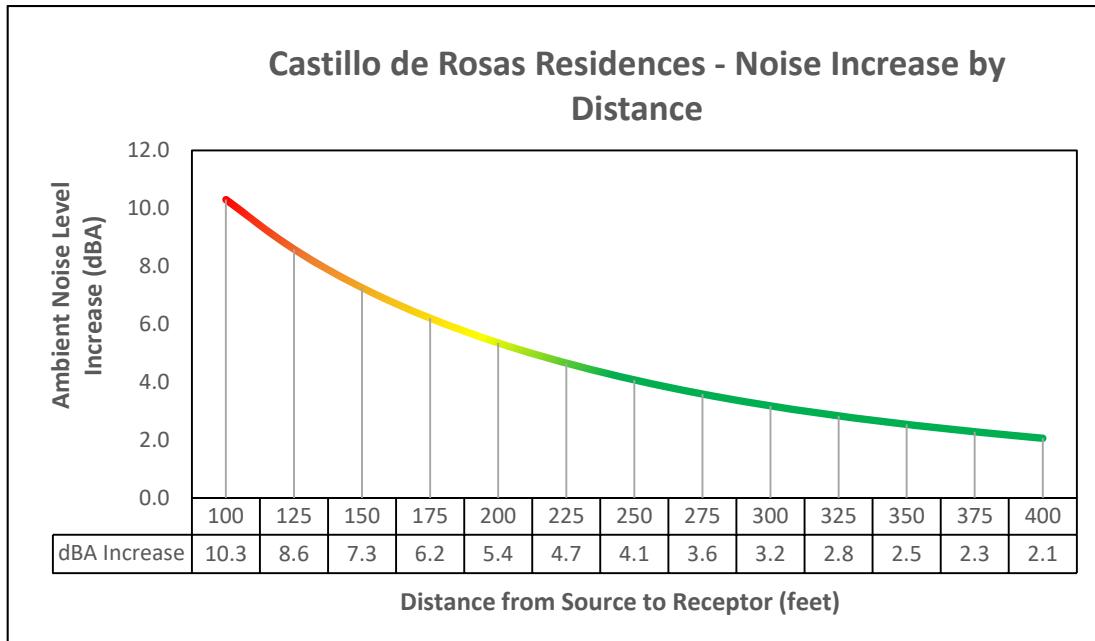
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1	
Cumulative Shielding	0	
Sound Barrier Shielding	15	
G	0	
D	100	*Distance from source to receptor
Mitigated Construction Noise	55.1	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	55.1	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	55.5	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	10.3	



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 - 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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Terrain	5
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	5

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	5	
G	0.23	
D	200	*Distance from source to receptor
Unmitigated Construction Noise	60.7	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	60.7	
Existing Ambient Noise	49.9	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	61.1	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	11.2	

Construction Noise Impact Analysis

Construction Noise - Mitigated

Construction Equipment Mitigation

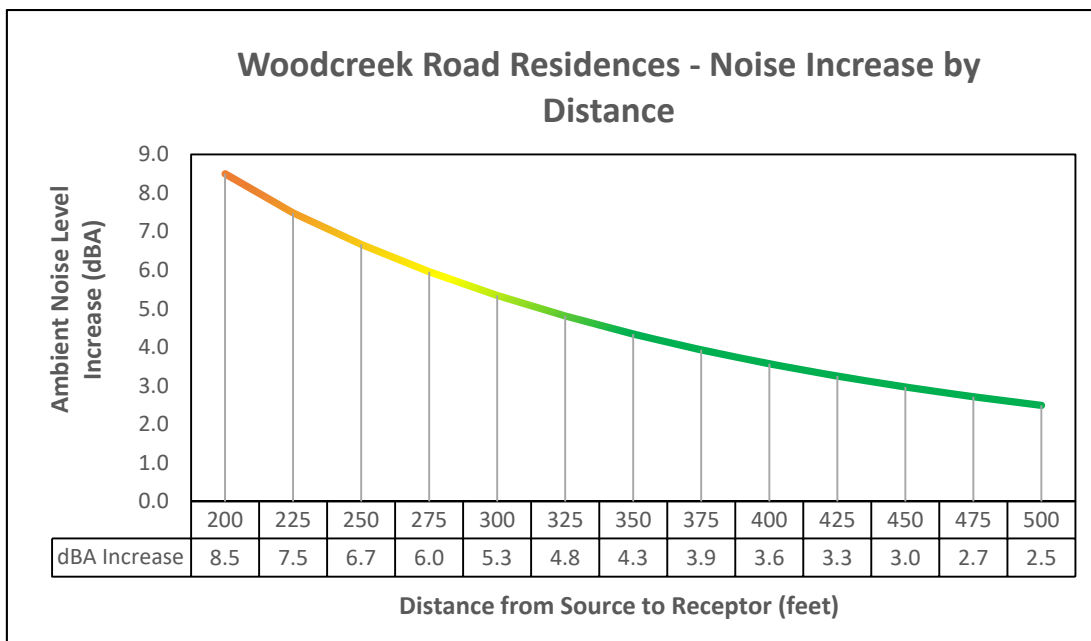
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1	
Cumulative Shielding	5	
Sound Barrier Shielding	0	
G	0.23	
D	200	*Distance from source to receptor
Mitigated Construction Noise	57.7	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	57.7	
Existing Ambient Noise	49.9	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	58.4	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	8.5	



