

# **APPENDIX D**

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FHWA Modeling Data

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Existing Conditions - 2006  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Riviera Road	Township Road	SR 99	1,600	45	50	97	2	1	85		15	
2	Riviera Road	SR 99	Larkin Road	3,100	45	50	97	2	1	85		15	
3	Township Road	Riviera Road	Pennington Road	1,900	45	50	97	2	1	85		15	
4	Township Road	Pennington Road	Paseo Road	2,000	45	50	97	2	1	85		15	
5	Pennington Road	Township Road	Luther Road	1,800	45	50	97	2	1	85		15	
6	Pennington Road	Luther Road	N Street	3,300	45	50	97	2	1	85		15	
7	Pennington Road	N Street	SR 99	9,100	45	50	97	2	1	85		15	
8	Pennington Road	SR 99	Sheldon Road	7,900	45	50	97	2	1	85		15	
9	Luther Road	Pennington Road	North	230	45	50	97	2	1	85		15	
10	Metteer Road	Riviera Road	Pennington Road	3,600	45	50	97	2	1	85		15	
11	Metteer Road	Pennington Road	Cooley Road	370	45	50	97	2	1	85		15	
12	Richards Road	Pennington Road	South	1700	45	50	97	2	1	85		15	
13	Larkin Road	Riviera Road	Pennington Road	460	45	50	97	2	1	85		15	
14	Larkin Road	Pennington Road	SR 99	700	45	50	97	2	1	85		15	
15	Larkin Road	Apricot Road	Paseo Road	2,100	45	50	97	2	1	85		15	
16	N Street	Pennington Road	Deanne Street	1400	45	50	97	2	1	85		15	
17	N Street	Hampton Road	Pennington Road	2900	45	50	97	2	1	85		15	
18	SR 99	Riviera Road	Pennington Road	15,200	45	50	97	2	1	85		15	
19	SR 99	Pennington Road	Paseo Road	18,900	45	50	97	2	1	85		15	
20	Sinnard Avenue	Pennington Road	Archer Road	2,400	45	50	97	2	1	85		15	
21	Sinnard Avenue	Archer Avenue	Bishop Avenue	240	45	50	97	2	1	85		15	
22	Bishop Avenue	SR 99	Sinnard Ave	180	45	50	97	2	1	85		15	
23	Sheldon Road	Pennington Road	Archer Road	400	45	50	97	2	1	85		15	
24	Sheldon Road	Archer Avenue	Bishop Ave	115	45	50	97	2	1	85		15	
25	Archer Avenue	SR 99	Sinnard Avenue	790	45	50	97	2	1	85		15	
26	Paseo Road	Township Road	SR 99	1,100	45	50	97	2	1	85		15	
27	Paseo Road	SR 99	Sinnard Ave	900	45	50	97	2	1	85		15	
28	Paseo Road	Sinnard Ave	Sheldon Ave	110	45	50	97	2	1	85		15	
29	Kent Avenue	Bishop Avenue	Paseo Road	370	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Existing Conditions - 2006  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Riviera Road	Township Road	SR 99	58.0	49.4	50.9	59.3	10	21	45	96	208
2	Riviera Road	SR 99	Larkin Road	60.9	52.3	53.8	62.2	15	32	70	150	323
3	Township Road	Riviera Road	Pennington Road	58.8	50.2	51.7	60.0	11	23	50	108	233
4	Township Road	Pennington Road	Paseo Road	59.0	50.4	51.9	60.3	11	24	52	112	241
5	Pennington Road	Township Road	Luther Road	58.5	49.9	51.4	59.8	10	22	48	104	225
6	Pennington Road	Luther Road	N Street	61.2	52.6	54.1	62.4	16	34	73	156	337
7	Pennington Road	N Street	SR 99	65.6	57.0	58.5	66.8	31	66	143	307	662
8	Pennington Road	SR 99	Sheldon Road	65.0	56.4	57.9	66.2	28	60	130	280	603
9	Luther Road	Pennington Road	North	49.6	41.0	42.5	50.9	3	6	12	26	57
10	Metteer Road	Riviera Road	Pennington Road	61.6	53.0	54.4	62.8	17	36	77	166	357
11	Metteer Road	Pennington Road	Cooley Road	51.7	43.1	44.6	52.9	4	8	17	36	78
12	Richards Road	Pennington Road	South	58.3	49.7	51.2	59.5	10	22	47	100	216
13	Larkin Road	Riviera Road	Pennington Road	52.6	44.0	45.5	53.9	4	9	20	42	91
14	Larkin Road	Pennington Road	SR 99	54.4	45.8	47.3	55.7	6	12	26	56	120
15	Larkin Road	Apricot Road	Paseo Road	59.2	50.6	52.1	60.5	12	25	54	116	249
16	N Street	Pennington Road	Deanne Street	57.5	48.8	50.3	58.7	9	19	41	88	190
17	N Street	Hampton Road	Pennington Road	60.6	52.0	53.5	61.9	14	31	67	143	309
18	SR 99	Riviera Road	Pennington Road	67.8	59.2	60.7	69.1	43	93	201	433	932
19	SR 99	Pennington Road	Paseo Road	68.8	60.2	61.6	70.0	50	108	232	500	1078
20	Sinnard Avenue	Pennington Road	Archer Road	59.8	51.2	52.7	61.0	13	27	59	126	272
21	Sinnard Avenue	Archer Avenue	Bishop Avenue	49.8	41.2	42.7	51.0	3	6	13	27	59
22	Bishop Avenue	SR 99	Sinnard Ave	48.5	39.9	41.4	49.8	2	5	10	22	48
23	Sheldon Road	Pennington Road	Archer Road	52.0	43.4	44.9	53.3	4	8	18	38	82
24	Sheldon Road	Archer Avenue	Bishop Ave	46.6	38.0	39.5	47.8	2	4	8	17	36
25	Archer Avenue	SR 99	Sinnard Avenue	55.0	46.4	47.9	56.2	6	13	28	60	130
26	Paseo Road	Township Road	SR 99	56.4	47.8	49.3	57.7	8	16	35	75	162
27	Paseo Road	SR 99	Sinnard Ave	55.5	46.9	48.4	56.8	7	14	31	66	142
28	Paseo Road	Sinnard Ave	Sheldon Ave	46.4	37.8	39.3	47.7	2	3	8	16	35
29	Kent Avenue	Bishop Avenue	Paseo Road	51.7	43.1	44.6	52.9	4	8	17	36	78

