



Appendix I-1: Noise Element Data



APPENDIX I-1: NOISE ELEMENT DATA

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Table 1: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L ₀₂ , L ₀₈ , L ₅₀ , L ₉₀	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L _{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L _{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L _{max} , L _{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurement and Noise Control 1991.

Table 2: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ times as loud
Suburban Street	55	Quiet	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ times as loud
Large Transformer	45	Quiet	
Average Residence without Stereo Playing	40	Faint	⅙ times as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing
	0	Very Faint	

Source: Compiled by LSA Associates, Inc., 2004.

Table 3: Short-Term Ambient Noise Monitoring Results (15 minutes)

ID	Location	Start Time	Leq (dBA)	Noise Sources	Remarks
1	20 feet (ft) from the street, on the southwest corner of Riverside Drive and Wineville Avenue.	3:21 p.m.	73.2	Traffic on SR-60, I-15, and Riverside Drive and Wineville Avenue.	Intersection is a four-way controlled stop. Land uses are all industrial.
2	30 ft from the street, on the northwest corner of the Etiwanda Avenue and Cantu Galleano Ranch Road.	2:41 p.m.	67.4	Traffic on Etiwanda Avenue and Cantu Galleano Ranch Road.	Four-legged signalized intersection. Land use is light industry, sports ground, and empty space.
3	5 ft from the street, on the southeast corner of Jurupa Road and Troth Street.	3:54 p.m.	69.1	Traffic on Jurupa Road and Troth Street.	Intersection is a four-way controlled stop. Commercial other than residential house on southeast corner.
4	10 ft from the street, on the southwest corner of Magnolia Avenue and McKinley Street.	1:34 p.m.	70.2	Traffic on McKinley Street and Magnolia Avenue.	Intersection is signal-controlled; both streets are major streets with heavy traffic in each direction. Land use is commercial, preschool, and residential area away from intersection.
5	20 ft south of Indiana Avenue at bend in street, near intersection of Indiana Avenue and Barker Lane.	12:53 p.m.	58.0	Traffic on Indiana Avenue; children playing and talking at nearby residence.	Airplanes flying over the sound meter and train passing screened out. Land use is residential and mountain area.
6	20 ft from the street, on the northeast corner of Cajalco Road and Eagle Canyon Road.	10:43 a.m.	72.5	Cars and heavy trucks traffic on Cajalco Road and Eagle Canyon Road.	Three-legged intersection with a stop sign for Eagle Canyon Road and Cajalco Road has right-of-way (ROW) – heavy trucks consistently exiting and entering Eagle Canyon Road. Land use is empty space at intersection of Cajalco Road and Eagle Canyon Road, and a few residential areas on eastside.
7	5 ft east of 34th Street and 75 ft from northeast corner of Armstrong Road and 34th Street.	4:38 p.m.	62.8	Traffic on Armstrong/Valley Road and 34th Street.	Four-legged signalized intersection. Land use is residential or empty space.
8	30 ft from the street, on the northeast corner of McAllister Street and El Sobrante Road.	5:04 p.m.	68.1	Traffic on McAllister Street and El Sobrante Road.	Three-legged intersection with a stop sign for McAllister Street; residential on the northwest corner.
9	140 ft west of Via Lakistas, on sidewalk, 3 ft south from Eureka Street.	1:34 p.m.	44.3	Traffic on Eureka Street and Via Lakistas.	Intersection is a two-way controlled stop; Via Lakistas has ROW. Land use is residential.
10	20 ft from the street, on the southeast corner of Center Street and Mt. Vernon Avenue.	5:27 p.m.	63.7	Traffic on Center Street and Mt. Vernon Avenue (more traffic).	Four-way stop sign intersection. Land use is residential, open space, and agricultural.
11	20 ft from Washington Street, on the northwest corner of Washington Street and Van Buren Boulevard.	4:23 p.m.	65.2	Cars passing on Washington Street and Van Buren Boulevard; cars pulling in/out lot on Washington Street close by the sound meter.	Four-legged signalized intersection; commercial 7-11 market located in the northwest corner of intersection.
12	5 ft from the street, on the southeast corner of Cajalco Road and El Sobrante Road.	3:38 a.m.	74.8	Traffic on Cajalco Road and El Sobrante Road.	Three-legged intersection with a signal.
13	15 ft south of Ellis Avenue; SH-74 to the North.	10:10 a.m.	71.7	Traffic on SH-74 and Ellis Avenue.	Heavy traffic on SH-74; intersection 250 ft south from Ellis Avenue is signal-controlled. Land use is low- density residential or empty space.
14	25 ft from southbound SH- 74, driveway to residential area.	9:40 a.m.	71.0	Traffic on SH-74.	High speed on SH-74; low density residential area.
15	20 ft south of Ramona Expressway, on the northwest corner of Hansen Avenue and Reservoir Avenue.	11:25 a.m.	73.5	Traffic on Ramona Expressway; traffic on Davis/Hansen Avenue.	Heavy traffic and many heavy trucks on Ramona Expressway. Land use is composed of commercial, sports field, and empty space.



Table 3: Short-Term Ambient Noise Monitoring Results (15 minutes)

ID	Location	Start Time	Leq (dBA)	Noise Sources	Remarks
16	10 ft east of Olson Avenue, near intersection of McWade Avenue and Olson Avenue.	4:55 p.m.	56.5	Traffic on Olson; light traffic on McWade Avenue.	Light traffic on Olson Avenue and McWade Avenue. Children talking and playing outside, a few dogs barking. Land use is residential.
17	25 ft west of SR-79, on the northwest corner of SR-79 and Scott Road, 150 ft north from Scott Road.	3:20 p.m.	71.1	Heavy traffic and high speed on SR-79; traffic on Scott Road.	Intersection is signal controlled. Land use is empty space.
18	20 ft from south of De Portola Road (nearby address #34265).	12:55 p.m.	46.3	Very low traffic and slow speed on De Portola Road, community noise, farmer working and talking nearby.	Helicopters flying over the sound meter but screened out during monitoring work. Land use is farmland.
19	10 ft from the street, on northeast corner of Cherry Valley Boulevard and Beaumont Avenue.	12:40 p.m.	66.3	Traffic on Cherry Valley Boulevard and Beaumont Avenue.	Intersection is signal-controlled; moderate traffic levels on Cherry Valley Boulevard and Beaumont Avenue; aircraft flying over the sound meter (screened out); more traffic on Beaumont Avenue. Land use is commercial, community center, and a school.
20	15 ft from the street, on southeast corner of Mayberry Avenue and Cornell Street.	4:20 p.m.	58.1	Traffic on Cornell Street and Mayberry Avenue.	Intersection is a two-way controlled stop; Cornell Street has ROW; low traffic both roadways. Land use is residential.
21	10 ft south of SR 79, Radec junction of SR 79, and Sage Road.	2:00 p.m.	69.4	Traffic on SR 79 and Sage Road.	Heavy traffic on SR 79; low traffic on Sage Road. Land use is commercial and residential, and one commercial building located northwest is closed.
22	15 ft from the street, on the northwest corner of Broadway Road and Bonita Avenue.	9:53 a.m.	62.0	Traffic on Broadway Road and Bonita Avenue.	Intersection is a two-way controlled stop on Bonita Avenue; Broadway Road has ROW; residential developments in the southwest corner of the intersection. Windy conditions.
231	In front of entrance gate to windmill farm (Green Power); on north corner of Ruppert Street and 19th Avenue.	4:30 p.m.	51.7	Windmill noise. Traffic on I-10, 2,000 ft away from the sound meter but faint.	Aircraft flying over the sound meter but screened out; quiet area. Land use is office, light industrial, and windmill farm.
24	10 ft from the street, on the southwest corner of Ramon Road and Desert Moon Drive.	3:45 p.m.	69.8	Traffic on Ramon Road and Desert Moon Drive.	Intersection is a two-way controlled stop; Ramon Road has ROW; more traffic on Ramon Road. Land use is residential, commercial, and empty.
25	30 ft from the street, on the northwest corner of Adams Street and 42nd Avenue.	3:00 p.m.	65.6	Traffic on Adams Street and 42nd Avenue.	Intersection is a four-way controlled stop; residential development on three corners. Bermuda Dunes Country Club is located south of 42nd Avenue.
26	15 ft from south of SH-74 across Pinyon 30 Fire Station.	12:40 p.m. (Nov. 5, 2010)	68.1	Traffic on SH-74, faint radio sound, faint people talking.	Posted speed limits on SH-74 are 35 mph but actual speeds are higher than that; roadway pavement condition was rough.
27	30 ft from the street, on the northwest corner of Highway 86 and 62nd Avenue.	2:00 p.m.	69.3	Heavy and high speed traffic on Highway 86 and lower speed traffic on 62nd Avenue.	Intersection is a two-way controlled stop; Highway 86 has ROW. Roadway construction activities occurred approximately 2,000 ft away from the sound meter but faint noise. Land use is farmland. A little windy weather conditions.
28	15 ft south from Ragsdale Road; 150 ft west from Desert Center Rice Road.	4:35 p.m.	61.8	Traffic on I-10 (approximately 1,000 ft south from the sound meter), low speed trucks on Ragsdale Road, and parking activities.	Trucks are idling in the parking lot and moving slowly. Land use is commercial, parking lot, and empty space.
29	20 ft from the street, on the	2:15 p.m.	63.2	Traffic on 28th Street and	Intersection is a three-legged intersection;