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 - 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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	0	
G	0	
D	100	*Distance from source to receptor
Unmitigated Construction Noise	73.1	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	73.1	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	73.1	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	27.9	

Construction Noise - Mitigated

Construction Equipment Mitigation

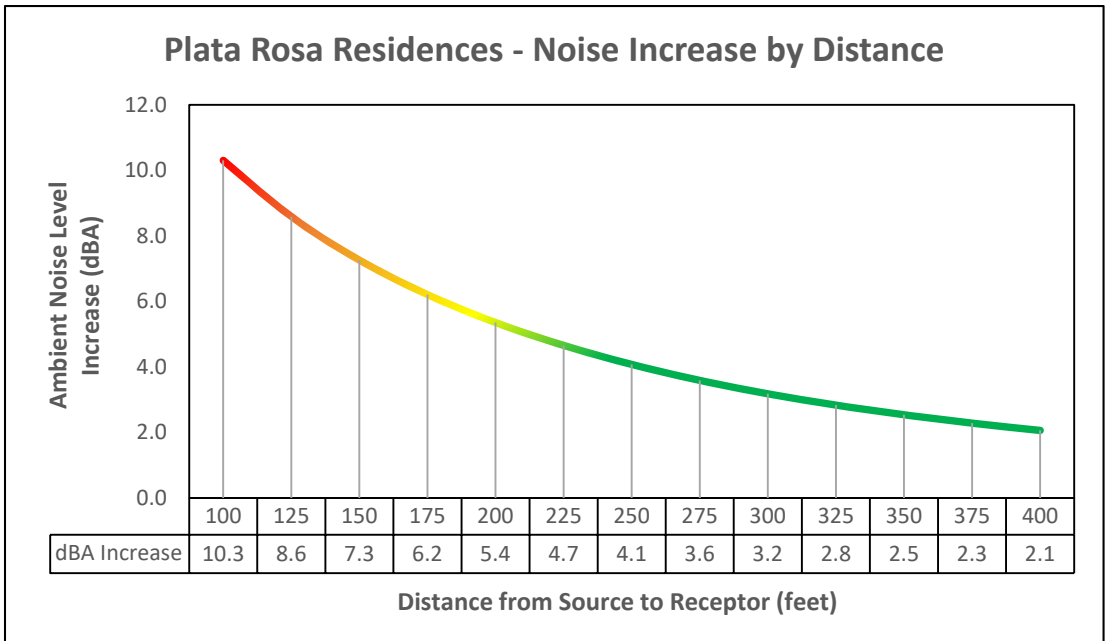
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1	
Cumulative Shielding	0	
Sound Barrier Shielding	15	
G	0	
D	100	*Distance from source to receptor
Mitigated Construction Noise	55.1	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	55.1	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	55.5	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	10.3	



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 - 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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	0	
G	0	
D	150	*Distance from source to receptor
Unmitigated Construction Noise	69.6	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	69.6	
Existing Ambient Noise	52.8	*Represents estimated ambient noise conditions.
Unmitigated Ambient Noise	69.7	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	16.9	

Estimated Ambient Noise Level at Receptor

Monitored Noise Level	68.7	
Reference Distance	45	*from monitoring location to centerline of Upland Road.
G	0	
D	280	*Distance from noise source to receptor
Estimated Noise Level	52.8	

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	0	
Sound Barrier Shielding	15	
G	0	
D	150	*Distance from source to receptor
Mitigated Construction Noise	51.6	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	51.6	
Existing Ambient Noise	52.8	*Represents estimated ambient noise conditions
Mitigated Ambient Noise	55.3	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	2.5	

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 - 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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	0	
G	0	
D	700	*Distance from source to receptor
Unmitigated Construction Noise	56.2	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	56.2	
Existing Ambient Noise	50.3	*Represents estimated ambient noise conditions.
Unmitigated Ambient Noise	57.2	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	6.9	

