

Appendix F

Noise

Noise Measurement 1

Freq Weight : A
 Time Weight : SLOW
 Level Range : 40-100
 Max dB : 91.7 - 2020/01/23 17:14:45
 Level Range : 40-100
 SEL : 104.2
 Leq : 74.7

No. s	Date Time	(dB)				
1	2020/01/23 17:01:37	75.8	75.5	76.1	76.0	74.1
6	2020/01/23 17:01:52	74.6	74.8	73.0	72.6	74.6
11	2020/01/23 17:02:07	75.5	75.0	75.4	73.4	72.8
16	2020/01/23 17:02:22	76.2	77.6	76.0	72.9	75.0
21	2020/01/23 17:02:37	72.2	72.5	74.3	74.5	73.6
26	2020/01/23 17:02:52	71.5	72.0	76.1	75.9	76.5
31	2020/01/23 17:03:07	74.8	73.8	72.9	73.8	71.8
36	2020/01/23 17:03:22	75.9	72.2	72.5	73.1	73.9
41	2020/01/23 17:03:37	73.5	73.1	74.1	78.9	75.1
46	2020/01/23 17:03:52	74.0	73.9	72.5	73.3	75.2
51	2020/01/23 17:04:07	72.9	73.5	77.9	77.7	77.8
56	2020/01/23 17:04:22	76.4	77.3	73.4	72.8	80.7
61	2020/01/23 17:04:37	77.0	79.6	78.3	74.8	74.8
66	2020/01/23 17:04:52	73.4	76.7	78.1	78.7	78.4
71	2020/01/23 17:05:07	74.8	74.8	72.8	74.2	81.3
76	2020/01/23 17:05:22	76.1	75.0	75.5	77.6	75.3
81	2020/01/23 17:05:37	80.3	75.2	75.1	74.5	71.6
86	2020/01/23 17:05:52	76.3	71.2	72.3	72.3	71.7
91	2020/01/23 17:06:07	71.6	74.9	72.7	73.5	74.4
96	2020/01/23 17:06:22	82.3	78.0	77.5	75.3	74.8
101	2020/01/23 17:06:37	77.0	76.4	77.6	76.7	81.2
106	2020/01/23 17:06:52	75.2	77.4	78.1	76.8	76.2
111	2020/01/23 17:07:07	75.1	73.8	76.5	75.9	73.9
116	2020/01/23 17:07:22	73.8	72.4	74.7	70.7	71.1
121	2020/01/23 17:07:37	70.7	74.5	76.5	73.6	73.8
126	2020/01/23 17:07:52	72.8	71.4	72.3	71.1	71.4
131	2020/01/23 17:08:07	75.8	72.0	73.4	73.4	76.4
136	2020/01/23 17:08:22	74.1	73.2	74.9	74.2	77.2
141	2020/01/23 17:08:37	74.9	75.9	73.6	73.6	76.4
146	2020/01/23 17:08:52	72.3	72.0	78.5	77.7	73.2
151	2020/01/23 17:09:07	77.5	74.8	73.9	76.6	77.3
156	2020/01/23 17:09:22	77.3	75.7	76.1	71.5	74.3
161	2020/01/23 17:09:37	74.2	71.0	74.6	73.0	74.2
166	2020/01/23 17:09:52	73.7	75.6	75.2	74.4	79.9
171	2020/01/23 17:10:07	73.6	70.5	69.7	70.0	74.7
176	2020/01/23 17:10:22	74.0	74.5	72.8	72.1	71.9
181	2020/01/23 17:10:37	72.7	73.2	76.4	76.5	77.3
186	2020/01/23 17:10:52	74.1	76.9	73.2	74.6	75.3
191	2020/01/23 17:11:07	74.6	72.4	70.6	70.1	70.2
196	2020/01/23 17:11:22	70.4	70.1	71.3	73.7	78.0
201	2020/01/23 17:11:37	78.1	77.7	76.9	77.6	73.9
206	2020/01/23 17:11:52	73.1	72.6	76.4	82.3	75.4
211	2020/01/23 17:12:07	73.3	71.4	71.6	73.1	71.0
216	2020/01/23 17:12:22	72.9	72.0	72.1	73.3	73.0
221	2020/01/23 17:12:37	71.0	71.0	73.1	75.1	74.3
226	2020/01/23 17:12:52	75.1	73.7	74.6	73.0	71.8
231	2020/01/23 17:13:07	71.8	72.4	72.0	72.1	73.9
236	2020/01/23 17:13:22	72.6	76.4	72.2	71.5	74.5
241	2020/01/23 17:13:37	74.6	77.7	75.8	75.5	72.9
246	2020/01/23 17:13:52	72.7	74.9	79.4	73.1	72.4
251	2020/01/23 17:14:07	76.1	78.3	76.1	83.4	75.8
256	2020/01/23 17:14:22	75.3	73.1	73.0	72.6	75.1
261	2020/01/23 17:14:37	72.2	76.2	91.6	81.0	73.4
266	2020/01/23 17:14:52	72.7	73.7	72.8	70.6	70.6
271	2020/01/23 17:15:07	73.2	72.4	74.3	81.4	76.3
276	2020/01/23 17:15:22	76.3	73.2	74.3	73.6	72.6
281	2020/01/23 17:15:37	72.8	72.1	75.1	75.2	71.4
286	2020/01/23 17:15:52	71.9	72.1	74.6	73.2	75.8
291	2020/01/23 17:16:07	78.5	72.6	71.3	74.2	73.6
296	2020/01/23 17:16:22	76.0	75.2	72.1	71.3	72.2