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



**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Riviera	Township Rd	SR 99	550	45	50	97	2	1	85		15	
2	Riviera	SR 99	Larkin Rd	1,325	45	50	97	2	1	85		15	
	1 Street	Township Rd	Luther Rd		45	50		2	1	85			
	1 Street	Luther Rd	N Street		45	50		2	1	85			
	2 Street	SR 99	Larkin Rd		45	50		2	1	85			
	West Sinnard Ave	Township Rd	Luther Rd		45	50		2	1	85			
	West Sinnard Ave	Luther Rd	N Street		45	50		2	1	85			
	West Sinnard Ave	N Street	SR 99 connection		45	50		2	1	85			
	West Sinnard Ave	SR 99 connection	Larkin Rd		45	50		2	1	85			
	West Sinnard Ave	Larkin Rd	Orchard Rd		45	50		2	1	85			
	4 Street	F Street	Larkin Rd		45	50		2	1	85			
	4 Street	Larkin Rd	Sinnard Ave		45	50		2	1	85			
	5 Street	SR 99	Larkin Rd		45	50		2	1	85			
	5 Street	Larkin Rd	Sinnard Ave		45	50		2	1	85			
15	6 Street	Township Rd	Luther Rd	2,800	45	50	97	2	1	85		15	
16	6 Street	Luther Rd	N Street	2,500	45	50	97	2	1	85		15	
	Brianne Way	Larkin Rd	Sinnard Ave		45	50		2	1	85			
18	Ramsdell Rd	Township Rd	Luther Rd	4,525	45	50	97	2	1	85		15	
19	Ramsdell Rd	Luther Rd	N Street	2,475	45	50	97	2	1	85		15	
	Ramsdell Rd	N Street	Nevada Street		45	50		2	1	85			
21	Ramsdell Rd	Nevada Street	SR 99	5,250	45	50	97	2	1	85		15	
	Ramsdell Rd	SR 99	Larkin Rd		45	50		2	1	85			
	Ramsdell Rd	Larkin Rd	Sinnard Ave		45	50		2	1	85			
24	Kola St	Street A	Luther Rd	2,525	45	50	97	2	1	85		15	
25	Kola St	Luther Rd	N Street	3,225	45	50	97	2	1	85		15	
26	Kola St	N Street	SR 99	11,120	45	50	97	2	1	85		15	
27	Kola St	SR 99	Larkin Road	10,150	45	50	97	2	1	85		15	
	7 Street	Orchard Way	Larkin Rd		45	50		2	1	85			
29	Pennington Road	Township Rd	Luther Rd	3,450	45	50	97	2	1	85		15	

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**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Riviera	Township Rd	SR 99	53.4	44.8	46.3	54.6	5	10	22	47	102
2	Riviera	SR 99	Larkin Rd	57.2	48.6	50.1	58.5	9	18	39	85	183
	1 Street	Township Rd	Luther Rd									
	1 Street	Luther Rd	N Street									
	2 Street	SR 99	Larkin Rd									
	West Sinnard Ave	Township Rd	Luther Rd									
	West Sinnard Ave	Luther Rd	N Street									
	West Sinnard Ave	N Street	SR 99 connection									
	West Sinnard Ave	SR 99 connection	Larkin Rd									
	West Sinnard Ave	Larkin Rd	Orchard Rd									
	4 Street	F Street	Larkin Rd									
	4 Street	Larkin Rd	Sinnard Ave									
	5 Street	SR 99	Larkin Rd									
	5 Street	Larkin Rd	Sinnard Ave									
15	6 Street	Township Rd	Luther Rd	60.5	51.9	53.3	61.7	14	30	65	140	302
16	6 Street	Luther Rd	N Street	60.0	51.4	52.9	61.2	13	28	60	130	280
	Brianne Way	Larkin Rd	Sinnard Ave									
18	Ramsdell Rd	Township Rd	Luther Rd	62.6	53.9	55.4	63.8	19	42	90	193	416
19	Ramsdell Rd	Luther Rd	N Street	59.9	51.3	52.8	61.2	13	28	60	129	278
	Ramsdell Rd	N Street	Nevada Street									
21	Ramsdell Rd	Nevada Street	SR 99	63.2	54.6	56.1	64.4	21	46	99	213	459
	Ramsdell Rd	SR 99	Larkin Rd									
	Ramsdell Rd	Larkin Rd	Sinnard Ave									
24	Kola St	Street A	Luther Rd	60.0	51.4	52.9	61.3	13	28	61	131	282
25	Kola St	Luther Rd	N Street	61.1	52.5	54.0	62.3	15	33	71	154	332
26	Kola St	N Street	SR 99	66.5	57.8	59.3	67.7	35	76	163	351	757
27	Kola St	SR 99	Larkin Road	66.1	57.5	58.9	67.3	33	71	153	331	712
	7 Street	Orchard Way	Larkin Rd									
29	Pennington Road	Township Rd	Luther Rd	61.4	52.8	54.3	62.6	16	35	75	161	347

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



**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Pennington Road	Luther Rd	N Street	6,000	45	50	97	2	1	85		15	
2	Pennington Road	N Street	SR 99	11,700	45	50	97	2	1	85		15	
3	Pennington Road	SR 99	Larkin Rd	2,575	45	50	97	2	1	85		15	
4	Pennington Road	Larkin Rd	Sinnard Ave	3,225	45	50	97	2	1	85		15	
5	Presley Street	Township Rd	Richard Ave	8,775	45	50	97	2	1	85		15	
6	Fir Street	Richard Ave	Broadway	1,000	45	50	97	2	1	85		15	
7	Elm St	Broadway	SR 99	2,125	45	50	97	2	1	85		15	
8	Elm St	SR 99	Larkin Rd	5,150	45	50	97	2	1	85		15	
9	Archer Avenue	SR 99	K Street	2975	45	50	97	2	1	85		15	
10	Ash St-Apricot	Broadway	SR 99	16,375	45	50	97	2	1	85		15	
11	Apricot St	Richard Ave	Broadway	10,725	45	50	97	2	1	85		15	
12	Ash St	SR 99	K Street	2975	45	50	97	2	1	85		15	
13	8 Street	Township Rd	Cannon Way	1,600	45	50	97	2	1	85		15	
14	9 Street	Richard Ave	Larkin Rd	2,675	45	50	97	2	1	85		15	
15	10 Street	SR 99	Sinnard Ave	800	45	50	97	2	1	85		15	
16	11 Street	Richard Avenue	Larkin Road	2725	45	50	97	2	1	85		15	
17	12 Street	Richard Ave	Larkin Road	2725	45	50	97	2	1	85		15	
18	Bishop Avenue	SR 99	Sinnard Ave	2,675	45	50	97	2	1	85		15	
19	13 Street	Township Rd	Richard Ave	10,350	45	50	97	2	1	85		15	
20	13 Street	Richard Avenue	Larkin Road	13,750	45	50	97	2	1	85		15	
	14 Street	Township Road	Richard Ave		45	50		2	1	85			
22	14 Street	Richard Avenue	Larkin Road	14,925	45	50	97	2	1	85		15	
23	Paseo Avenue	Township Rd	Richard Ave	6,250	45	50	97	2	1	85		15	
24	Paseo Avenue	Richard Avenue	Larkin Road	13,850	45	50	97	2	1	85		15	
25	Paseo Avenue	Larking Road	D Street	15,950	45	50	97	2	1	85		15	
26	Paseo Avenue	D Street	SR 99	15,950	45	50	97	2	1	85		15	
27	Paseo Avenue	SR 99	Sinnard Ave	2,100	45	50	97	2	1	85		15	
28	Clark Road	Township Rd	Broadway	12,100	45	50	97	2	1	85		15	
29	Township Rd	Butte Co line	Riviera Rd	11,275	45	50	97	2	1	85		15	