Estimated Ambient Noise Level at Receptor

Monitored Noise Level	68.7	
Reference Distance	45	*from monitoring location to centerline of Upland Road.
G	0	
D	375	*Distance from noise source to receptor
Estimated Noise Level	50.3	

Construction Noise Impact Analysis

Construction Noise - Mitigated

Construction Equipment Mitigation

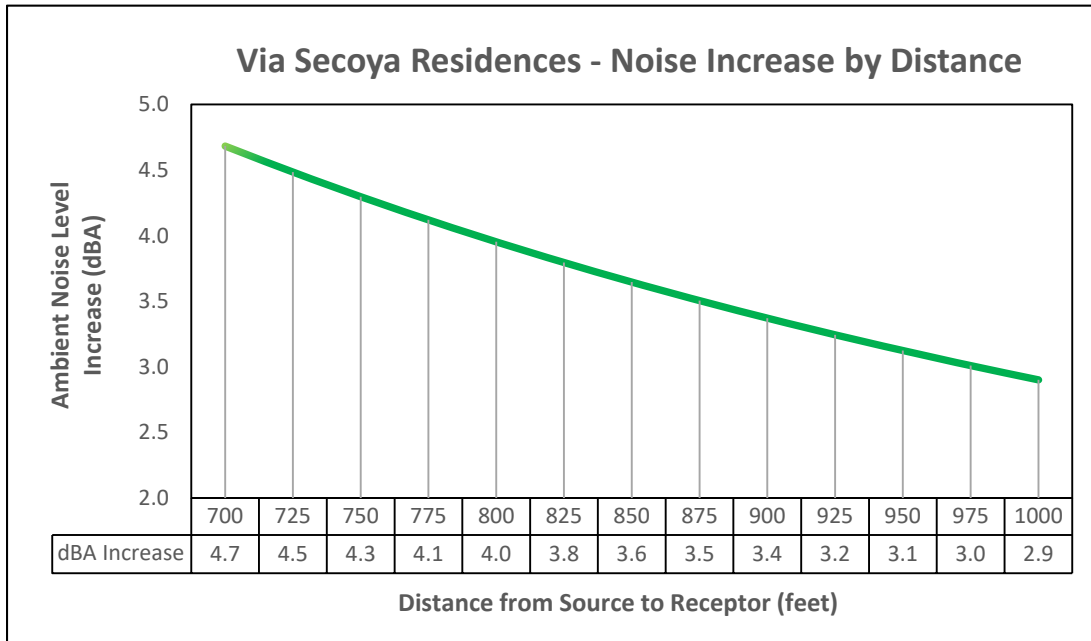
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Excavator	81	0.4	3	74.0
Loader	79	0.4	3	72.0
Combined dBA, Mitigated				76.1

Mitigated Construction Noise Level

Total Equipment Noise Level	76.1	
Cumulative Shielding	0	
Sound Barrier Shielding	0	
G	0	
D	700	*Distance from source to receptor
Mitigated Construction Noise	53.2	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	53.2	
Existing Ambient Noise	50.3	*Represents estimated ambient noise conditions.
Mitigated Ambient Noise	55.0	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	4.7	



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 - 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

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	79.1	
Cumulative Shielding	0	
G	0	
D	650	*Distance from source to receptor
Unmitigated Construction Noise	56.9	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	56.9	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	69.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	0.3	

Construction Noise Impact Analysis

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	0	
Sound Barrier Shielding	0	
G	0	
D	650	*Distance from source to receptor
Mitigated Construction Noise	53.9	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	53.9	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	68.8	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	0.1	

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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	0	
G	0	
D	100	*Distance from source to receptor
Unmitigated Construction Noise	74.0	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	74.0	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	74.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	28.8	