Table 3: Short-Term Ambient Noise Monitoring Results (15 minutes)

ID	Location	Start Time	Leq (dBA)	Noise Sources	Remarks
	southeast corner of Arrow- head Boulevard and 28th Avenue.			Arrowhead Boulevard, two tractors on Arrowhead, and agricultural equipment nearby.	free flowing traffic on 28th Avenue; Arrowhead Boulevard has a stop sign. Land use is farmland.

Source: LSA Associates, Inc., March 2011.

1 This measurement was conducted within the City of Palm Springs because the proposed monitoring location was not available.

dBA = A-weighted decibels

L_{eq} = equivalent continuous sound level

SH = State Highway

Table 4: Meteorological Conditions During Short-Term Monitoring

Site Number	Maximum Wind Speed (mph)	Average Wind Speed (mph)	Temperature (°F)	Relative Humidity (%)
1	8.1	3.5	95.7	12.7
2	4.8	0.8	96.4	12.7
3	4.6	0.8	94.6	14.2
4	7.1	1.7	96.4	11.5
5	6.8	1.3	98.6	9.3
6	6.9	1.1	94.6	12.5
7	6.8	2.4	93.2	14.5
8	4.9	2.2	87.3	18.9
9	8.7	3.6	88.3	15.2
10	3.6	1.5	86.9	18.4
11	8.8	1.7	88.4	12.5
12	6.0	1.7	91.9	12.1
13	1.5	0.9	81.6	16.5
14	1.3	0.8	77.1	19.5
15	4.4	2.7	84.7	12.0
16	2.3	1.8	85.2	10.9
17	5.4	2.6	95.6	8.2
18	4.7	2.2	91.2	18.8
19	5.1	3.8	80.1	10.0
20	2.5	1.1	91.3	23.4
21	6.7	4.1	91.1	17.2
22	13.3	10.5	85.9	23.0
23	4.4	3.6	90.5	8.5
24	2.4	1.2	92.3	13.5
25	2.7	1.7	93.7	14.2
26	3.6	2.2	79.7	19.2
27	8.5	4.4	96.7	14.3
28	3.6	2.7	89.9	12.1
29	4.6	3.1	90.2	24.1

Source: LSA Associates, Inc., March 2011.

°F = degrees Fahrenheit

mph = miles per hour



Table 5: Base Year Condition (2007) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 L _{dn} (ft)	Centerline to 65 L _{dn} (ft)	Centerline to 60 L _{dn} (ft)	L _{dn} (dBA) 50 ft from Centerline of Outermost Lane
38th Avenue between Del Webb Boulevard and western city limits of Indio	10,600	< 50	57	121	65.1
42nd Avenue between Washington Street and Yucca Lane	15,700	< 50	85	180	66.6
54th Avenue between Monroe Street and Jackson Street	10,000	< 50	87	187	67.9
62nd Avenue between eastern city limits of La Quinta and Jackson Street	10,400	< 50	78	167	67.2
Agua Mansa Road between Market Street and Wilson Street	13,300	< 50	95	204	67.9
Airport Boulevard between Van Buren Street and Fredrick Street	6,200	< 50	51	110	64.4
Archibald Avenue between Limonite Avenue and northern county limits of Riverside	18,000	69	149	320	71.4
Archibald Avenue between River Road and Chandler Street	9,300	< 50	94	203	68.4
Armstrong Avenue between Sierra Avenue and SH-60	20,800	58	124	266	70.2
Bellegrave Avenue between Cantu Galleano Ranch Road and Marlatt Street	14,300	56	119	256	69.9
Bellegrave Avenue between Bain Street and Van Buren Boulevard	10,100	< 50	104	223	69.0
Bellegrave Avenue between Ontario Freeway and Wineville Avenue	12,500	< 50	105	224	68.0
Bob Hope Drive between Ramon Road and Dinah Shore Drive	15,100	< 50	103	220	67.9
Briggs Road between Los Alamos Road and SH-79	7,700	< 50	63	134	65.1
Broadway between southern city limits of Blythe and Seeley Avenue	8,500	< 50	< 50	105	63.0
Cactus Avenue between Elsworth Street and I-215	24,100	57	117	251	68.7
Cajalco Road between Temescal Canyon Road and La Sierra Avenue	13,800	< 50	75	162	67.0
Cajalco Road between El Sobrante Road and Gavilan Road	14,900	52	110	236	68.8
Cajalco Road between Patterson Avenue and Day Street	13,300	< 50	96	205	67.9
Camino Real between Jurupa Road and Limonite Avenue	10,300	< 50	58	124	65.2
Cantu Galleano Ranch Road between Etiwanda Avenue and Van Buren Boulevard	20,500	102	217	466	72.8
Center Street between Iowa Avenue and Mount Vernon Avenue	6,700	< 50	58	120	63.9
Citrus Street between Cleveland Avenue and Summer Avenue	8,700	< 50	59	128	65.4
Clay Street between Limonite Avenue and Van Buren Boulevard	14,000	< 50	85	181	66.6
Clinton Keith Road between western city limits of Murrieta and Los Alamos Road	11,800	< 50	86	184	67.2
Country Village Road between Granite Hill Drive and Philadelphia Street	20,300	68	142	304	70.0
Del Webb Boulevard between Washington Street and 38th Avenue	12,800	< 50	80	169	66.1
Desert Moon Drive between Ramon Road and Varner Road	10,300	< 50	69	141	64.4
Dillon Road between Long Canyon Road and Bennett Road	9,100	< 50	88	188	67.9
Domenigoni Parkway between Warren Road and Patterson Avenue	28,400	139	295	634	74.4
Domenigoni Road between SH-79 and Patterson Avenue	27,200	136	289	621	74.2
E Streettson Avenue between eastern city limits of Hemet and Girard Street	12,500	< 50	95	205	68.5
El Sobrante Road between Cajalco Road and Mockingbird Canyon Road	11,600	< 50	77	165	67.1
Ellis Avenue between Theda Street and Marshall Road	9,000	< 50	82	175	66.9
Etiwanda Avenue between SH-60 and Philadelphia Street	33,400	108	227	487	72.6
Etiwanda Avenue between Limonite Avenue and Holmes Avenue	8,400	< 50	57	118	63.7
Felspar Road between Mission Boulevard and Galena Street	11,500	< 50	92	198	68.3
Gavilan Road between Cajalco Road and Multiview Drive	11,200	< 50	67	145	66.2
Gilman Springs Road between ramps on SH-79 and State Street	17,900	94	202	435	73.4
Gilman Springs Road between Jack Rabbit Trail and Bridge Street	16,300	84	179	386	72.0