Noise Measurement 2

Freq Weight : A
 Time Weight : SLOW
 Level Range : 40-100
 Max dB : 61.9 - 2020/01/23 17:51:33
 Level Range : 40-100
 SEL : 86.3
 Leq : 56.8

No. s	Date Time	(dB)				
1	2020/01/23 17:38:44	58.9	57.5	56.7	57.2	57.3
6	2020/01/23 17:38:59	57.3	56.4	56.1	56.0	55.9
11	2020/01/23 17:39:14	56.5	56.3	55.8	55.7	55.8
16	2020/01/23 17:39:29	55.6	56.1	56.2	59.0	57.8
21	2020/01/23 17:39:44	55.8	55.4	54.8	55.5	57.0
26	2020/01/23 17:39:59	55.2	55.0	55.0	55.6	54.8
31	2020/01/23 17:40:14	54.0	53.9	53.9	54.5	55.5
36	2020/01/23 17:40:29	55.0	54.8	54.7	54.3	54.8
41	2020/01/23 17:40:44	57.9	55.3	55.2	56.2	55.7
46	2020/01/23 17:40:59	54.8	54.6	54.9	55.5	55.7
51	2020/01/23 17:41:14	55.7	56.1	56.2	55.5	55.4
56	2020/01/23 17:41:29	55.5	55.3	55.2	54.6	55.0
61	2020/01/23 17:41:44	54.9	54.8	54.7	54.6	54.4
66	2020/01/23 17:41:59	54.4	54.5	54.5	54.3	54.4
71	2020/01/23 17:42:14	54.0	54.5	54.7	55.1	55.1
76	2020/01/23 17:42:29	54.8	54.7	55.1	55.2	55.5
81	2020/01/23 17:42:44	55.3	55.2	54.9	54.6	54.6
86	2020/01/23 17:42:59	54.3	54.4	54.6	54.6	54.1
91	2020/01/23 17:43:14	54.1	54.3	54.9	54.3	55.9
96	2020/01/23 17:43:29	54.1	54.0	54.5	54.8	54.8
101	2020/01/23 17:43:44	55.4	55.2	55.2	55.0	55.6
106	2020/01/23 17:43:59	56.0	55.8	55.4	55.4	56.1
111	2020/01/23 17:44:14	55.3	54.6	54.7	54.8	54.8
116	2020/01/23 17:44:29	54.9	55.2	55.0	55.7	55.5
121	2020/01/23 17:44:44	55.7	55.8	55.9	55.9	57.2
126	2020/01/23 17:44:59	57.3	56.4	56.6	56.5	56.9
131	2020/01/23 17:45:14	56.7	56.5	56.8	56.9	57.6
136	2020/01/23 17:45:29	56.9	57.1	56.5	56.5	56.6
141	2020/01/23 17:45:44	57.0	56.8	55.9	56.0	56.0
146	2020/01/23 17:45:59	56.3	56.6	56.6	56.3	56.4
151	2020/01/23 17:46:14	56.3	56.4	56.4	56.5	56.3
156	2020/01/23 17:46:29	56.1	56.2	56.2	56.9	57.8
161	2020/01/23 17:46:44	57.5	56.7	56.4	56.1	56.6
166	2020/01/23 17:46:59	56.7	57.5	58.3	60.0	58.8
171	2020/01/23 17:47:14	57.1	56.5	56.6	57.0	56.3
176	2020/01/23 17:47:29	56.6	57.1	56.6	56.2	56.8