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**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Pennington Road	Luther Rd	N Street	63.8	55.2	56.7	65.0	23	50	108	233	502
2	Pennington Road	N Street	SR 99	66.7	58.1	59.6	67.9	36	78	169	363	783
3	Pennington Road	SR 99	Larkin Rd	60.1	51.5	53.0	61.3	13	29	61	132	285
4	Pennington Road	Larkin Rd	Sinnard Ave	61.1	52.5	54.0	62.3	15	33	71	154	332
5	Presley Street	Township Rd	Richard Ave	65.4	56.8	58.3	66.7	30	65	139	300	646
6	Fir Street	Richard Ave	Broadway	56.0	47.4	48.9	57.2	7	15	33	71	152
7	Elm St	Broadway	SR 99	59.3	50.7	52.1	60.5	12	25	54	117	251
8	Elm St	SR 99	Larkin Rd	63.1	54.5	56.0	64.4	21	45	98	210	453
9	Archer Avenue	SR 99	K Street	60.7	52.1	53.6	62.0	15	31	68	146	314
10	Ash St-Apricot	Broadway	SR 99	68.1	59.5	61.0	69.4	45	98	211	455	980
11	Apricot St	Richard Ave	Broadway	66.3	57.7	59.2	67.5	34	74	159	343	739
12	Ash St	SR 99	K Street	60.7	52.1	53.6	62.0	15	31	68	146	314
13	8 Street	Township Rd	Cannon Way	58.0	49.4	50.9	59.3	10	21	45	96	208
14	9 Street	Richard Ave	Larkin Rd	60.3	51.7	53.1	61.5	14	29	63	136	293
15	10 Street	SR 99	Sinnard Ave	55.0	46.4	47.9	56.3	6	13	28	61	131
16	11 Street	Richard Avenue	Larkin Road	60.3	51.7	53.2	61.6	14	30	64	138	296
17	12 Street	Richard Ave	Larkin Road	60.3	51.7	53.2	61.6	14	30	64	138	296
18	Bishop Avenue	SR 99	Sinnard Ave	60.3	51.7	53.1	61.5	14	29	63	136	293
19	13 Street	Township Rd	Richard Ave	66.1	57.5	59.0	67.4	33	72	155	335	722
20	13 Street	Richard Avenue	Larkin Road	67.4	58.8	60.3	68.6	40	87	188	405	872
	14 Street	Township Road	Richard Ave									
22	14 Street	Richard Avenue	Larkin Road	67.7	59.1	60.6	69.0	43	92	198	427	921
23	Paseo Avenue	Township Rd	Richard Ave	64.0	55.3	56.8	65.2	24	52	111	239	515
24	Paseo Avenue	Richard Avenue	Larkin Road	67.4	58.8	60.3	68.7	41	88	189	407	876
25	Paseo Avenue	Larking Road	D Street	68.0	59.4	60.9	69.3	45	96	207	447	963
26	Paseo Avenue	D Street	SR 99	68.0	59.4	60.9	69.3	45	96	207	447	963
27	Paseo Avenue	SR 99	Sinnard Ave	59.2	50.6	52.1	60.5	12	25	54	116	249
28	Clark Road	Township Rd	Broadway	66.8	58.2	59.7	68.1	37	80	173	372	801
29	Township Rd	Butte Co line	Riviera Rd	66.5	57.9	59.4	67.8	35	76	165	355	764

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**Model Input Sheet**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Township Rd	Riviera Rd	Sinnard Ave	11,775	45	50	97	2	1	85		15	
2	Township Rd	Sinnard Avenue	Pennington Road	13,450	45	50	97	2	1	85		15	
3	Township Rd	Pennington Road	8 Street	11,675	45	50	97	2	1	85		15	
4	Township Rd	8 Street	Paseo Avenue	8,550	45	50	97	2	1	85		15	
5	Township Rd	Paseo Avenue	Clark Road	12,100	45	50	97	2	1	85		15	
	A Street	Riviera Rd	Sinnard Ave		45	50		2	1	85			
7	A Street	Sinnard Avenue	Kola St	4,100	45	50	97	2	1	85		15	
8	A Street	Kola St	Pennington Road	9,150	45	50	97	2	1	85		15	
9	A Street	Pennington Road	8 Street	9,950	45	50	97	2	1	85		15	
10	A Street	8 Street	Paseo Avenue	6,100	45	50	97	2	1	85		15	
	Luther Rd	Riviera Rd	Sinnard Avenue		45	50		2	1	85			
12	Luther Rd	Sinnard Avenue	Pennington Rd	3,000	45	50	97	2	1	85		15	
13	Richard Ave	Pennington Rd	Apricot St	6,550	45	50	97	2	1	85		15	
14	Richard Ave	Apricot St	13 Street	11,600	45	50	97	2	1	85		15	
15	Richard Ave	13 Street	Paseo Avenue	14,450	45	50	97	2	1	85		15	
	C Street	Riviera Road	Sinnard Avenue		45	50		2	1	85			
17	C Street	Sinnard Avenue	Ramsdell	1,900	45	50	97	2	1	85		15	
	N Street	1 Street	Sinnard Avenue		45	50		2	1	85			
19	N Street	Sinnard Avenue	Ramsdell	1,900	45	50	97	2	1	85		15	
20	N Street	Ramsdell	Kola St	3,350	45	50	97	2	1	85		15	
21	N Street	Kola St	Pennington Rd	7,200	45	50	97	2	1	85		15	
22	N Street	Pennington Rd	Fir St	11,500	45	50	97	2	1	85		15	
23	N Street	Fir St	Apricot St	12,225	45	50	97	2	1	85		15	
24	N Street	Apricot St	13 Street	11,975	45	50	97	2	1	85		15	
25	N Street	13 Street	Paseo Avenue	6,200	45	50	97	2	1	85		15	
26	Broadway	Pennington Rd	Elm Street	1,725	45	50	97	2	1	85		15	
27	Broadway	Elm Street	Ash-Apricot Conn	1,750	45	50	97	2	1	85		15	
28	Broadway	Ash-Apricot	Apricot St	18,125	45	50	97	2	1	85		15	
29	West Larkin Road	Apricot St	13 Street	9,775	45	50	97	2	1	85		15	