Table 5: Base Year Condition (2007) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 L _{dn} (ft)	Centerline to 65 L _{dn} (ft)	Centerline to 60 L _{dn} (ft)	L _{dn} (dBA) 50 ft from Centerline of Outermost Lane
Graeber Street between Cactus Avenue and Meyer Street	8,600	< 50	< 50	66	60.4
Grand Avenue between Corydon Road and Ortega Highway	13,600	< 50	96	206	68.5
Hamner Avenue between Limonite Avenue and 65th Street	15,000	63	123	258	68.1
Hamner Avenue between northern city limits of Norco and 68th Street	8,800	< 50	85	180	66.5
Harrison Street between 62nd Avenue and 54th Avenue	12,300	87	187	403	72.9
Horsethief Canyon Road between Temecula Valley Freeway and Mountain Road	10,600	< 50	57	123	65.2
I-10 between Apache Trail and Fields Road	132,800	823	1,770	3,811	84.7
I-10 between SH-111 and Tipton Road	106,600	774	1,665	3,585	84.6
I-10 between Ramon Road and Date Palm Drive	112,800	730	1,570	3,379	84.0
I-10 between SH-62 and Tipton Road	106,800	774	1,666	3,588	84.6
I-10 between Ramon Road and Monterey Avenue	118,200	736	1,582	3,408	84.3
I-10 between SH-86 and Dillon Road	25,800	418	899	1,936	82.1
I-10 between Dillon Road and Box Canyon Road	25,500	429	922	1,986	81.8
I-10 between Red Cloud Mine Road and Eagle Mountain Road	25,500	431	926	1,995	81.8
I-10 between Hayfield Road and Red Cloud Mine Road	15,500	417	898	1,933	81.6
I-10 between Box Canyon Road and Summit Road	25,500	431	926	1,995	81.8
I-10 between Chuckwalla Valley Road and Willey Well Road	24,900	433	932	2,008	81.9
I-10 between Willey Well Road and Mesa Drive	25,900	434	935	2,013	81.9
I-15 between Mission Boulevard and Philadelphia Street	191,000	617	1,325	2,853	82.9
I-15 between SH-79 and Rainbow Valley Boulevard West	146,700	527	1,130	2,433	81.8
I-215 between Van Buren Boulevard and Oleander Avenue	139,700	458	984	2,118	81.5
Indian Avenue between Dillon Road and 18th Avenue	17,600	69	146	314	70.7
Iowa Avenue between Center Street and northern city limits of Riverside	23,300	80	167	357	70.6
Jurupa Road between Valley Way and Camino Real	9,000	< 50	58	117	63.2
Knabe Road between Temecula Valley Freeway and Hunt Road	15,700	< 50	107	226	67.6
Cleveland Avenue between southern city limits of Riverside and Dufferin Avenue	15,700	< 50	99	212	68.1
Limonite Avenue between Archibald Avenue and Harrison Avenue	7,700	< 50	65	140	66.0
Limonite Avenue between Hamner Avenue and I-15	22,900	73	152	323	70.0
Limonite Avenue between Pedley Road and Clay Street	16,600	58	121	258	68.9
Limonite Avenue between Pedley Road and Van Buren Boulevard	17,100	77	162	348	70.9
Limonite Avenue between Etiwanda Avenue and Marlatt Street	19,300	61	130	280	70.5
Limonite Avenue between Van Buren Boulevard and Felspar Road	25,700	97	203	435	71.9
Limonite Avenue between Peralta Place and Camino Real	16,800	57	114	242	68.1
Los Alamos Road between Briggs Road and Whitewood Road	11,200	< 50	70	150	65.9
Los Alamos Road between eastern city limits of Murrieta and Briggs Road	11,300	< 50	70	150	66.5
Market Street between Aquamansa Road and Rubidoux Boulevard	17,300	57	121	259	69.4
Markham Street between Mocking Bird Canyon Boulevard and Washington Street	8,100	< 50	68	142	65.0
Markham Street between Seaton Avenue and Day Street	9,500	< 50	69	149	66.4
Menifee Road between Nuevo Road and Central Avenue	6,600	< 50	81	175	67.5
Mission Boulevard between Wineville Avenue and I-15	10,100	63	132	283	69.5
Mission Boulevard between Pedley Road and Agate Street	19,000	70	148	317	70.3
Mocking Bird Canyon Boulevard between Van Buren Boulevard and Markham Street	19,900	79	164	350	70.5
Mocking Bird Canyon Boulevard between Markham Street and Van Buren Boulevard	15,500	69	141	301	69.5
Monroe Street between 54th Avenue and 52nd Avenue	20,600	< 50	108	228	67.7



Table 5: Base Year Condition (2007) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 L _{dn} (ft)	Centerline to 65 L _{dn} (ft)	Centerline to 60 L _{dn} (ft)	L _{dn} (dBA) 50 ft from Centerline of Outermost Lane
Mountain View Road between 20th Avenue and Varner Road	11,500	< 50	76	164	67.1
Murrieta Hot Spring Road between Sky Canyon Drive and Winchester Road	11,600	< 50	65	137	64.7
Nuevo Road between Menifee Road and Lakeview Avenue	8,200	< 50	65	141	66.0
Old Elsinore Road between San Jacinto Avenue and Orange Avenue	7,200	< 50	61	131	65.6
Ontario Freeway between Limonite Avenue and 68th Street	184,000	631	1,358	2,925	83.9
Palm Drive between northern city limits of Cathedral City and 20th Avenue	29,100	81	171	366	71.2
Pedley Road between Mission Boulevard and SH-60	7,700	< 50	70	151	66.5
Pedley Road between Limonite Avenue and Jurupa Road	7,100	< 50	61	131	65.6
Perris Boulevard between Reche Vista Drive and Sunnymead Ranch Parkway	6,200	< 50	68	145	65.6
Pinacate Road between eastern city limits of Menifee and Juniper Flats Road	27,000	106	226	485	73.0
Ramon Road between Varner Road and I-10	15,200	53	109	233	68.2
Pourroy Road between Thompson Road and Winchester Road	9,400	< 50	58	125	65.3
Ramon Road between Sierra Del Sol and La Canada Way	9,800	< 50	77	160	65.3
Ramon Road between Bob Hope Drive and I-10	36,600	87	174	369	70.1
Ramon Road between I-10 and Varner Road	36,600	85	173	368	70.4
Ramon Road between Sierra Del Sol and Desert Moon Drive	11,000	< 50	106	228	68.6
Ramona Expressway between eastern city limits of Perris and Davis Road	13,500	71	153	329	71.6
Ramona Expressway between Davis Road and Lakeview Avenue	13,500	71	153	329	71.6
Reche Vista Drive between Perris Boulevard and Reche Canyon Boulevard	12,300	< 50	61	132	65.6
Redlands Boulevard between San Timoteo Canyon Road and Locust Avenue	18,900	71	150	323	70.9
Rubidoux Boulevard between Market Street and 24th Street	11,100	54	111	236	68.3
Schleisman Road between Archibald Avenue and River Road	12,500	< 50	82	175	67.5
Sierra Avenue between Armstrong Avenue and Northern County Limits of Riverside	13,000	61	124	263	68.6
Monterey Avenue between Ramon Road and I-10	9,200	< 50	61	131	65.6
SR-111 between Tram Way Road and I-10	21,000	111	234	502	72.8
SR-195 between Lincoln Street and Grapefruit Boulevard	13,100	59	118	250	68.3
SR-371 between SH-74 and Mitchell Road	7,800	< 50	104	225	69.1
SR-60 between Wineville Avenue and Mission Boulevard	163,600	589	1,267	2,729	83.2
SR-60 between SH-60 and Jack Rabbit Trail	63,600	428	920	1,981	81.8
SR-62 between I-10 and Dillon Road	18,100	119	253	542	73.3
SR-74 between northern city limits of Lake Elsinore and I-15	28,300	105	225	483	73.0
SR-74 between Theda Street and Ethanac Road	27,100	102	217	465	72.8
SR-74 between SH-371 and Palm Canyon Drive	8,300	53	110	233	68.3
SR-78 between Hobson Way and 18th Avenue	10,600	< 50	96	205	67.9
SR-79 between eastern city limits of Murrieta and Pourroy Road	19,100	110	237	510	73.9
SR-79 between Auld Road and Hunter Road	32,200	128	274	588	74.3
SR-79 between Scott Road and Wickered Road	20,700	100	216	465	73.8
SR-79 between eastern city limits of Temecula and Anza Road	13,800	71	152	327	71.5
SR-79 between SH-371 and Sage Road	8,800	52	111	239	69.5
SR-79 between Domenigoni Road and Patton Avenue	19,100	99	212	456	73.7
SR-79 between Gilman Springs Road and southern city limits of Beaumont	47,100	152	324	697	75.0
SR-86 between Pierce Street and 81st Avenue	8,200	78	167	360	72.2