181	2020/01/23 17:47:44	56.8	57.9	56.4	56.7	56.2
186	2020/01/23 17:47:59	55.7	55.8	55.6	56.0	56.1
191	2020/01/23 17:48:14	56.1	56.3	56.9	57.4	57.0
196	2020/01/23 17:48:29	56.9	56.9	56.8	56.5	56.7
201	2020/01/23 17:48:44	56.9	56.8	56.6	56.8	56.5
206	2020/01/23 17:48:59	57.4	57.3	57.0	56.7	56.7
211	2020/01/23 17:49:14	56.7	56.9	56.8	56.5	56.7
216	2020/01/23 17:49:29	57.1	57.7	59.0	58.0	58.1
221	2020/01/23 17:49:44	57.9	58.1	58.8	58.9	58.3
226	2020/01/23 17:49:59	57.8	58.0	58.6	59.1	59.0
231	2020/01/23 17:50:14	58.7	58.4	58.9	58.7	59.4
236	2020/01/23 17:50:29	59.5	59.1	58.7	59.0	58.8
241	2020/01/23 17:50:44	58.8	58.6	58.6	59.3	58.7
246	2020/01/23 17:50:59	58.8	58.5	58.1	58.0	58.0
251	2020/01/23 17:51:14	58.6	59.0	59.6	60.8	60.0
256	2020/01/23 17:51:29	61.6	61.4	61.0	60.7	60.1
261	2020/01/23 17:51:44	59.4	58.7	58.3	58.2	58.1
266	2020/01/23 17:51:59	58.0	57.9	57.7	57.8	57.4
271	2020/01/23 17:52:14	56.6	56.7	56.9	57.8	57.8
276	2020/01/23 17:52:29	57.6	57.5	58.0	60.1	59.5
281	2020/01/23 17:52:44	57.9	57.4	58.0	58.1	57.2
286	2020/01/23 17:52:59	56.7	56.6	56.6	56.6	57.3
291	2020/01/23 17:53:14	57.1	56.9	56.9	57.0	57.3
296	2020/01/23 17:53:29	56.9	57.3	57.9	57.5	57.9

Ground born Noise and Vibration Modeling

Source: Caltrans Transportation and Construction Vibration Guidance Manual 2013
http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf

Propagation

V_{ref} 1E-06
 Crest Factor (PPV/RMS) 4
 Soil Type default Default, Hard, or competent (competent soils are sands, clays, silty clays, gravel, silts, or weathered rock)
 n value 1.1

Equipment	PPV _{ref}	L _{Vref}	RMS _{ref}	Ref Distance	Distance	PPV _x	L _{Vx}	RMS _x	Distance to		
	(in/sec)	(VdB)	(in/sec)	(feet)	(feet)	(in/sec)	(VdB)	(in/sec)	0.100 PPV	72.0 VdB	0.0040 RMS
Vibratory Roller	0.21	94	0.050	25	30	0.1718	92	0.041	49	250	249
Large bulldozer	0.089	87	0.022	25	30	0.0728	85	0.018	22	120	120
Loaded trucks	0.076	83	0.014	25	30	0.0622	81	0.012	19	79	79