**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Township Rd	Riviera Rd	Sinnard Ave	66.7	58.1	59.6	67.9	36	79	169	365	786
2	Township Rd	Sinnard Avenue	Pennington Road	67.3	58.7	60.2	68.5	40	86	185	399	859
3	Township Rd	Pennington Road	8 Street	66.7	58.1	59.5	67.9	36	78	168	363	782
4	Township Rd	8 Street	Paseo Avenue	65.3	56.7	58.2	66.6	29	64	137	295	635
5	Township Rd	Paseo Avenue	Clark Road	66.8	58.2	59.7	68.1	37	80	173	372	801
	A Street	Riviera Rd	Sinnard Ave									
7	A Street	Sinnard Avenue	Kola St	62.1	53.5	55.0	63.4	18	39	84	181	389
8	A Street	Kola St	Pennington Road	65.6	57.0	58.5	66.9	31	66	143	308	665
9	A Street	Pennington Road	8 Street	66.0	57.4	58.9	67.2	33	70	151	326	703
10	A Street	8 Street	Paseo Avenue	63.8	55.2	56.7	65.1	24	51	109	235	507
	Luther Rd	Riviera Rd	Sinnard Avenue									
12	Luther Rd	Sinnard Avenue	Pennington Rd	60.8	52.2	53.6	62.0	15	32	68	147	316
13	Richard Ave	Pennington Rd	Apricot St	64.2	55.6	57.0	65.4	25	53	115	247	532
14	Richard Ave	Apricot St	13 Street	66.6	58.0	59.5	67.9	36	78	168	361	779
15	Richard Ave	13 Street	Paseo Avenue	67.6	59.0	60.5	68.8	42	90	194	418	901
	C Street	Riviera Road	Sinnard Avenue									
17	C Street	Sinnard Avenue	Ramsdell	58.8	50.2	51.7	60.0	11	23	50	108	233
	N Street	1 Street	Sinnard Avenue									
19	N Street	Sinnard Avenue	Ramsdell	58.8	50.2	51.7	60.0	11	23	50	108	233
20	N Street	Ramsdell	Kola St	61.2	52.6	54.1	62.5	16	34	73	158	340
21	N Street	Kola St	Pennington Rd	64.6	56.0	57.4	65.8	26	57	122	263	566
22	N Street	Pennington Rd	Fir St	66.6	58.0	59.5	67.8	36	77	167	359	774
23	N Street	Fir St	Apricot St	66.9	58.3	59.7	68.1	37	81	174	374	806
24	N Street	Apricot St	13 Street	66.8	58.2	59.7	68.0	37	80	171	369	795
25	N Street	13 Street	Paseo Avenue	63.9	55.3	56.8	65.2	24	51	110	238	513
26	Broadway	Pennington Rd	Elm Street	58.4	49.8	51.2	59.6	10	22	47	101	219
27	Broadway	Elm Street	Ash-Apricot Conn	58.4	49.8	51.3	59.7	10	22	48	102	221
28	Broadway	Ash-Apricot	Apricot St	68.6	60.0	61.5	69.8	49	105	226	487	1048
29	West Larkin Road	Apricot St	13 Street	65.9	57.3	58.8	67.1	32	69	150	322	695

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

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



Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	West Larkin Road	13 Street	Paseo Avenue	19,500	45	50	97	2	1	85		15	
	D Street	11 Street	Paseo Avenue		45	50		2	1	85			
	E Street	Riviera Road	2 Street		45	50		2	1	85			
	F Street	2 Street	Sinnard Avenue		45	50		2	1	85			
	F Street	Sinnard Avenue	SR 99		45	50		2	1	85			
6	East Larkin Road	Butte Co line	Riviera Rd	12,875	45	50	97	2	1	85		15	
7	East Larkin Road	Riveira Road	Sinnard Avenue	11,550	45	50	97	2	1	85		15	
8	East Larkin Road	Sinnard Avenue	5 Street	11,550	45	50	97	2	1	85		15	
9	East Larkin Road	5 Street	Ramsdell Dr	17,950	45	50	97	2	1	85		15	
10	East Larkin Road	Ramsdell Dr	Pennington Rd	9,200	45	50	97	2	1	85		15	
11	East Larkin Road	Pennington Rd	Ash Street	8,275	45	50	97	2	1	85		15	
12	K Street	Pennington Road	Ash Street	2,500	45	50	97	2	1	85		15	
	K Street	Ash Street	Bishop Avenue	1,000	45	50	97	2	1	85		15	
13	Orchard Way	Sinnard Avenue	Ramsdell Dr		45	50		2	1	85			
	Orchard Way	Ramsdell Dr	Pennington Rd	3,250	45	50	97	2	1	85		15	
	Sinnard Avenue	4 Street	Ramsdell Dr		45	50		2	1	85			
15	Sinnard Avenue	Ramsdell Dr	Pennington Rd		45	50		2	1	85			
	Sinnard Avenue	Pennington Road	Bishop Avenue	500	45	50	97	2	1	85		15	
18	Sinnard Avenue	Bishop Avenue	Paseo Avenue	2,100	45	50	97	2	1	85		15	
19	Sinnard Avenue	Bishop Avenue	Paseo Avenue	2,100	45	50	97	2	1	85		15	
20	Metter Road	Riviera Road	Brianne Way	2,000	45	50	97	2	1	85		15	
21	Metter Road	Brianne Way	Pennington Road	4,000	45	50	97	2	1	85		15	
22	Sheldon Road	Pennington Road	Bishop Road	500	45	50	97	2	1	85		15	
23	SR 99	Butte Co line	Riviera Road	20,825	45	50	97	2	1	85		15	
24	SR 99	Riviera Rd	Sinnard Ave	21,650	45	50	97	2	1	85		15	
25	SR 99	Sinnard Avenue	F Street	21,650	45	50	97	2	1	85		15	
26	SR 99	F Street	Ramsdell Dr	21,650	45	50	97	2	1	85		15	
27	SR 99	Ramsdell Dr	Kola St	25,675	45	50	97	2	1	85		15	
28	SR 99	Kola St	Pennington Road	27,300	45	50	97	2	1	85		15	
29	SR 99	Pennington Road	Ash-Apricot	24,800	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	West Larkin Road	13 Street	Paseo Avenue	68.9	60.3	61.8	70.1	51	110	237	511	1101
	D Street	11 Street	Paseo Avenue									
	E Street	Riviera Road	2 Street									
	F Street	2 Street	Sinnard Avenue									
	F Street	Sinnard Avenue	SR 99									
6	East Larkin Road	Butte Co line	Riviera Rd	67.1	58.5	60.0	68.3	39	83	180	387	835
7	East Larkin Road	Riveira Road	Sinnard Avenue	66.6	58.0	59.5	67.9	36	78	167	360	776
8	East Larkin Road	Sinnard Avenue	5 Street	66.6	58.0	59.5	67.9	36	78	167	360	776
9	East Larkin Road	5 Street	Ramsdell Dr	68.5	59.9	61.4	69.8	48	104	224	483	1042
10	East Larkin Road	Ramsdell Dr	Pennington Rd	65.6	57.0	58.5	66.9	31	67	144	310	667
11	East Larkin Road	Pennington Rd	Ash Street	65.2	56.6	58.1	66.4	29	62	134	288	622
12	K Street	Pennington Road	Ash Street	60.0	51.4	52.9	61.2	13	28	60	130	280
13	K Street	Ash Street	Bishop Avenue	56.0	47.4	48.9	57.2	7	15	33	71	152
	Orchard Way	Sinnard Avenue	Ramsdell Dr									
15	Orchard Way	Ramsdell Dr	Pennington Rd	61.1	52.5	54.0	62.4	15	33	72	155	333
	Sinnard Avenue	4 Street	Ramsdell Dr									
	Sinnard Avenue	Ramsdell Dr	Pennington Rd									
18	Sinnard Avenue	Pennington Road	Bishop Avenue	53.0	44.4	45.9	54.2	4	10	21	44	96
19	Sinnard Avenue	Bishop Avenue	Paseo Avenue	59.2	50.6	52.1	60.5	12	25	54	116	249
20	Metter Road	Riviera Road	Brianne Way	59.0	50.4	51.9	60.3	11	24	52	112	241
21	Metter Road	Brianne Way	Pennington Road	62.0	53.4	54.9	63.3	18	38	82	178	383
22	Sheldon Road	Pennington Road	Bishop Road	53.0	44.4	45.9	54.2	4	10	21	44	96
23	SR 99	Butte Co line	Riviera Road	69.2	60.6	62.1	70.4	53	115	248	534	1150
24	SR 99	Riviera Rd	Sinnard Ave	69.3	60.7	62.2	70.6	55	118	254	548	1180
25	SR 99	Sinnard Avenue	F Street	69.3	60.7	62.2	70.6	55	118	254	548	1180
26	SR 99	F Street	Ramsdell Dr	69.3	60.7	62.2	70.6	55	118	254	548	1180
27	SR 99	Ramsdell Dr	Kola St	70.1	61.5	63.0	71.3	61	132	285	614	1322
28	SR 99	Kola St	Pennington Road	70.4	61.7	63.2	71.6	64	138	297	639	1377
29	SR 99	Pennington Road	Ash-Apricot	69.9	61.3	62.8	71.2	60	129	278	600	1292