Construction Noise - Mitigated

Construction Equipment Mitigation

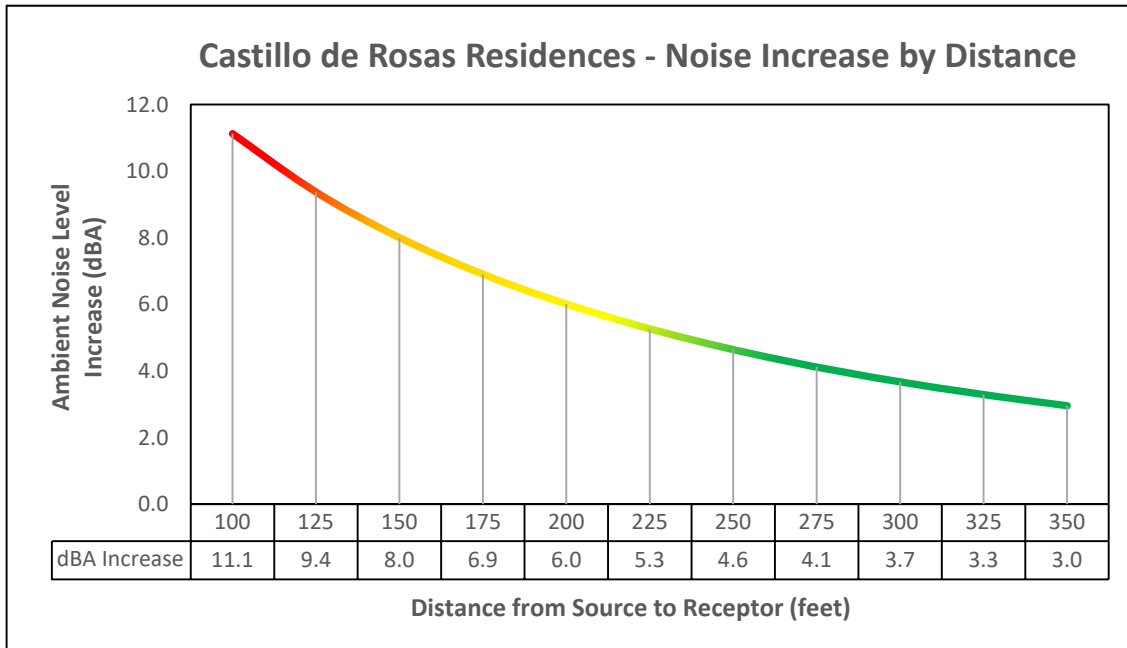
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	0	
Sound Barrier Shielding	15	
G	0	
D	100	*Distance from source to receptor
Mitigated Construction Noise	56.0	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	56.0	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	56.3	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	11.1	



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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

Terrain	5
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	5

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	5	
G	0.23	
D	200	*Distance from source to receptor
Unmitigated Construction Noise	61.6	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	61.6	
Existing Ambient Noise	49.9	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	61.9	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	12.0	

Construction Noise - Mitigated

Construction Equipment Mitigation

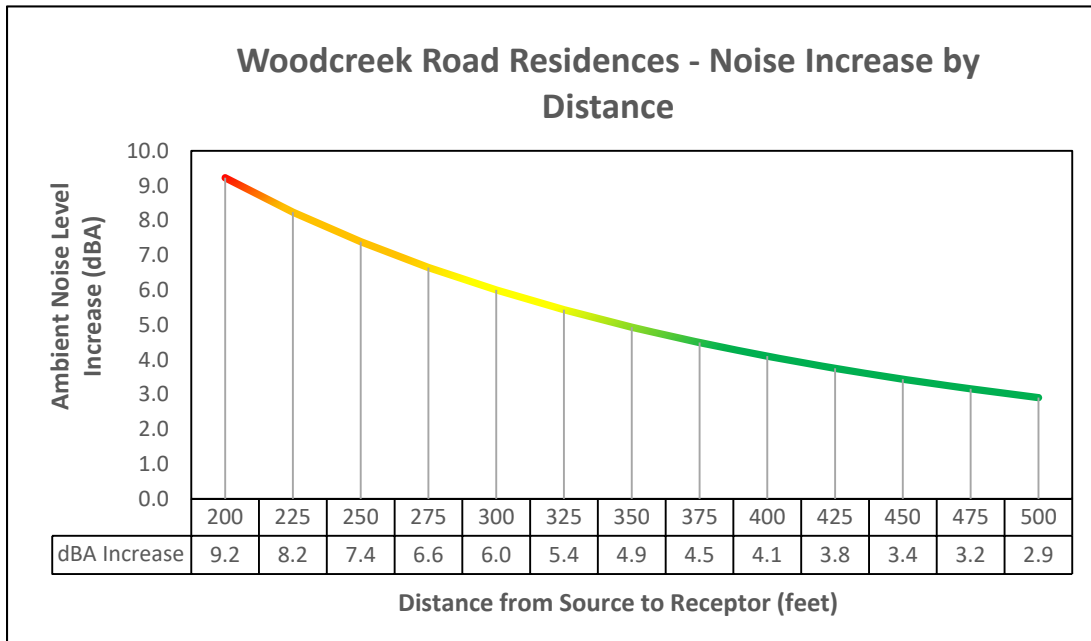
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	5	
Sound Barrier Shielding	0	
G	0.23	
D	200	*Distance from source to receptor
Mitigated Construction Noise	58.6	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	58.6	
Existing Ambient Noise	49.9	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	59.1	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	9.2	



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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	0	
G	0	
D	100	*Distance from source to receptor
Unmitigated Construction Noise	74.0	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	74.0	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	74.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	28.8	