Table 5: Base Year Condition (2007) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 L _{dn} (ft)	Centerline to 65 L _{dn} (ft)	Centerline to 60 L _{dn} (ft)	L _{dn} (dBA) 50 ft from Centerline of Outermost Lane
SR-86 between 74th Avenue and Pierce Street	7,700	77	165	354	71.5
SR-86 between southern city limits of Coachella and 66th Avenue	37,900	247	531	1,144	78.6
SR-86 between 54th Avenue and Airport Boulevard	12,800	88	190	409	73.0
SR-86 between I-10 and Dillon Road	62,200	362	779	1,678	81.1
SR-86 between Grapefruit Boulevard and southern city limits of Coachella	37,900	247	531	1,143	78.2
Seaton Avenue between Harvill Avenue and Markham Street	10,100	< 50	65	131	64.0
I-15 between Temescal Canyon Road and Indian Truck Trail	150,900	594	1,277	2,750	83.2
I-15 between Weirick Road and Temescal Canyon Road	154,100	596	1,283	2,762	83.2
Temescal Canyon Road between Cajalco Road and I-15	10,600	< 50	79	169	66.6
Temescal Canyon Road between I-15 and Lawson Road	9,300	< 50	54	115	64.1
Temescula Valley Freeway between Temescal Canyon Road and Weirick Road	154,100	596	1,283	2,762	83.2
US-95 between I-10 and northern county limits of Riverside	7,200	< 50	105	225	68.5
Van Buren Boulevard between Bellegrave Avenue and Etiwanda Avenue	44,400	192	411	885	76.5
Van Buren Boulevard between Mocking Bird Canyon Boulevard and Firethorn Avenue	48,000	136	290	624	74.2
Van Buren Boulevard between Washington Street and Krameria Avenue	35,800	116	246	529	73.2
Van Buren Boulevard between Limonite Avenue and Jurupa Road	44,600	191	409	880	76.5
Van Buren Boulevard between Limonite Avenue and Clay Street	56,700	210	450	968	77.1
Van Buren Boulevard between I-215 and Harmon Street	27,000	101	213	457	72.2
Warren Road between Domenigoni Parkway and Simpson Road	11,000	62	132	285	70.6
Warren Road between western city limits of Hemet and West Esplanade Avenue	8,600	65	137	294	70.3
Washington Street between Van Buren Boulevard and Golden Street	13,300	< 50	82	176	67.5
Washington Street between Del Webb Boulevard and Wildcat Drive	14,000	< 50	86	182	66.6
West Florida Avenue between Winchester Road and western city limits of Hemet	36,500	141	301	648	74.9
Winchester Road between West Florida Avenue and California Avenue	12,800	80	171	367	71.7

Source: LSA Associates, Inc., March 2011.

Note: ADT values rounded up to the nearest 100. Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.

ADT = average daily traffic

dBA = A-weighted decibels

ft = feet

L_{dn} = Day-Night Average Level

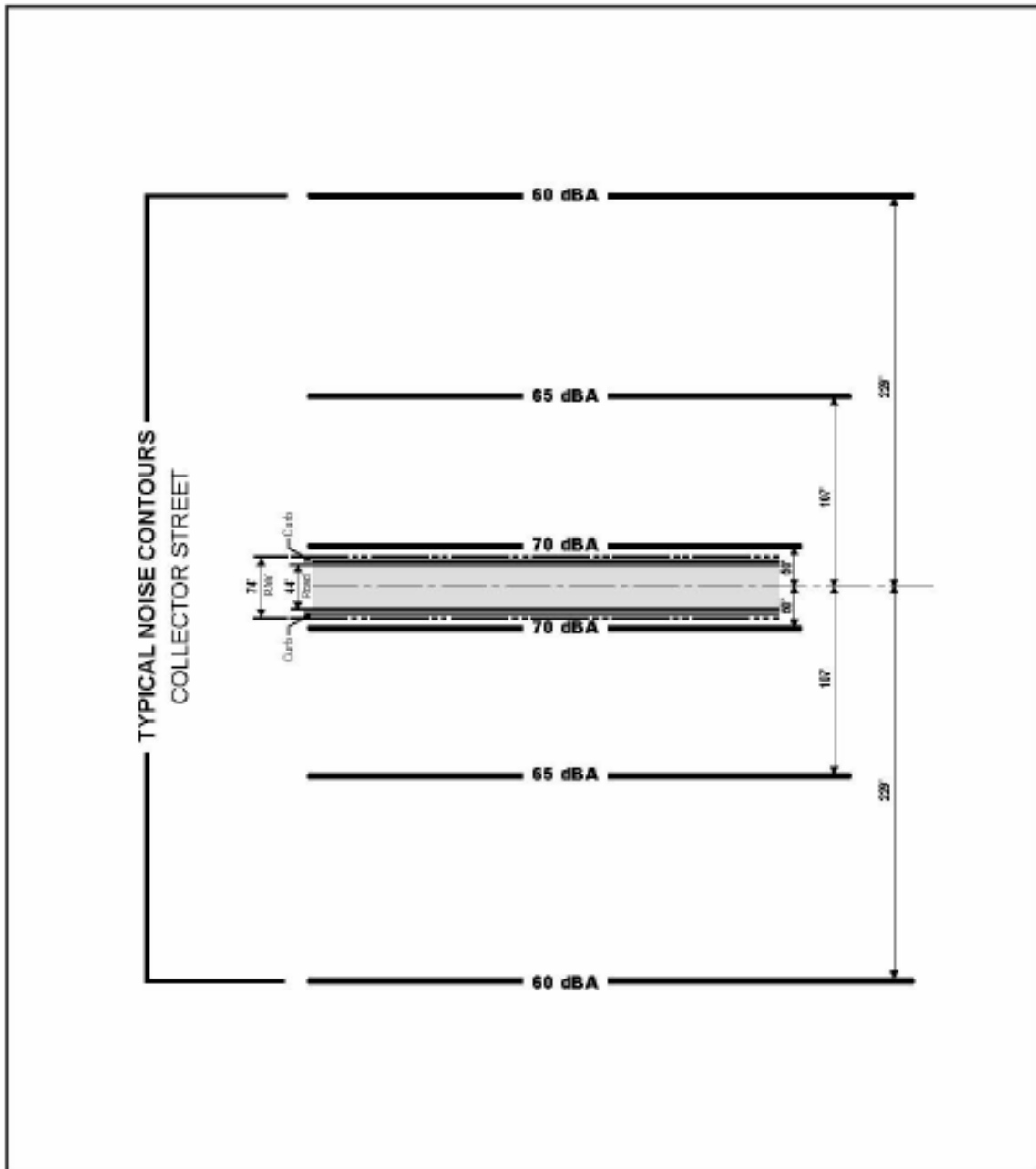


Figure 1

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Projected Noise Contours Along Freeways and Major Highways:
 Collector Street (2 Lanes)**