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	SR 99	Ash-Apricot	Bishop Avenue	33,625	45	50	97	2	1	85		15	
2	SR 99	Bishop Avenue	Paseo Avenue	31,350	45	50	97	2	1	85		15	
3	SR 99	Paseo Avenue	Clark Road	48,425	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + Existing GP  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	SR 99	Ash-Apricot	Bishop Avenue	71.3	62.7	64.1	72.5	73	158	341	735	1583
2	SR 99	Bishop Avenue	Paseo Avenue	71.0	62.4	63.8	72.2	70	151	325	701	1510
3	SR 99	Paseo Avenue	Clark Road	72.8	64.2	65.7	74.1	94	202	435	937	2018

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



**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

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

Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	Riviera	Township Rd	SR 99	5,550	45	50	97	2	1	85		15	
2	Riviera	SR 99	Larkin Rd	1,850	45	50	97	2	1	85		15	
3	1 Street	Township Rd	Luther Rd	1,650	45	50	97	2	1	85		15	
4	1 Street	Luther Rd	N Street	5,450	45	50	97	2	1	85		15	
5	2 Street	SR 99	Larkin Rd	4,800	45	50	97	2	1	85		15	
6	West Sinnard Ave	Township Rd	Luther Rd	7,225	45	50	97	2	1	85		15	
7	West Sinnard Ave	Luther Rd	N Street	8,575	45	50	97	2	1	85		15	
8	West Sinnard Ave	N Street	SR 99 connection	13,550	45	50	97	2	1	85		15	
9	West Sinnard Ave	SR 99 connection	Larkin Rd	7,750	45	50	97	2	1	85		15	
10	West Sinnard Ave	Larkin Rd	Orchard Rd	5,125	45	50	97	2	1	85		15	
11	4 Street	F Street	Larkin Rd	5,525	45	50	97	2	1	85		15	
12	4 Street	Larkin Rd	Sinnard Ave	8,450	45	50	97	2	1	85		15	
13	5 Street	SR 99	Larkin Rd	6,300	45	50	97	2	1	85		15	
14	5 Street	Larkin Rd	Sinnard Ave	10,600	45	50	97	2	1	85		15	
15	6 Street	Township Rd	Luther Rd	1,425	45	50	97	2	1	85		15	
16	6 Street	Luther Rd	N Street	250	45	50	97	2	1	85		15	
17	Brianne Way	Larkin Rd	Sinnard Ave	7,600	45	50	97	2	1	85		15	
18	Ramsdell Rd	Township Rd	Luther Rd	2,925	45	50	97	2	1	85		15	
19	Ramsdell Rd	Luther Rd	N Street	3,475	45	50	97	2	1	85		15	
	Ramsdell Rd	N Street	Nevada Street	0	45	50		2	1	85			
21	Ramsdell Rd	Nevada Street	SR 99	3,975	45	50	97	2	1	85		15	
22	Ramsdell Rd	SR 99	Larkin Rd	10,750	45	50	97	2	1	85		15	
23	Ramsdell Rd	Larkin Rd	Sinnard Ave	2,825	45	50	97	2	1	85		15	
24	Kola St	Street A	Luther Rd	4,750	45	50	97	2	1	85		15	
25	Kola St	Luther Rd	N Street	6,925	45	50	97	2	1	85		15	
26	Kola St	N Street	SR 99	11,575	45	50	97	2	1	85		15	
27	Kola St	SR 99	Larkin Road	5,925	45	50	97	2	1	85		15	
28	7 Street	Orchard Way	Larkin Rd	1,550	45	50	97	2	1	85		15	
29	Pennington Road	Township Rd	Luther Rd	3,475	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Riviera	Township Rd	SR 99	63.4	54.8	56.3	64.7	22	48	103	221	476
2	Riviera	SR 99	Larkin Rd	58.7	50.1	51.5	59.9	11	23	49	106	229
3	1 Street	Township Rd	Luther Rd	58.2	49.6	51.0	59.4	10	21	46	98	212
4	1 Street	Luther Rd	N Street	63.4	54.8	56.2	64.6	22	47	101	218	470
5	2 Street	SR 99	Larkin Rd	62.8	54.2	55.7	64.1	20	43	93	201	432
6	West Sinnard Ave	Township Rd	Luther Rd	64.6	56.0	57.5	65.8	26	57	122	264	568
7	West Sinnard Ave	Luther Rd	N Street	65.3	56.7	58.2	66.6	30	64	137	295	636
8	West Sinnard Ave	N Street	SR 99 connection	67.3	58.7	60.2	68.6	40	86	186	401	863
9	West Sinnard Ave	SR 99 connection	Larkin Rd	64.9	56.3	57.8	66.1	28	59	128	276	595
10	West Sinnard Ave	Larkin Rd	Orchard Rd	63.1	54.5	56.0	64.3	21	45	97	210	452
11	4 Street	F Street	Larkin Rd	63.4	54.8	56.3	64.7	22	47	102	220	475
12	4 Street	Larkin Rd	Sinnard Ave	65.3	56.7	58.1	66.5	29	63	136	293	630
13	5 Street	SR 99	Larkin Rd	64.0	55.4	56.9	65.2	24	52	112	241	518
14	5 Street	Larkin Rd	Sinnard Ave	66.2	57.6	59.1	67.5	34	73	158	340	733
15	6 Street	Township Rd	Luther Rd	57.5	48.9	50.4	58.8	9	19	41	89	192
16	6 Street	Luther Rd	N Street	50.0	41.4	42.9	51.2	3	6	13	28	60
17	Brianne Way	Larkin Rd	Sinnard Ave	64.8	56.2	57.7	66.0	27	59	127	273	587
18	Ramsdell Rd	Township Rd	Luther Rd	60.7	52.0	53.5	61.9	14	31	67	144	311
19	Ramsdell Rd	Luther Rd	N Street	61.4	52.8	54.3	62.6	16	35	75	162	349
	Ramsdell Rd	N Street	Nevada Street									
21	Ramsdell Rd	Nevada Street	SR 99	62.0	53.4	54.9	63.2	18	38	82	177	381
22	Ramsdell Rd	SR 99	Larkin Rd	66.3	57.7	59.2	67.6	34	74	159	343	740
23	Ramsdell Rd	Larkin Rd	Sinnard Ave	60.5	51.9	53.4	61.7	14	30	65	141	304
24	Kola St	Street A	Luther Rd	62.8	54.2	55.6	64.0	20	43	92	199	429
25	Kola St	Luther Rd	N Street	64.4	55.8	57.3	65.6	26	55	119	256	552
26	Kola St	N Street	SR 99	66.6	58.0	59.5	67.9	36	78	167	361	777
27	Kola St	SR 99	Larkin Road	63.7	55.1	56.6	65.0	23	50	107	231	497
28	7 Street	Orchard Way	Larkin Rd	57.9	49.3	50.8	59.1	9	20	44	94	203
29	Pennington Road	Township Rd	Luther Rd	61.4	52.8	54.3	62.6	16	35	75	162	349