Construction Noise - Mitigated

Construction Equipment Mitigation

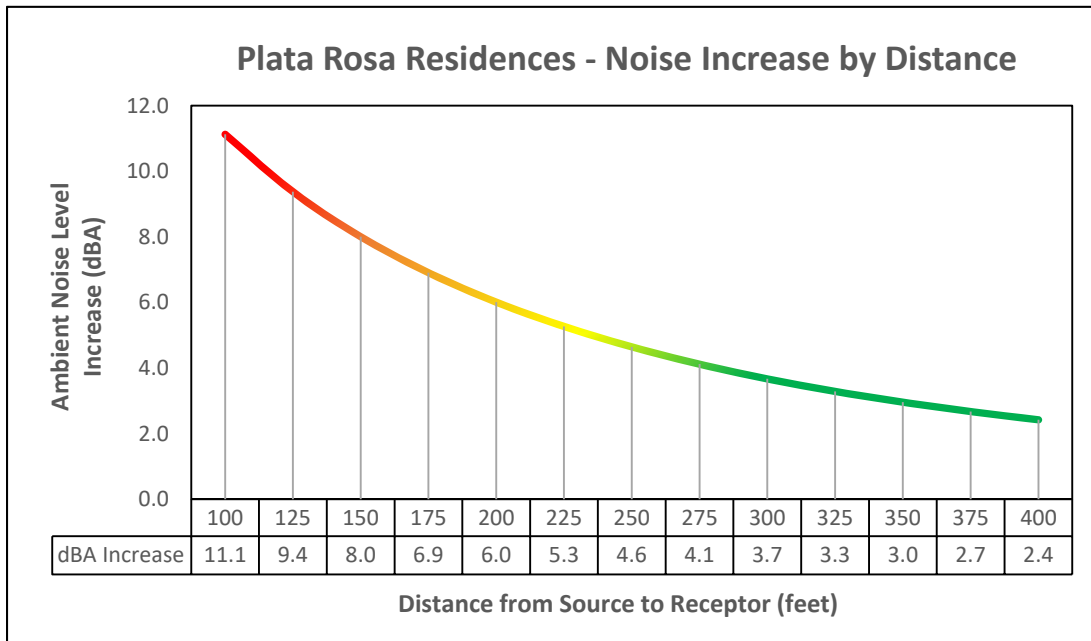
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	0	
Sound Barrier Shielding	15	
G	0	
D	100	*Distance from source to receptor
Mitigated Construction Noise	56.0	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	56.0	
Existing Ambient Noise	45.2	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	56.3	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	11.1	



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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	0	
G	0	
D	150	*Distance from source to receptor
Unmitigated Construction Noise	70.5	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	70.5	
Existing Ambient Noise	52.8	*Represents estimated ambient noise conditions.
Unmitigated Ambient Noise	70.6	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	17.8	

Estimated Ambient Noise Level at Receptor

Monitored Noise Level	68.7	
Reference Distance	45	*from monitoring location to centerline of Upland Road.
G	0	
D	280	*Distance from noise source to receptor
Estimated Noise Level	52.8	

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	0	
Sound Barrier Shielding	15	
G	0	
D	150	*Distance from source to receptor
Mitigated Construction Noise	52.5	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	52.5	
Existing Ambient Noise	52.8	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	55.7	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	2.9	

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 Noise - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	0	
G	0	
D	700	*Distance from source to receptor
Unmitigated Construction Noise	57.1	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	57.1	
Existing Ambient Noise	50.3	*Represents estimated ambient noise conditions.
Unmitigated Ambient Noise	57.9	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	7.6	

Estimated Ambient Noise Level at Receptor

Monitored Noise Level	68.7	
Reference Distance	45	*from monitoring location to centerline of Upland Road.
G	0	
D	375	*Distance from noise source to receptor
Estimated Noise Level	50.3	

