

APPENDIX F

Noise Monitoring

Appendix A
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet



Project: Roseville Downtown SP
Date: November 9, 2007
Site: A

Hour	Leq	Lmax	L50	L90
0:00	58.9	75.1	57.0	55.2
1:00	65.8	82.4	57.9	51.7
2:00	66.2	89.0	58.4	50.6
3:00	65.2	86.7	56.5	51.9
4:00	67.9	85.2	60.8	54.3
5:00	62.0	78.7	57.4	53.7
6:00	61.4	76.8	57.9	55.3
7:00	62.4	87.3	56.9	54.8
8:00	58.8	75.7	55.7	52.4
9:00	61.8	87.5	53.8	49.8
10:00	58.3	78.2	52.0	47.3
11:00	61.2	78.5	55.8	48.2
12:00	60.7	76.9	54.5	47.1
13:00	62.1	80.8	56.1	51.2
14:00	64.0	88.5	59.1	53.9
15:00	63.6	83.0	58.1	55.1
16:00	60.7	75.0	58.7	55.2
17:00	63.6	82.5	61.0	56.3
18:00	74.1	106.1	63.0	57.4
19:00	61.5	78.7	57.0	55.2
20:00	61.1	78.3	56.5	54.7
21:00	62.1	74.6	58.5	55.2
22:00	62.8	84.1	57.0	52.6
23:00	69.1	87.9	56.3	51.8

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
65.0	82.1	57.1	52.9
65.4	82.9	57.7	53.0

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
74.1	106.1	63.0	57.4
69.1	89.0	60.8	55.3

Percentage of Energy	
Daytime	60%
Nighttime	40%

Calculated L_{dn}, dBA
71.8

Appendix A
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet



Project: Roseville Downtown SP
Date: November 9, 2007
Site: B

Hour	Leq	Lmax	L50	L90
0:00	60.9	78.3	54.1	49.8
1:00	60.3	79.3	54.3	50.3
2:00	58.5	77.0	53.6	50.1
3:00	58.7	76.4	54.2	50.5
4:00	61.5	78.5	56.6	52.5
5:00	65.1	78.7	59.7	53.1
6:00	69.1	81.7	66.6	59.6
7:00	70.4	85.7	68.9	61.8
8:00	70.1	82.0	68.7	61.8
9:00	69.6	85.4	67.7	60.6
10:00	69.1	79.4	67.6	58.9
11:00	69.0	81.4	67.6	58.4
12:00	69.6	83.3	68.1	60.9
13:00	69.1	82.8	67.6	59.7
14:00	69.7	84.6	68.5	61.8
15:00	70.0	86.4	69.0	62.0
16:00	70.5	79.7	69.5	62.5
17:00	70.2	87.0	69.3	62.4
18:00	69.2	79.8	68.1	60.0
19:00	67.7	77.9	65.7	58.9
20:00	66.5	77.3	63.8	57.4
21:00	66.4	78.2	63.2	57.3
22:00	65.5	76.4	61.8	55.9
23:00	64.0	76.2	58.9	53.5

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
69.3	82.1	67.5	60.3
64.0	78.0	57.8	52.8

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
70.5	87.0	69.5	62.5
69.1	81.7	66.6	59.6

Percentage of Energy	
Daytime	85%
Nighttime	15%

Calculated L_{dn}, dBA
71.7

Appendix B
Project-Generated Construction Source Noise Prediction Model
 Roseville Downtown Specific Plan



Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L _{eq} dBA)	Assumptions:	Reference Emission Noise Levels (L _{max}) at 50 feet ¹		Usage Factor ¹
	1000	62.1	Dozer	85		0.4
	50	88.1	Excavator	85		0.4
	100	82.1	Mounted Hoe Ram	90		0.2
	150	78.6	Concrete Saw	90		0.2
	200	76.1				
	250	74.2				
	300	72.6				
	350	71.2	Ground Type	Hard		
	400	70.1	Source Height	8		
	450	69.1	Receiver Height	5		
	500	68.1	Ground Factor	0.00		
	550	67.3				
				Predicted Noise		
				Level ²	L_{eq} dBA at 50 feet²	
				Dozer	81.0	
				Excavator	81.0	
				Mounted Hoe Ram	83.0	
				Concrete Saw	83.0	
				Combined Predicted Noise Level (L_{eq} dBA at 50 feet)		
				88.1		

Sources:

¹ Obtained from the FHWA Roadway Construction Noise Model, January 2006.

² Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$$L_{eq}(\text{equip}) = E.L. + 10 \cdot \log(\text{U.F.}) - 20 \cdot \log(D/50) - 10 \cdot G \cdot \log(D/50)$$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Existing
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Washington Boulevard	North of Junction	18,300	45	100	97	2	1	85		15	
2	Washington Boulevard	South of Junction	22,200	45	100	97	2	1	85		15	
3	Washington Boulevard	North of Main	23,100	45	100	97	2	1	85		15	
4	Washington Boulevard	South of Main	27,700	45	100	97	2	1	85		15	
5	Washington Boulevard	North of Oak	31,200	45	100	97	2	1	85		15	
6	Main Street	West of Washington	13,600	25	100	97	2	1	85		15	
7	Main Street	East of Washington	7,400	25	100	97	2	1	85		15	
8	Vernon Street	North of Douglas	12,800	35	100	97	2	1	85		15	
9	Vernon Street	West of Judah	13,000	35	100	97	2	1	85		15	
10	Vernon Street	East of Judah	13,200	35	100	97	2	1	85		15	
11	Vernon Street	West of Grant	12,500	35	100	97	2	1	85		15	
12	Vernon Street	East of Grant	10,500	35	100	97	2	1	85		15	
13	Vernon Street	West of Lincoln	10,300	35	100	97	2	1	85		15	
14	Vernon Street	East of Lincoln	15,400	35	100	97	2	1	85		15	
15	Oak Street	West of Washington	14,900	25	100	97	2	1	85		15	
16	Oak Street	East of Washington	18,700	25	100	97	2	1	85		15	
17	Lincoln Street	North of Vernon	1,200	25	100	97	2	1	85		15	
18	Lincoln Street	South of Vernon	7,300	25	100	97	2	1	85		15	
19	Judah Street	South of Vernon	2,100	25	100	97	2	1	85		15	
20	Grant Street	South of Vernon	5,700	25	100	97	2	1	85		15	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Existing
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment	Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
			Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Washington Boulevard	North of Junction	64	55.5	57.0	65.3	49	106	227	490	1055
2	Washington Boulevard	South of Junction	65	56.3	57.8	66.2	56	120	259	557	1200
3	Washington Boulevard	North of Main	65	56.5	58.0	66.4	57	123	265	572	1232
4	Washington Boulevard	South of Main	66	57.3	58.8	67.1	65	139	300	646	1391
5	Washington Boulevard	North of Oak	66	57.8	59.3	67.7	70	151	324	699	1506
6	Main Street	West of Washingtc	55	50.2	54.8	58.8	18	39	83	180	387
7	Main Street	East of Washingto	53	47.6	52.2	56.2	12	26	56	120	258
8	Vernon Street	North of Douglas	59	52.2	54.4	61.2	26	56	120	259	558
9	Vernon Street	West of Judah	59	52.3	54.5	61.3	26	56	121	262	564
10	Vernon Street	East of Judah	60	52.4	54.6	61.3	26	57	123	264	569
11	Vernon Street	West of Grant	59	52.1	54.3	61.1	25	55	118	255	549
12	Vernon Street	East of Grant	59	51.4	53.6	60.3	23	49	105	227	489
13	Vernon Street	West of Lincoln	58	51.3	53.5	60.3	22	48	104	224	483
14	Vernon Street	East of Lincoln	60	53.0	55.2	62.0	29	63	136	293	631
15	Oak Street	West of Washingtc	56	50.6	55.2	59.2	19	41	89	191	412
16	Oak Street	East of Washingto	57	51.6	56.2	60.2	22	48	103	222	479
17	Lincoln Street	North of Vernon	45	39.7	44.3	48.3	4	8	17	36	77
18	Lincoln Street	South of Vernon	53	47.5	52.1	56.1	12	26	55	119	256
19	Judah Street	South of Vernon	47	42.1	46.7	50.7	5	11	24	52	111
20	Grant Street	South of Vernon	52	46.4	51.1	55.0	10	22	47	101	217