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Pennington Road	Luther Rd	N Street	5,800	45	50	97	2	1	85		15	
2	Pennington Road	N Street	SR 99	13,150	45	50	97	2	1	85		15	
3	Pennington Road	SR 99	Larkin Rd	2,875	45	50	97	2	1	85		15	
4	Pennington Road	Larkin Rd	Sinnard Ave	6,150	45	50	97	2	1	85		15	
5	Presley Street	Township Rd	Richard Ave	3,500	45	50	97	2	1	85		15	
6	Fir Street	Richard Ave	Broadway	4,275	45	50	97	2	1	85		15	
7	Elm St	Broadway	SR 99	3,650	45	50	97	2	1	85		15	
8	Elm St	SR 99	Larkin Rd	3,675	45	50	97	2	1	85		15	
9	Archer Avenue	SR 99	K Street	6100	45	50	97	2	1	85		15	
10	Ash St-Apricot	Broadway	SR 99	12,385	45	50	97	2	1	85		15	
11	Apricot St	Richard Ave	Broadway	6,250	45	50	97	2	1	85		15	
12	Ash St	SR 99	K Street	6100	45	50	97	2	1	85		15	
13	8 Street	Township Rd	Cannon Way	2,275	45	50	97	2	1	85		15	
14	9 Street	Richard Ave	Larkin Rd	1,050	45	50	97	2	1	85		15	
15	10 Street	SR 99	Sinnard Ave	1,300	45	50	97	2	1	85		15	
16	11 Street	Richard Avenue	Larkin Road	1850	45	50	97	2	1	85		15	
17	12 Street	Richard Ave	Larkin Road	1850	45	50	97	2	1	85		15	
18	Bishop Avenue	SR 99	Sinnard Ave	10,850	45	50	97	2	1	85		15	
19	13 Street	Township Rd	Richard Ave	2,600	45	50	97	2	1	85		15	
20	13 Street	Richard Avenue	Larkin Road	5,450	45	50	97	2	1	85		15	
21	14 Street	Township Road	Richard Ave	3,250	45	50	97	2	1	85		15	
22	14 Street	Richard Avenue	Larkin Road	9,025	45	50	97	2	1	85		15	
23	Paseo Avenue	Township Rd	Richard Ave	3,775	45	50	97	2	1	85		15	
24	Paseo Avenue	Richard Avenue	Larkin Road	5,450	45	50	97	2	1	85		15	
25	Paseo Avenue	Larking Road	D Street	7,025	45	50	97	2	1	85		15	
26	Paseo Avenue	D Street	SR 99	10,750	45	50	97	2	1	85		15	
27	Paseo Avenue	SR 99	Sinnard Ave	3,400	45	50	97	2	1	85		15	
28	Clark Road	Township Rd	Broadway	8,400	45	50	97	2	1	85		15	
29	Township Rd	Butte Co line	Riviera Rd	7,750	45	50	97	2	1	85		15	



**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Pennington Road	Luther Rd	N Street	63.6	55.0	56.5	64.9	23	49	106	228	490
2	Pennington Road	N Street	SR 99	67.2	58.6	60.1	68.4	39	85	182	393	846
3	Pennington Road	SR 99	Larkin Rd	60.6	52.0	53.5	61.8	14	31	66	143	307
4	Pennington Road	Larkin Rd	Sinnard Ave	63.9	55.3	56.8	65.1	24	51	110	237	510
5	Presley Street	Township Rd	Richard Ave	61.4	52.8	54.3	62.7	16	35	75	163	350
6	Fir Street	Richard Ave	Broadway	62.3	53.7	55.2	63.5	19	40	86	186	400
7	Elm St	Broadway	SR 99	61.6	53.0	54.5	62.9	17	36	78	167	360
8	Elm St	SR 99	Larkin Rd	61.6	53.0	54.5	62.9	17	36	78	168	362
9	Archer Avenue	SR 99	K Street	63.8	55.2	56.7	65.1	24	51	109	235	507
10	Ash St-Apricot	Broadway	SR 99	66.9	58.3	59.8	68.2	38	81	175	377	813
11	Apricot St	Richard Ave	Broadway	64.0	55.3	56.8	65.2	24	52	111	239	515
12	Ash St	SR 99	K Street	63.8	55.2	56.7	65.1	24	51	109	235	507
13	8 Street	Township Rd	Cannon Way	59.6	51.0	52.4	60.8	12	26	57	122	263
14	9 Street	Richard Ave	Larkin Rd	56.2	47.6	49.1	57.5	7	16	34	73	157
15	10 Street	SR 99	Sinnard Ave	57.1	48.5	50.0	58.4	8	18	39	84	181
16	11 Street	Richard Avenue	Larkin Road	58.7	50.1	51.5	59.9	11	23	49	106	229
17	12 Street	Richard Ave	Larkin Road	58.7	50.1	51.5	59.9	11	23	49	106	229
18	Bishop Avenue	SR 99	Sinnard Ave	66.3	57.7	59.2	67.6	35	74	160	346	745
19	13 Street	Township Rd	Richard Ave	60.1	51.5	53.0	61.4	13	29	62	133	287
20	13 Street	Richard Avenue	Larkin Road	63.4	54.8	56.2	64.6	22	47	101	218	470
21	14 Street	Township Road	Richard Ave	61.1	52.5	54.0	62.4	15	33	72	155	333
22	14 Street	Richard Avenue	Larkin Road	65.5	56.9	58.4	66.8	31	66	142	306	659
23	Paseo Avenue	Township Rd	Richard Ave	61.8	53.2	54.6	63.0	17	37	79	171	368
24	Paseo Avenue	Richard Avenue	Larkin Road	63.4	54.8	56.2	64.6	22	47	101	218	470
25	Paseo Avenue	Larking Road	D Street	64.5	55.9	57.3	65.7	26	56	120	259	557
26	Paseo Avenue	D Street	SR 99	66.3	57.7	59.2	67.6	34	74	159	343	740
27	Paseo Avenue	SR 99	Sinnard Ave	61.3	52.7	54.2	62.6	16	34	74	159	344
28	Clark Road	Township Rd	Broadway	65.2	56.6	58.1	66.5	29	63	135	291	628
29	Township Rd	Butte Co line	Riviera Rd	64.9	56.3	57.8	66.1	28	59	128	276	595