Construction Noise - Mitigated

Construction Equipment Mitigation

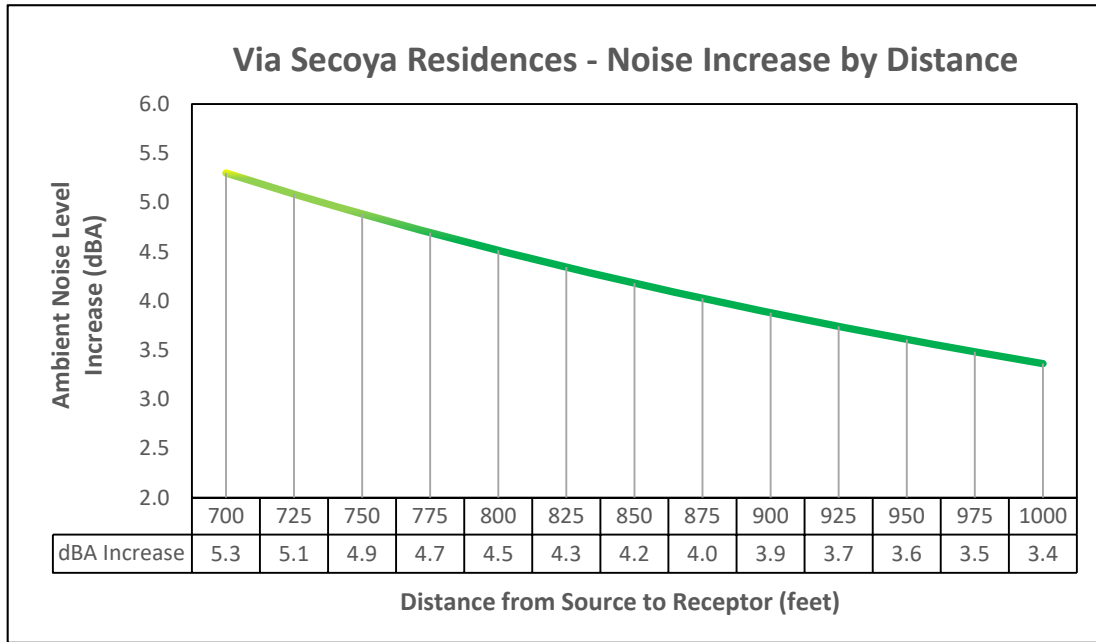
Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	0	
Sound Barrier Shielding	0	
G	0	
D	700	*Distance from source to receptor
Mitigated Construction Noise	54.1	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	54.1	
Existing Ambient Noise	50.3	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	55.6	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	5.3	



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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Scraper	84	0.4	80.0
Combined dBA			80.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	80.0	
Cumulative Shielding	0	
G	0	
D	650	*Distance from source to receptor
Unmitigated Construction Noise	57.7	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	57.7	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Unmitigated Ambient Noise	69.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	0.3	

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Scraper	84	0.4	3	77.0
Combined dBA, Mitigated				77.0

Mitigated Construction Noise Level

Total Equipment Noise Level	77.0	
Cumulative Shielding	0	
Sound Barrier Shielding	0	
G	0	
D	650	*Distance from source to receptor
Mitigated Construction Noise	54.7	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	54.7	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions, as recorded in monitoring studies.
Mitigated Ambient Noise	68.9	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	0.2	

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 - Unmitigated

Total Equipment Noise Levels

Source	Emission Level (dBA)	Usage Factor	Adjusted dBA
Dozer	82	0.4	78.0
Combined dBA			78.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	78.0	
Cumulative Shielding	0	
G	0	
D	30	*Distance from source to receptor
Unmitigated Construction Noise	78.0	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	78.0	
Existing Ambient Noise	72	*Represents existing ambient noise conditions
Unmitigated Ambient Noise	79.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	7.0	

Construction Noise Impact Analysis

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Dozer	82	0.4	3	75.0
Combined dBA, Mitigated				75.0

Mitigated Construction Noise Level

Total Equipment Noise Level	75.0	
Cumulative Shielding	0	
Sound Barrier Shielding	10	
G	0	
D	30	*Distance from source to receptor
Mitigated Construction Noise	65.0	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	65.0	
Existing Ambient Noise	72	*Represents existing ambient noise conditions
Mitigated Ambient Noise	72.8	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	0.8	

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
Dozer	82	0.4	78.0
Combined dBA			78.0

Housing Row Shielding

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

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

<i>If gaps in the row of buildings constitute more than 65% of the length of the row:</i>		
A(buildings)	0	

Tree Zone Shielding

<i>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:</i>		
W	0	*width of the tree zone along the line of sight between source and receiver, in feet.
A(trees)	0	

Cumulative Shielding

X	0
X	0
X	0
Buildings(1)	0
Buildings(2)	0
Tree Zone	0
Cumulative	0

Construction Noise Impact Analysis

Unmitigated Construction Noise Level

Total Equipment Noise Level	78.0	
Cumulative Shielding	0	
G	0	
D	175	*Distance from source to receptor
Unmitigated Construction Noise	67.1	*Represents level of unmitigated construction noise at receptor location

Unmitigated Receptor Noise Level

Unmitigated Construction Noise	67.1	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions
Unmitigated Ambient Noise	71.0	*Represents projected ambient noise conditions with the addition of unmitigated construction noise.
Unmitigated Increase	2.3	

Construction Noise Impact Analysis

Construction Noise - Mitigated

Construction Equipment Mitigation

Source	Emission Level (dBA)	Usage Factor	Mitigative Attenuation	Adjusted dBA
Dozer	82	0.4	3	75.0
Combined dBA, Mitigated				75.0

Mitigated Construction Noise Level

Total Equipment Noise Level	75.0	
Cumulative Shielding	0	
Sound Barrier Shielding	0	
G	0	
D	175	*Distance from source to receptor
Mitigated Construction Noise	64.1	*Represents level of mitigated construction noise at receptor location.