\\1070610618\Noise\GIS\stand\Proj_Collector_Street\Noise\011511\11



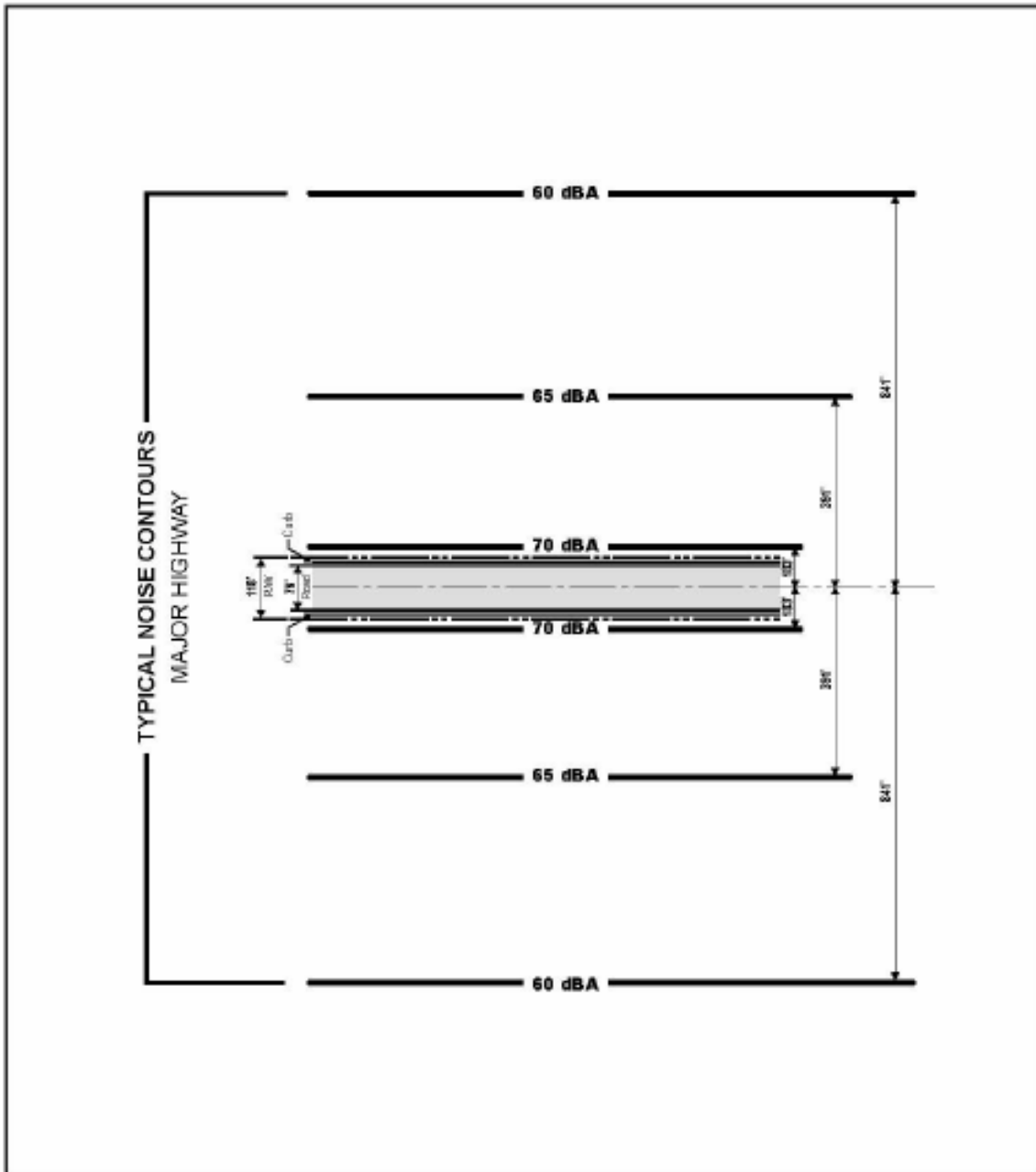


Figure 3

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Projected Noise Contours Along Freeways and Major Highways:
 Major Highway (4 Lanes)**

\\C081061\GIS\Noise\GIS\external\Proj_Corridor_MajorHighway_4Lanes.dwg (6/15/11)



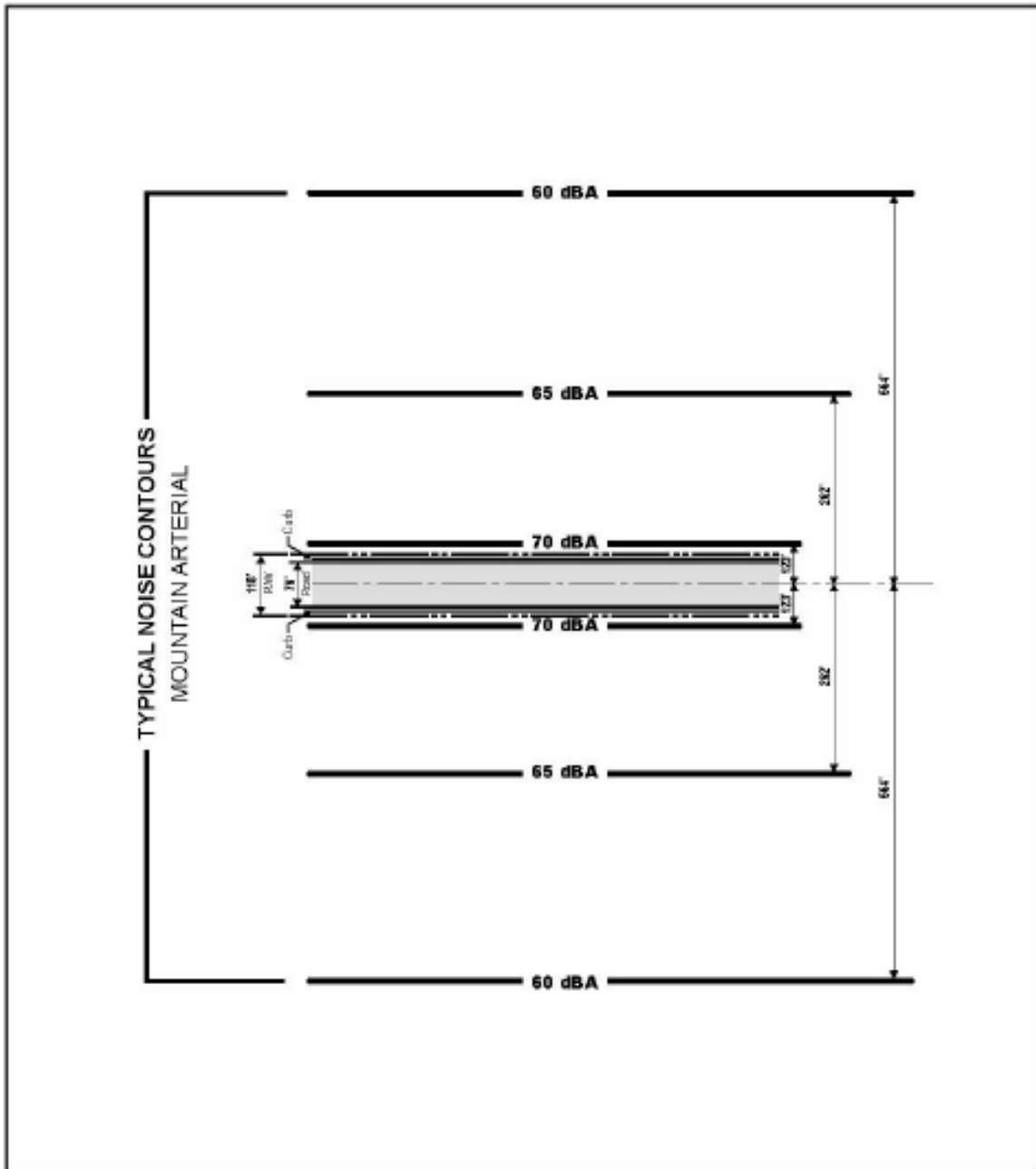


Figure 4

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Projected Noise Contours Along Freeways and Major Highways:
Mountain Arterial (4 Lanes)**