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	Township Rd	Riviera Rd	Sinnard Ave	6,650	45	50	97	2	1	85		15	
2	Township Rd	Sinnard Avenue	Pennington Road	8,500	45	50	97	2	1	85		15	
3	Township Rd	Pennington Road	8 Street	8,725	45	50	97	2	1	85		15	
4	Township Rd	8 Street	Paseo Avenue	7,725	45	50	97	2	1	85		15	
5	Township Rd	Paseo Avenue	Clark Road	8,400	45	50	97	2	1	85		15	
6	A Street	Riviera Rd	Sinnard Ave	3,450	45	50	97	2	1	85		15	
7	A Street	Sinnard Avenue	Kola St	5,000	45	50	97	2	1	85		15	
8	A Street	Kola St	Pennington Road	7,625	45	50	97	2	1	85		15	
9	A Street	Pennington Road	8 Street	5,575	45	50	97	2	1	85		15	
10	A Street	8 Street	Paseo Avenue	6,050	45	50	97	2	1	85		15	
11	Luther Rd	Riviera Rd	Sinnard Avenue	3,450	45	50	97	2	1	85		15	
12	Luther Rd	Sinnard Avenue	Pennington Rd	4,150	45	50	97	2	1	85		15	
13	Richard Ave	Pennington Rd	Apricot St	4,600	45	50	97	2	1	85		15	
14	Richard Ave	Apricot St	13 Street	5,450	45	50	97	2	1	85		15	
15	Richard Ave	13 Street	Paseo Avenue	6,900	45	50	97	2	1	85		15	
16	C Street	Riviera Road	Sinnard Avenue	1,850	45	50	97	2	1	85		15	
17	C Street	Sinnard Avenue	Ramsdell	1,800	45	50	97	2	1	85		15	
18	N Street	1 Street	Sinnard Avenue	4,025	45	50	97	2	1	85		15	
19	N Street	Sinnard Avenue	Ramsdell	2,400	45	50	97	2	1	85		15	
20	N Street	Ramsdell	Kola St	2,200	45	50	97	2	1	85		15	
21	N Street	Kola St	Pennington Rd	7,200	45	50	97	2	1	85		15	
22	N Street	Pennington Rd	Fir St	10,850	45	50	97	2	1	85		15	
23	N Street	Fir St	Apricot St	8,950	45	50	97	2	1	85		15	
24	N Street	Apricot St	13 Street	9,150	45	50	97	2	1	85		15	
25	N Street	13 Street	Paseo Avenue	3,200	45	50	97	2	1	85		15	
26	Broadway	Pennington Rd	Elm Street	3,625	45	50	97	2	1	85		15	
27	Broadway	Elm Street	Ash-Apricot Conn	1,825	45	50	97	2	1	85		15	
28	Broadway	Ash-Apricot	Apricot St	13,975	45	50	97	2	1	85		15	
29	West Larkin Road	Apricot St	13 Street	8,625	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Township Rd	Riviera Rd	Sinnard Ave	64.2	55.6	57.1	65.5	25	54	116	249	537
2	Township Rd	Sinnard Avenue	Pennington Road	65.3	56.7	58.2	66.5	29	63	136	294	633
3	Township Rd	Pennington Road	8 Street	65.4	56.8	58.3	66.6	30	64	139	299	644
4	Township Rd	8 Street	Paseo Avenue	64.9	56.3	57.8	66.1	28	59	128	276	594
5	Township Rd	Paseo Avenue	Clark Road	65.2	56.6	58.1	66.5	29	63	135	291	628
6	A Street	Riviera Rd	Sinnard Ave	61.4	52.8	54.3	62.6	16	35	75	161	347
7	A Street	Sinnard Avenue	Kola St	63.0	54.4	55.9	64.2	21	44	96	206	444
8	A Street	Kola St	Pennington Road	64.8	56.2	57.7	66.1	27	59	127	273	589
9	A Street	Pennington Road	8 Street	63.5	54.9	56.3	64.7	22	48	103	222	478
10	A Street	8 Street	Paseo Avenue	63.8	55.2	56.7	65.1	23	50	109	234	504
11	Luther Rd	Riviera Rd	Sinnard Avenue	61.4	52.8	54.3	62.6	16	35	75	161	347
12	Luther Rd	Sinnard Avenue	Pennington Rd	62.2	53.6	55.1	63.4	18	39	85	182	392
13	Richard Ave	Pennington Rd	Apricot St	62.6	54.0	55.5	63.9	20	42	91	195	420
14	Richard Ave	Apricot St	13 Street	63.4	54.8	56.2	64.6	22	47	101	218	470
15	Richard Ave	13 Street	Paseo Avenue	64.4	55.8	57.3	65.6	26	55	119	256	551
16	C Street	Riviera Road	Sinnard Avenue	58.7	50.1	51.5	59.9	11	23	49	106	229
17	C Street	Sinnard Avenue	Ramsdell	58.5	49.9	51.4	59.8	10	22	48	104	225
18	N Street	1 Street	Sinnard Avenue	62.0	53.4	54.9	63.3	18	38	83	178	384
19	N Street	Sinnard Avenue	Ramsdell	59.8	51.2	52.7	61.0	13	27	59	126	272
20	N Street	Ramsdell	Kola St	59.4	50.8	52.3	60.7	12	26	55	119	257
21	N Street	Kola St	Pennington Rd	64.6	56.0	57.4	65.8	26	57	122	263	566
22	N Street	Pennington Rd	Fir St	66.3	57.7	59.2	67.6	35	74	160	346	745
23	N Street	Fir St	Apricot St	65.5	56.9	58.4	66.8	30	65	141	304	655
24	N Street	Apricot St	13 Street	65.6	57.0	58.5	66.9	31	66	143	308	665
25	N Street	13 Street	Paseo Avenue	61.0	52.4	53.9	62.3	15	33	71	153	330
26	Broadway	Pennington Rd	Elm Street	61.6	53.0	54.5	62.8	17	36	77	166	359
27	Broadway	Elm Street	Ash-Apricot Conn	58.6	50.0	51.5	59.9	11	23	49	105	227
28	Broadway	Ash-Apricot	Apricot St	67.4	58.8	60.3	68.7	41	88	190	409	881
29	West Larkin Road	Apricot St	13 Street	65.4	56.7	58.2	66.6	30	64	138	297	639