Mitigated Receptor Noise Level

Mitigated Construction Noise	64.1	
Existing Ambient Noise	68.7	*Represents existing ambient noise conditions
Mitigated Ambient Noise	70.0	*Represents projected ambient noise conditions with the addition of mitigated construction noise.
Mitigated Increase	1.3	

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

Receptor: Castillo de Rosas Residences
 Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	100
Unmitigated Vibration Level (in/sec)	0.022

Receptor: Woodcreek Road Residences
 Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	200
Unmitigated Vibration Level (in/sec)	0.011

Receptor: Plata Rosa Court Residences
 Equipment: Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	100
Unmitigated Vibration Level (in/sec)	0.022

Receptor: Padre Serra Parish
 Equipment: Caisson Drilling, Large Bulldozer

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	150
Unmitigated Vibration Level (in/sec)	0.015

Receptor: Somis Road Residences
 Equipment: Small Bulldozer

Source PPV (in/sec)	0.003
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	30
Unmitigated Vibration Level (in/sec)	0.003

Receptor: Del Rayo Court Residences
 Equipment: Small Bulldozer

Source PPV (in/sec)	0.003
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	175
Unmitigated Vibration Level (in/sec)	0.000

Construction Vibration - VdB

Receptor: Castillo de Rosas Residences
 Equipment: Large Bulldozer

Source VdB	87
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	100
Unmitigated Vibration Level (VdB)	68.9

Receptor: Woodcreek Road Residences
 Equipment: Large Bulldozer

Source VdB	87
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	200
Unmitigated Vibration Level (VdB)	59.9

Receptor: Plata Rosa Court Residences
 Equipment: Large Bulldozer

Source VdB	87
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	100
Unmitigated Vibration Level (VdB)	68.9

Receptor: Padre Serra Parish
 Equipment: Large Bulldozer

Source VdB	87
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	150
Unmitigated Vibration Level (VdB)	63.7

Construction Vibration Impact Analysis

Receptor: Somis Road Residences
Equipment: Small Bulldozer

Source VdB	58
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	30
Unmitigated Vibration Level (VdB)	55.6

Receptor: Del Rayo Court Residences
Equipment: Small Bulldozer

Source VdB	58
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	175
Unmitigated Vibration Level (VdB)	32.6

Sources

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

California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016											
Noah Tanski		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X1: AM Existing + Project											
BARRIER DESIGN:		INPUT HEIGHTS											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction			Calculated minus Goal
										Calculated	Goal	Calculated	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
EB Las Posas to Lewis	1	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0	
WB Las Posas from Lewis	2	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		2	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning										23 September 2016			
Noah Tanski										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X1: AM Existing											
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier				
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
								Sub'l Inc			Calculated	Goal	Calculated minus Goal
				dB	dB	dB	dB	dB		dB	dB	dB	dB
EB Las Posas to Lewis		1	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0
WB Las Posas from Lewis		2	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction									
				Min	Avg	Max							
				dB	dB	dB							
All Selected			2	0.0	0.0	0.0							
All Impacted			2	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X1: AM Future + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
EB Las Posas to Lewis	1	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
WB Las Posas from Lewis	2	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													
Noah Tanski													

23 September 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	St. John's Seminary												
RUN:	X1: AM Future												
BARRIER DESIGN:	INPUT HEIGHTS												
ATMOSPHERICS:	68 deg F, 50% RH												

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	With Barrier				
								Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB

EB Las Posas to Lewis	1	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
WB Las Posas from Lewis	2	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	2	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X1: PM Existing + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
EB Las Posas to Lewis	1	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
WB Las Posas from Lewis	2	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X1: PM Future + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
EB Las Posas to Lewis	1	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
WB Las Posas from Lewis	2	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													23 September 2016	
Noah Tanski													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			St. John's Seminary											
RUN:			X1: PM Future											
BARRIER DESIGN:			INPUT HEIGHTS											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.														
ATMOSPHERICS:			68 deg F, 50% RH											
Receiver														
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier				
									Calculated LAeq1h	Noise Reduction		Goal	Calculated minus Goal	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
EB Las Posas to Lewis		1	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0	
WB Las Posas from Lewis		2	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			2	0.0	0.0	0.0								
All Impacted			2	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X2: AM Existing + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Flynn from Avenida	1	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
SB Flynn to Avenida	2	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													23 September 2016	
Noah Tanski													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			St. John's Seminary											
RUN:			X2: AM Existing											
BARRIER DESIGN:			INPUT HEIGHTS											
													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:			68 deg F, 50% RH											
Receiver														
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier					
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
								Sub'l Inc			Calculated	Goal	Calculated minus Goal	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
NB Flynn from Avenida		1	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0	
SB Flynn to Avenida		2	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			2	0.0	0.0	0.0								
All Impacted			2	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X2: AM Future + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Flynn from Avenida	1	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
SB Flynn to Avenida	2	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning										23 September 2016			
Noah Tanski										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X2: AM Future											
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier					
						Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
							Sub'l Inc			Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
NB Flynn from Avenida	1	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0	
SB Flynn to Avenida	2	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		2	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X2: PM Existing + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier				
						Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Flynn from Avenida	1	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
SB Flynn to Avenida	2	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning										23 September 2016			
Noah Tanski										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X2: PM Existing											
BARRIER DESIGN:		INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier				
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
								Sub'l Inc			Calculated	Goal	Calculated minus Goal
				dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Flynn from Avenida		1	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
SB Flynn to Avenida		2	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction									
				Min	Avg	Max							
				dB	dB	dB							
All Selected			2	0.0	0.0	0.0							
All Impacted			1	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016											
Noah Tanski		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X2: PM Future + Project											
BARRIER DESIGN:		INPUT HEIGHTS					Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.						
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated Goal			Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
NB Flynn from Avenida	1	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0	
SB Flynn to Avenida	2	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		2	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													23 September 2016	
Noah Tanski													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			St. John's Seminary											
RUN:			X2: PM Future											
BARRIER DESIGN:			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:			68 deg F, 50% RH											
Receiver														
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier					
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
								Sub'l Inc			Calculated	Goal	Calculated minus Goal	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
NB Flynn from Avenida		1	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0	
SB Flynn to Avenida		2	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			2	0.0	0.0	0.0								
All Impacted			2	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X3: AM Existing + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
										Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Santa Rosa from Adolfo	1	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
SB Santa Rosa to Adolfo	2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016											
Noah Tanski		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X3: AM Existing											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction			Calculated minus Goal
										Calculated	Goal	Calculated	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
NB Santa Rosa from Adolfo	1	1	0.0	71.2	66	71.2	10	Snd Lvl	71.2	0.0	8	-8.0	
SB Santa Rosa to Adolfo	2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		2	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X3: AM Future + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Santa Rosa from Adolfo	1	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
SB Santa Rosa to Adolfo	2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													23 September 2016	
Noah Tanski													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			St. John's Seminary											
RUN:			X3: AM Future											
BARRIER DESIGN:			INPUT HEIGHTS											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.														
ATMOSPHERICS:			68 deg F, 50% RH											
Receiver														
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier					
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
								Sub'l Inc			Calculated	Goal	Calculated minus Goal	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
NB Santa Rosa from Adolfo		1	1	0.0	71.2	66	71.2	10	Snd Lvl	71.2	0.0	8	-8.0	
SB Santa Rosa to Adolfo		2	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			2	0.0	0.0	0.0								
All Impacted			2	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning													23 September 2016	
Noah Tanski													TNM 2.5	
													Calculated with TNM 2.5	
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:			St. John's Seminary											
RUN:			X3: PM Existing + Project											
BARRIER DESIGN:			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:			68 deg F, 50% RH											
Receiver														
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier					
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
								Sub'l Inc			Calculated	Goal	Calculated minus Goal	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
NB Santa Rosa from Adolfo		1	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0	
SB Santa Rosa to Adolfo		2	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			2	0.0	0.0	0.0								
All Impacted			2	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X3: PM Existing										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Santa Rosa from Adolfo	1	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0
SB Santa Rosa to Adolfo	2	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning		23 September 2016										
Noah Tanski		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		St. John's Seminary										
RUN:		X3: PM Future + Project										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier			
									Calculated LAeq1h	Noise Reduction		Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Santa Rosa from Adolfo	1	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0
SB Santa Rosa to Adolfo	2	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

St. John's Seminary

DKA Planning										23 September 2016			
Noah Tanski										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		St. John's Seminary											
RUN:		X3: PM Future											
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier				
							Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
								Sub'l Inc			Calculated	Goal	Calculated minus Goal
				dB	dB	dB	dB	dB		dB	dB	dB	dB
NB Santa Rosa from Adolfo		1	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0
SB Santa Rosa to Adolfo		2	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction									
				Min	Avg	Max							
				dB	dB	dB							
All Selected			2	0.0	0.0	0.0							
All Impacted			2	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							