\\C0510611306\se\GIS\stn\Proj\Contour_MountainArterial_4-Lanes.rvt 10/1/10



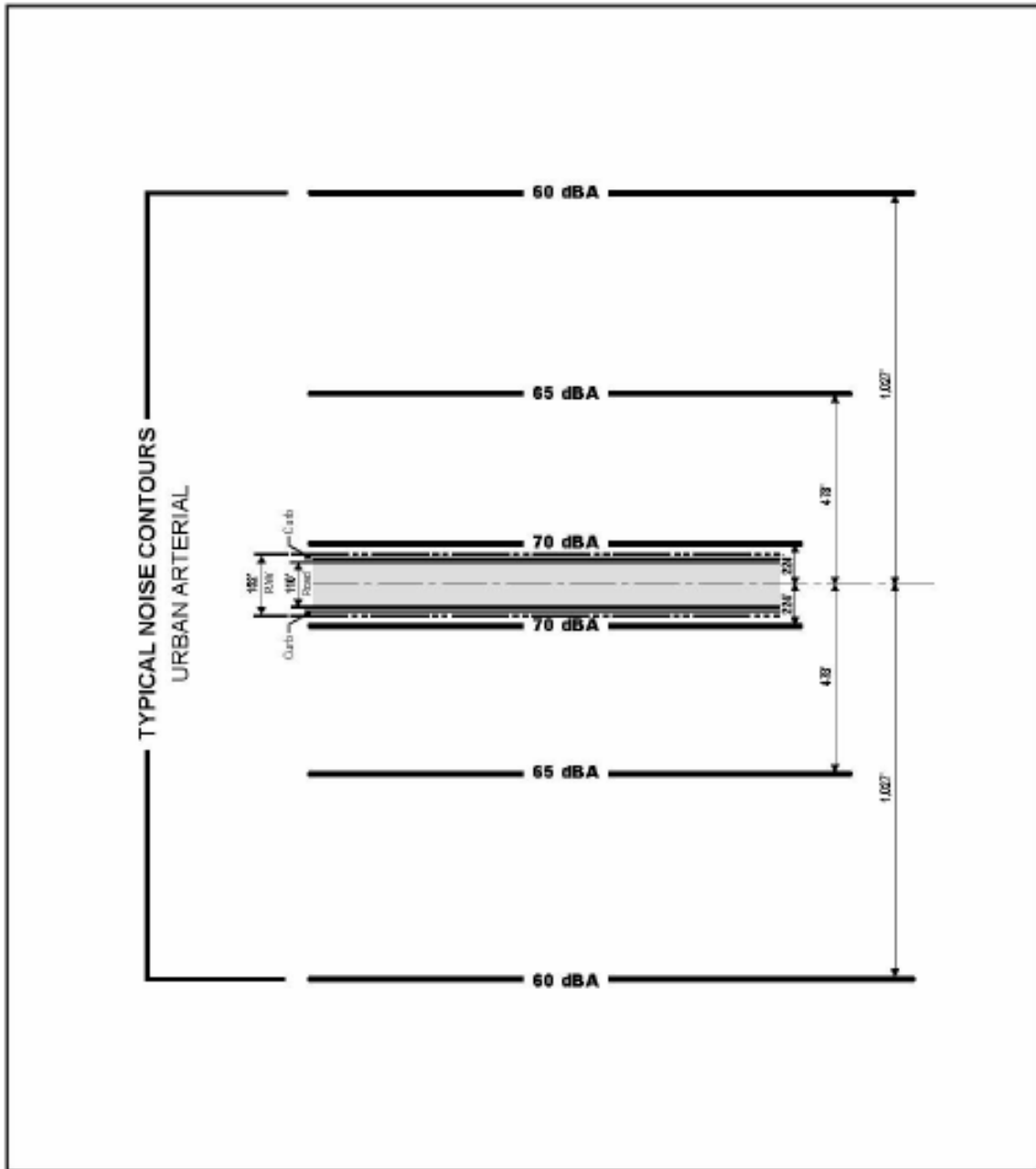


Figure 5

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

Projected Noise Contours Along Freeways and Major Highways:
 Urban Arterial (6 Lanes)

\\10081001\Noise\GIS\studies\Proj_Center_Dr\Renderings_6_Lanes.dwg 01.11.10



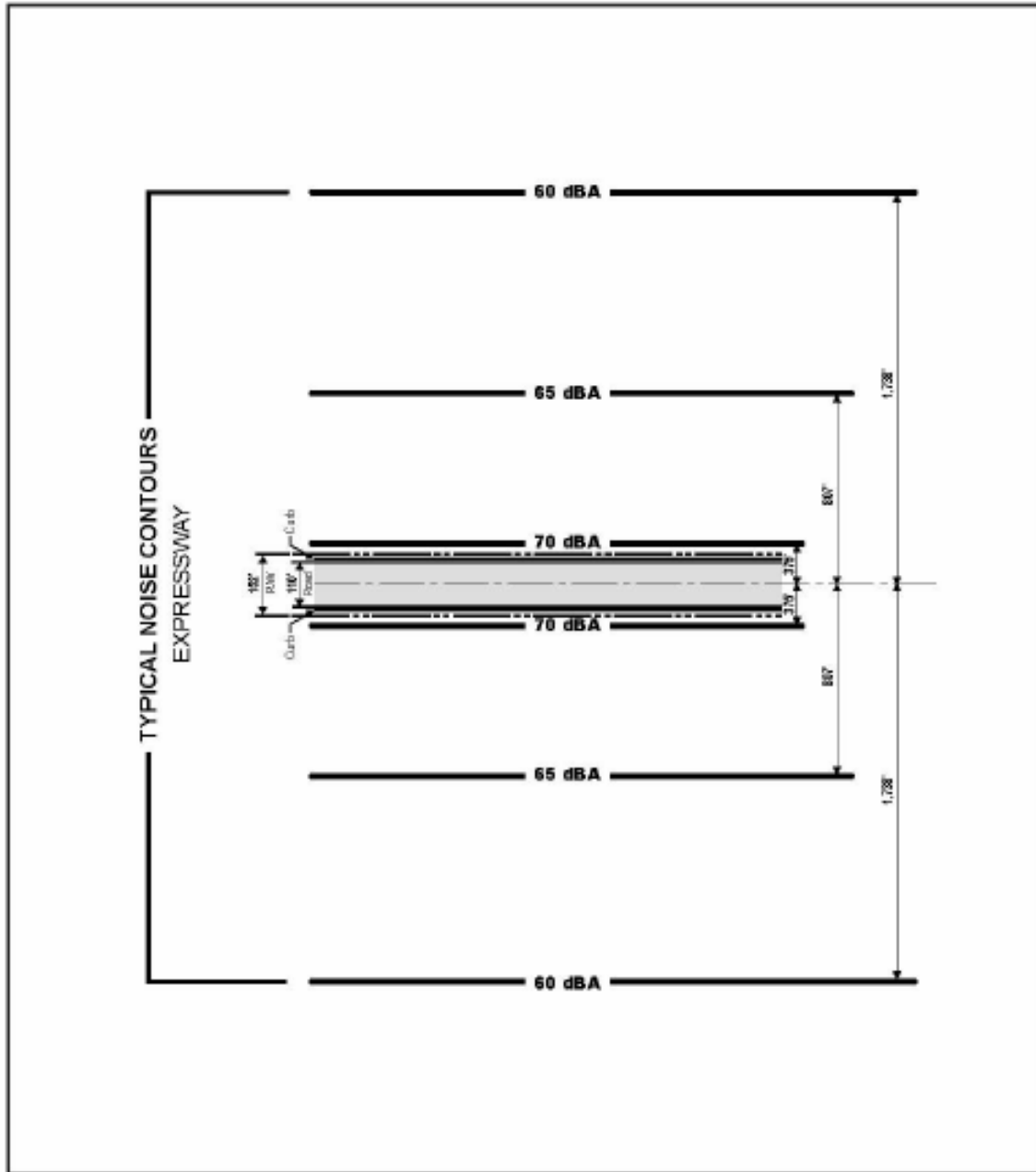


Figure 6

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Projected Noise Contours Along Freeways and Major Highways:
Expressway (6 Lanes)**

FIGURE 6: Noise Element Data - Expressway (6 Lanes) (R1) (1/15)