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	West Larkin Road	13 Street	Paseo Avenue	9,050	45	50	97	2	1	85		15	
2	D Street	11 Street	Paseo Avenue	8,500	45	50	97	2	1	85		15	
3	E Street	Riviera Road	2 Street	5,750	45	50	97	2	1	85		15	
4	F Street	2 Street	Sinnard Avenue	2,100	45	50	97	2	1	85		15	
5	F Street	Sinnard Avenue	SR 99	4,400	45	50	97	2	1	85		15	
6	East Larkin Road	Butte Co line	Riviera Rd	13,150	45	50	97	2	1	85		15	
7	East Larkin Road	Riveira Road	Sinnard Avenue	12,950	45	50	97	2	1	85		15	
8	East Larkin Road	Sinnard Avenue	5 Street	9,700	45	50	97	2	1	85		15	
9	East Larkin Road	5 Street	Ramsdell Dr	16,300	45	50	97	2	1	85		15	
10	East Larkin Road	Ramsdell Dr	Pennington Rd	10,600	45	50	97	2	1	85		15	
11	East Larkin Road	Pennington Rd	Ash Street	8,850	45	50	97	2	1	85		15	
12	K Street	Pennington Road	Ash Street	6,050	45	50	97	2	1	85		15	
13	K Street	Ash Street	Bishop Avenue	3,400	45	50	97	2	1	85		15	
14	Orchard Way	Sinnard Avenue	Ramsdell Dr	7,575	45	50	97	2	1	85		15	
15	Orchard Way	Ramsdell Dr	Pennington Rd	6,150	45	50	97	2	1	85		15	
16	Sinnard Avenue	4 Street	Ramsdell Dr	3,500	45	50	97	2	1	85		15	
17	Sinnard Avenue	Ramsdell Dr	Pennington Rd	3,225	45	50	97	2	1	85		15	
18	Sinnard Avenue	Pennington Road	Bishop Avenue	3,025	45	50	97	2	1	85		15	
19	Sinnard Avenue	Bishop Avenue	Paseo Avenue	3,400	45	50	97	2	1	85		15	
20	Metter Road	Riviera Road	Brianne Way	2,000	45	50	97	2	1	85		15	
21	Metter Road	Brianne Way	Pennington Road	4,000	45	50	97	2	1	85		15	
22	Sheldon Road	Pennington Road	Bishop Road	500	45	50	97	2	1	85		15	
23	SR 99	Butte Co line	Riviera Road	23,250	45	50	97	2	1	85		15	
24	SR 99	Riviera Rd	Sinnard Ave	30,500	45	50	97	2	1	85		15	
25	SR 99	Sinnard Avenue	F Street	32,650	45	50	97	2	1	85		15	
26	SR 99	F Street	Ramsdell Dr	32,650	45	50	97	2	1	85		15	
27	SR 99	Ramsdell Dr	Kola St	44,075	45	50	97	2	1	85		15	
28	SR 99	Kola St	Pennington Road	36,675	45	50	97	2	1	85		15	
29	SR 99	Pennington Road	Ash-Apricot	35,100	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	West Larkin Road	13 Street	Paseo Avenue	65.6	57.0	58.4	66.8	31	66	142	306	660
2	D Street	11 Street	Paseo Avenue	65.3	56.7	58.2	66.5	29	63	136	294	633
3	E Street	Riviera Road	2 Street	63.6	55.0	56.5	64.8	23	49	105	226	488
4	F Street	2 Street	Sinnard Avenue	59.2	50.6	52.1	60.5	12	25	54	116	249
5	F Street	Sinnard Avenue	SR 99	62.4	53.8	55.3	63.7	19	41	88	189	408
6	East Larkin Road	Butte Co line	Riviera Rd	67.2	58.6	60.1	68.4	39	85	182	393	846
7	East Larkin Road	Riveira Road	Sinnard Avenue	67.1	58.5	60.0	68.4	39	84	180	389	838
8	East Larkin Road	Sinnard Avenue	5 Street	65.9	57.3	58.7	67.1	32	69	149	321	691
9	East Larkin Road	5 Street	Ramsdell Dr	68.1	59.5	61.0	69.4	45	98	210	453	977
10	East Larkin Road	Ramsdell Dr	Pennington Rd	66.2	57.6	59.1	67.5	34	73	158	340	733
11	East Larkin Road	Pennington Rd	Ash Street	65.5	56.9	58.3	66.7	30	65	140	302	650
12	K Street	Pennington Road	Ash Street	63.8	55.2	56.7	65.1	23	50	109	234	504
13	K Street	Ash Street	Bishop Avenue	61.3	52.7	54.2	62.6	16	34	74	159	344
14	Orchard Way	Sinnard Avenue	Ramsdell Dr	64.8	56.2	57.7	66.0	27	59	126	272	586
15	Orchard Way	Ramsdell Dr	Pennington Rd	63.9	55.3	56.8	65.1	24	51	110	237	510
16	Sinnard Avenue	4 Street	Ramsdell Dr	61.4	52.8	54.3	62.7	16	35	75	163	350
17	Sinnard Avenue	Ramsdell Dr	Pennington Rd	61.1	52.5	54.0	62.3	15	33	71	154	332
18	Sinnard Avenue	Pennington Road	Bishop Avenue	60.8	52.2	53.7	62.0	15	32	68	147	318
19	Sinnard Avenue	Bishop Avenue	Paseo Avenue	61.3	52.7	54.2	62.6	16	34	74	159	344
20	Metter Road	Riviera Road	Brianne Way	59.0	50.4	51.9	60.3	11	24	52	112	241
21	Metter Road	Brianne Way	Pennington Road	62.0	53.4	54.9	63.3	18	38	82	178	383
22	Sheldon Road	Pennington Road	Bishop Road	53.0	44.4	45.9	54.2	4	10	21	44	96
23	SR 99	Butte Co line	Riviera Road	69.7	61.1	62.5	70.9	57	124	267	574	1238
24	SR 99	Riviera Rd	Sinnard Ave	70.8	62.2	63.7	72.1	69	148	320	688	1483
25	SR 99	Sinnard Avenue	F Street	71.1	62.5	64.0	72.4	72	155	334	720	1552
26	SR 99	F Street	Ramsdell Dr	71.1	62.5	64.0	72.4	72	155	334	720	1552
27	SR 99	Ramsdell Dr	Kola St	72.4	63.8	65.3	73.7	88	190	408	880	1896
28	SR 99	Kola St	Pennington Road	71.6	63.0	64.5	72.9	78	168	361	778	1677
29	SR 99	Pennington Road	Ash-Apricot	71.4	62.8	64.3	72.7	76	163	351	756	1629

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

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Ground Type :** Soft  
**Metric (L<sub>eq</sub>, L<sub>dn</sub>, CNEL) :** CNEL

**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)
		From	To										
1	SR 99	Ash-Apricot	Bishop Avenue	43,250	45	50	97	2	1	85		15	
2	SR 99	Bishop Avenue	Paseo Avenue	40,800	45	50	97	2	1	85		15	
3	SR 99	Paseo Avenue	Clark Road	51,475	45	50	97	2	1	85		15	

**Appendix XX**  
**Traffic Noise Prediction Model, (FHWA RD-77-108)**  
**Predicted Noise Levels**

**Project Name :** Live Oak GPU  
**Project Number :** 8110072.01  
**Modeling Condition :** Future + GPU  
**Metric (Leq, Ldn, CNEL) :** CNEL



Segment	Roadway	Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	SR 99	Ash-Apricot	Bishop Avenue	72.4	63.7	65.2	73.6	87	187	403	869	1872
2	SR 99	Bishop Avenue	Paseo Avenue	72.1	63.5	65.0	73.3	84	180	388	836	1801
3	SR 99	Paseo Avenue	Clark Road	73.1	64.5	66.0	74.4	98	210	453	976	2102