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Existing Plus Project
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Washington Boulevard	North of Junction	20,400	45	100	97	2	1	85		15	
2	Washington Boulevard	South of Junction	27,600	45	100	97	2	1	85		15	
3	Washington Boulevard	North of Main	28,600	45	100	97	2	1	85		15	
4	Washington Boulevard	South of Main	34,600	45	100	97	2	1	85		15	
5	Washington Boulevard	North of Oak	39,500	45	100	97	2	1	85		15	
6	Main Street	West of Washington	16,200	25	100	97	2	1	85		15	
7	Main Street	East of Washington	11,900	25	100	97	2	1	85		15	
8	Vernon Street	North of Douglas	20,400	35	100	97	2	1	85		15	
9	Vernon Street	West of Judah	20,400	35	100	97	2	1	85		15	
10	Vernon Street	East of Judah	18,100	35	100	97	2	1	85		15	
11	Vernon Street	West of Grant	17,800	35	100	97	2	1	85		15	
12	Vernon Street	East of Grant	15,200	35	100	97	2	1	85		15	
13	Vernon Street	West of Lincoln	14,900	35	100	97	2	1	85		15	
14	Vernon Street	East of Lincoln	18,400	35	100	97	2	1	85		15	
15	Oak Street	West of Washington	21,500	25	100	97	2	1	85		15	
16	Oak Street	East of Washington	21,300	25	100	97	2	1	85		15	
17	Lincoln Street	North of Vernon	4,600	25	100	97	2	1	85		15	
18	Lincoln Street	South of Vernon	10,800	25	100	97	2	1	85		15	
19	Judah Street	South of Vernon	5,500	25	100	97	2	1	85		15	
20	Grant Street	South of Vernon	10,900	25	100	97	2	1	85		15	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Existing Plus Project
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment	Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
			Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Washington Boulevard	North of Junction	65	56.0	57.5	65.8	53	113	244	526	1134
2	Washington Boulevard	South of Junction	66	57.3	58.8	67.1	64	139	299	644	1387
3	Washington Boulevard	North of Main	66	57.4	58.9	67.3	66	142	306	659	1421
4	Washington Boulevard	South of Main	67	58.3	59.7	68.1	75	161	348	749	1613
5	Washington Boulevard	North of Oak	67	58.8	60.3	68.7	82	176	380	818	1762
6	Main Street	West of Washingtc	56	51.0	55.6	59.6	20	44	94	202	435
7	Main Street	East of Washingto	55	49.6	54.3	58.2	16	35	76	164	354
8	Vernon Street	North of Douglas	61	54.3	56.5	63.2	35	76	164	353	761
9	Vernon Street	West of Judah	61	54.3	56.5	63.2	35	76	164	353	761
10	Vernon Street	East of Judah	61	53.7	55.9	62.7	33	70	151	326	703
11	Vernon Street	West of Grant	61	53.7	55.9	62.6	32	69	150	323	695
12	Vernon Street	East of Grant	60	53.0	55.2	61.9	29	63	135	290	625
13	Vernon Street	West of Lincoln	60	52.9	55.1	61.9	29	62	133	286	617
14	Vernon Street	East of Lincoln	61	53.8	56.0	62.8	33	71	153	330	710
15	Oak Street	West of Washingtc	57	52.2	56.8	60.8	24	53	113	244	526
16	Oak Street	East of Washingto	57	52.2	56.8	60.8	24	52	113	242	522
17	Lincoln Street	North of Vernon	51	45.5	50.1	54.1	9	19	41	87	188
18	Lincoln Street	South of Vernon	54	49.2	53.8	57.8	15	33	72	154	332
19	Judah Street	South of Vernon	52	46.3	50.9	54.9	10	21	46	98	212
20	Grant Street	South of Vernon	55	49.3	53.9	57.9	16	33	72	155	334