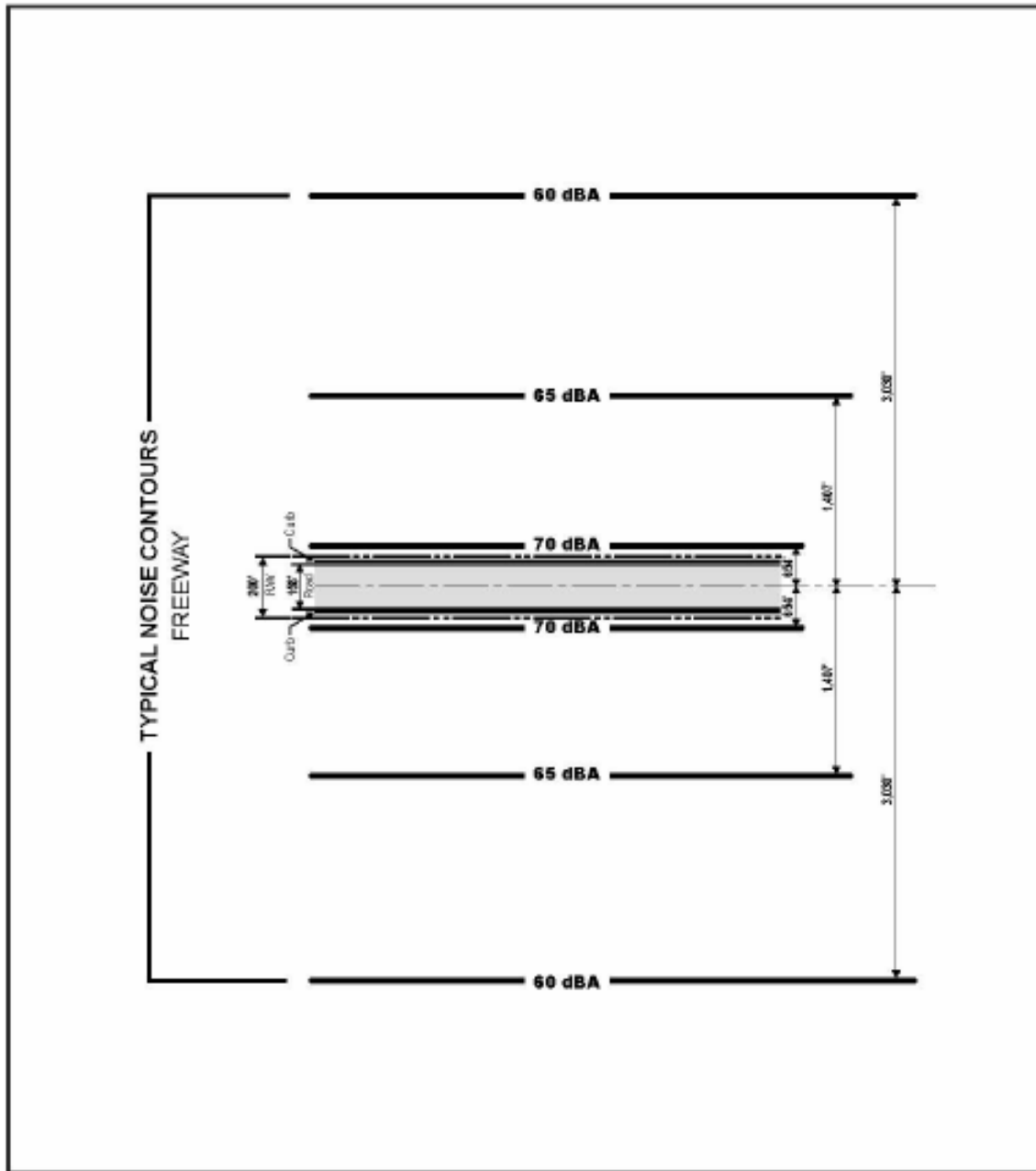


Figure 7

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Projected Noise Contours Along Freeways and Major Highways:
 Freeway (6 Lanes)**

21-COR1041-02-Natural Resources/Freq. Cont. Freeway_6-Lanes.dwg (8/15/10)



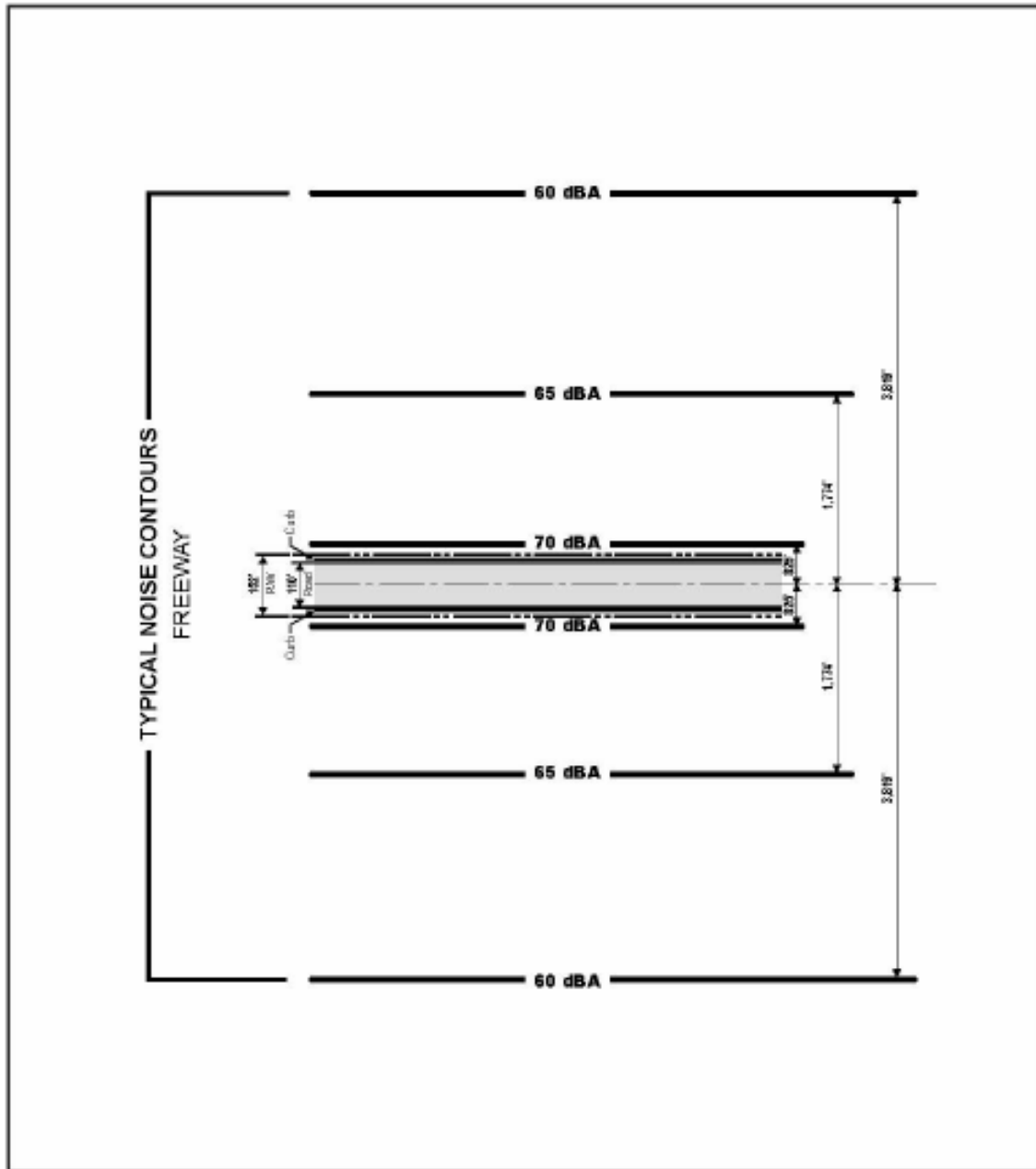


Figure 8

SOUND - COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA


Projected Noise Contours Along Freeways and Major Highways:
Freeway (10 Lanes)

\\C08106113\Noise\GeneralPlan_Ont_Planing_10_Lanes.dwg (01/21/15)





Figure 9

 NOT TO SCALE

**Projected Noise Contours Along Freeways and Major Highways:
 Grand Avenue between Cactus Avenue and Ortega Highway**

J:\C081061\Noise\GIS\Noise_Popul\Noise_Centers_GrandAve_Cactus&Ortega.rvt (8/15/10)