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Future (2020) No Project
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Washington Boulevard	North of Junction	32,200	45	100	97	2	1	85		15	
2	Washington Boulevard	South of Junction	33,800	45	100	97	2	1	85		15	
3	Washington Boulevard	North of Main	34,600	45	100	97	2	1	85		15	
4	Washington Boulevard	South of Main	45,400	45	100	97	2	1	85		15	
5	Washington Boulevard	North of Oak	47,600	45	100	97	2	1	85		15	
6	Main Street	West of Washington	17,200	25	100	97	2	1	85		15	
7	Main Street	East of Washington	11,000	25	100	97	2	1	85		15	
8	Vernon Street	North of Douglas	23,100	35	100	97	2	1	85		15	
9	Vernon Street	West of Judah	24,200	35	100	97	2	1	85		15	
10	Vernon Street	East of Judah	26,800	35	100	97	2	1	85		15	
11	Vernon Street	West of Grant	24,800	35	100	97	2	1	85		15	
12	Vernon Street	East of Grant	15,800	35	100	97	2	1	85		15	
13	Vernon Street	West of Lincoln	16,000	35	100	97	2	1	85		15	
14	Vernon Street	East of Lincoln	24,600	35	100	97	2	1	85		15	
15	Oak Street	West of Washington	21,600	25	100	97	2	1	85		15	
16	Oak Street	East of Washington	29,400	25	100	97	2	1	85		15	
17	Lincoln Street	North of Vernon	3,100	25	100	97	2	1	85		15	
18	Lincoln Street	South of Vernon	12,900	25	100	97	2	1	85		15	
19	Judah Street	South of Vernon	3,700	25	100	97	2	1	85		15	
20	Grant Street	South of Vernon	12,800	25	100	97	2	1	85		15	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Future (2020) No Project
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment	Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
			Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Washington Boulevard	North of Junction	67	58.0	59.4	67.8	71	154	331	714	1538
2	Washington Boulevard	South of Junction	67	58.2	59.6	68.0	74	159	342	737	1588
3	Washington Boulevard	North of Main	67	58.3	59.7	68.1	75	161	348	749	1613
4	Washington Boulevard	South of Main	68	59.4	60.9	69.3	90	193	417	897	1933
5	Washington Boulevard	North of Oak	68	59.6	61.1	69.5	93	200	430	926	1995
6	Main Street	West of Washingtc	56	51.2	55.9	59.8	21	45	98	210	453
7	Main Street	East of Washingto	55	49.3	53.9	57.9	16	34	72	156	336
8	Vernon Street	North of Douglas	62	54.8	57.0	63.8	38	83	178	384	827
9	Vernon Street	West of Judah	62	55.0	57.2	64.0	40	85	184	396	853
10	Vernon Street	East of Judah	63	55.5	57.6	64.4	42	91	197	424	913
11	Vernon Street	West of Grant	62	55.1	57.3	64.1	40	87	187	402	867
12	Vernon Street	East of Grant	60	53.2	55.3	62.1	30	64	138	298	642
13	Vernon Street	West of Lincoln	60	53.2	55.4	62.2	30	65	139	300	647
14	Vernon Street	East of Lincoln	62	55.1	57.3	64.0	40	86	186	400	862
15	Oak Street	West of Washingtc	57	52.2	56.9	60.8	24	53	114	245	527
16	Oak Street	East of Washingto	59	53.6	58.2	62.2	30	65	140	301	648
17	Lincoln Street	North of Vernon	49	43.8	48.4	52.4	7	14	31	67	145
18	Lincoln Street	South of Vernon	55	50.0	54.6	58.6	17	37	81	174	374
19	Judah Street	South of Vernon	50	44.6	49.2	53.2	8	16	35	75	163
20	Grant Street	South of Vernon	55	50.0	54.6	58.6	17	37	80	173	372

Appendix C
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Future (2020) Plus Project
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT



Segment	Roadway	Segment	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Washington Boulevard	North of Junction	32,500	45	100	97	2	1	85		15	
2	Washington Boulevard	South of Junction	34,800	45	100	97	2	1	85		15	
3	Washington Boulevard	North of Main	36,200	45	100	97	2	1	85		15	
4	Washington Boulevard	South of Main	46,700	45	100	97	2	1	85		15	
5	Washington Boulevard	North of Oak	49,700	45	100	97	2	1	85		15	
6	Main Street	West of Washington	18,300	25	100	97	2	1	85		15	
7	Main Street	East of Washington	12,400	25	100	97	2	1	85		15	
8	Vernon Street	North of Douglas	23,600	35	100	97	2	1	85		15	
9	Vernon Street	West of Judah	24,700	35	100	97	2	1	85		15	
10	Vernon Street	East of Judah	26,600	35	100	97	2	1	85		15	
11	Vernon Street	West of Grant	25,600	35	100	97	2	1	85		15	
12	Vernon Street	East of Grant	16,900	35	100	97	2	1	85		15	
13	Vernon Street	West of Lincoln	17,100	35	100	97	2	1	85		15	
14	Vernon Street	East of Lincoln	24,500	35	100	97	2	1	85		15	
15	Oak Street	West of Washington	22,900	25	100	97	2	1	85		15	
16	Oak Street	East of Washington	29,700	25	100	97	2	1	85		15	
17	Lincoln Street	North of Vernon	6,100	25	100	97	2	1	85		15	
18	Lincoln Street	South of Vernon	13,300	25	100	97	2	1	85		15	
19	Judah Street	South of Vernon	4,300	25	100	97	2	1	85		15	
20	Grant Street	South of Vernon	12,400	25	100	97	2	1	85		15	

Appendix C
Traffic Noise Prediction Model, (FWHA RD-77-108)
Predicted Noise Levels

Project Name : Roseville Downtown Specific Plan EIR
Project Number : 7110247.01
Modeling Condition : Future (2020) Plus Project
Metric (Leq, Ldn, CNEL) : Ldn



Segment	Roadway	Segment	Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
			Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Washington Boulevard	North of Junction	67	58.0	59.5	67.8	72	155	333	718	1547
2	Washington Boulevard	South of Junction	67	58.3	59.8	68.1	75	162	349	752	1619
3	Washington Boulevard	North of Main	67	58.5	59.9	68.3	77	166	358	772	1662
4	Washington Boulevard	South of Main	68	59.6	61.1	69.4	91	197	424	914	1970
5	Washington Boulevard	North of Oak	68	59.8	61.3	69.7	95	205	442	953	2054
6	Main Street	West of Washingtc	57	51.5	56.1	60.1	22	47	102	219	472
7	Main Street	East of Washingto	55	49.8	54.4	58.4	17	36	78	169	364
8	Vernon Street	North of Douglas	62	54.9	57.1	63.9	39	84	181	389	839
9	Vernon Street	West of Judah	62	55.1	57.3	64.1	40	86	186	401	865
10	Vernon Street	East of Judah	63	55.4	57.6	64.4	42	91	196	422	908
11	Vernon Street	West of Grant	62	55.3	57.4	64.2	41	89	191	411	885
12	Vernon Street	East of Grant	61	53.4	55.6	62.4	31	67	145	312	671
13	Vernon Street	West of Lincoln	61	53.5	55.7	62.5	31	68	146	314	677
14	Vernon Street	East of Lincoln	62	55.1	57.2	64.0	40	86	185	399	860
15	Oak Street	West of Washingtc	58	52.5	57.1	61.1	25	55	118	254	548
16	Oak Street	East of Washingto	59	53.6	58.2	62.2	30	65	140	303	652
17	Lincoln Street	North of Vernon	52	46.7	51.4	55.3	11	23	49	105	227
18	Lincoln Street	South of Vernon	55	50.1	54.7	58.7	18	38	82	177	382
19	Judah Street	South of Vernon	50	45.2	49.8	53.8	8	18	39	83	180
20	Grant Street	South of Vernon	55	49.8	54.4	58.4	17	36	78	169	364