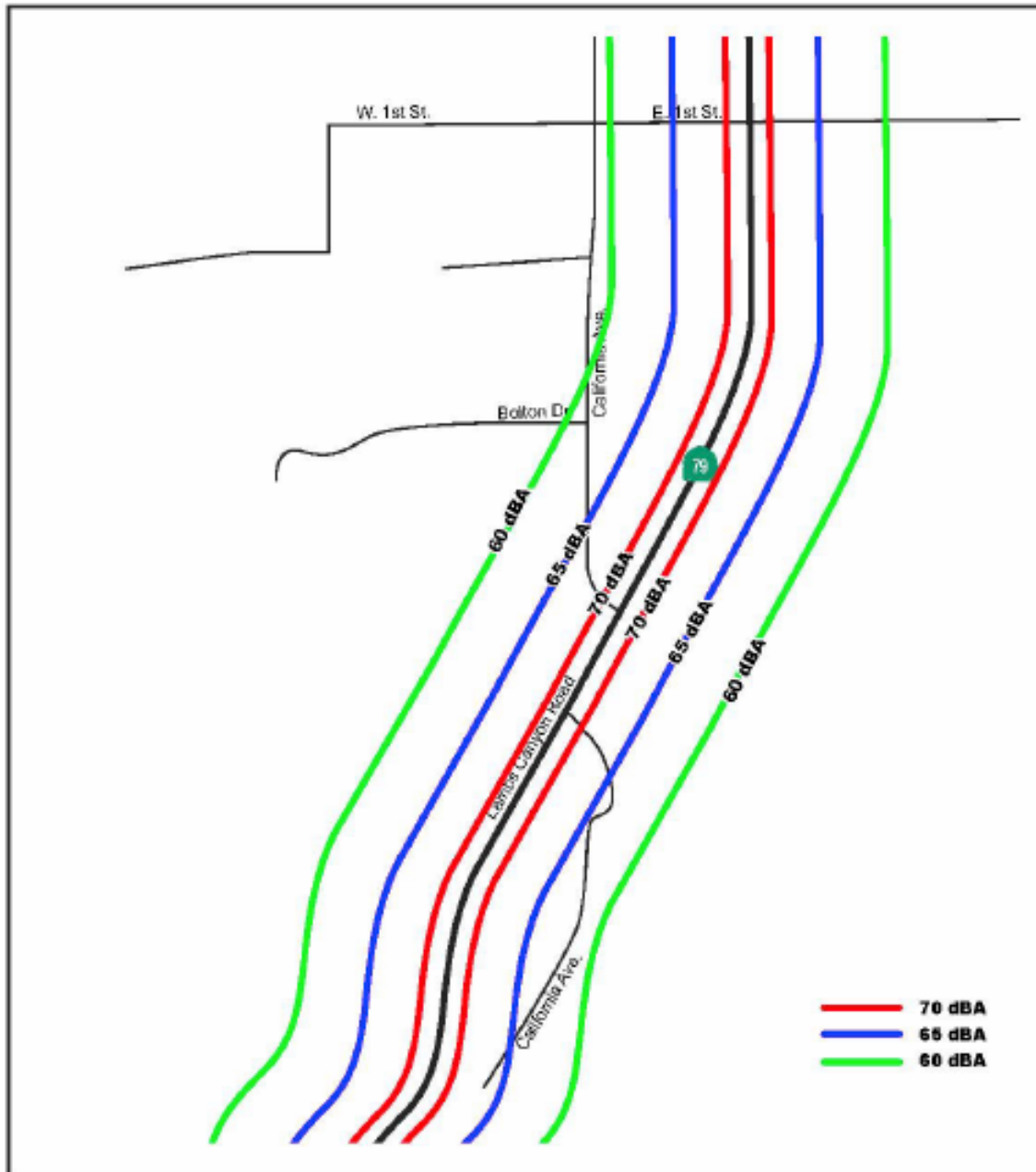


Figure 10



Projected Noise Contours Along Freeways and Major Highways:
State Route 79 between Gilman Springs Road and Mellow Lane

[K:\2081\001\0\Mapal\Contours_Fwy\Ext\Contour_08-79 at Gilman & Mellow.dwg 07/10/15]



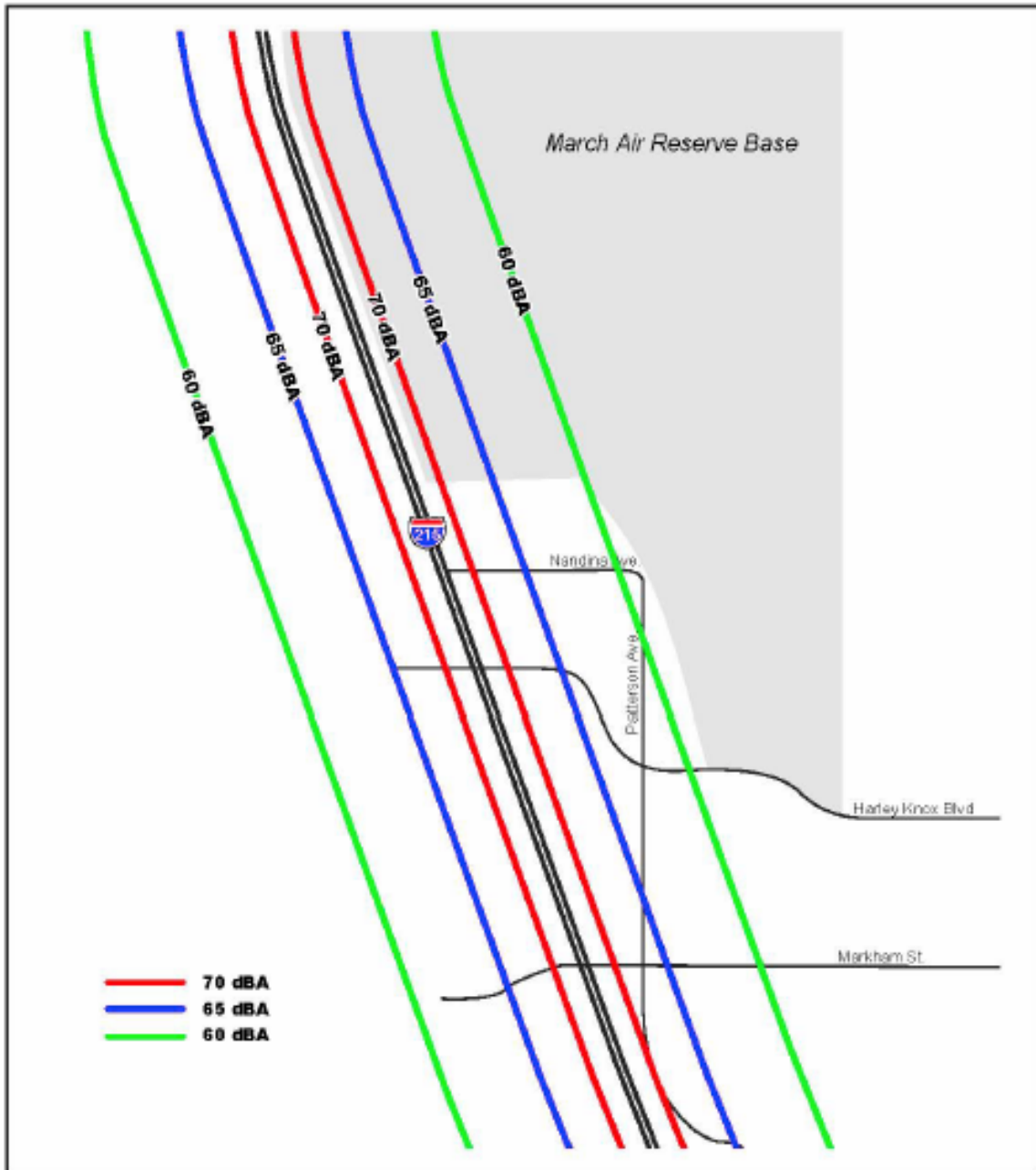


Figure 11



Projected Noise Contours Along Freeways and Major Highways:
 I-215 between Van Buren Blvd and Ramona Expressway

J:\2008\06118\Noise Elements\Project\Noise Contour_Map\111_MapData.mxd 6/15/10



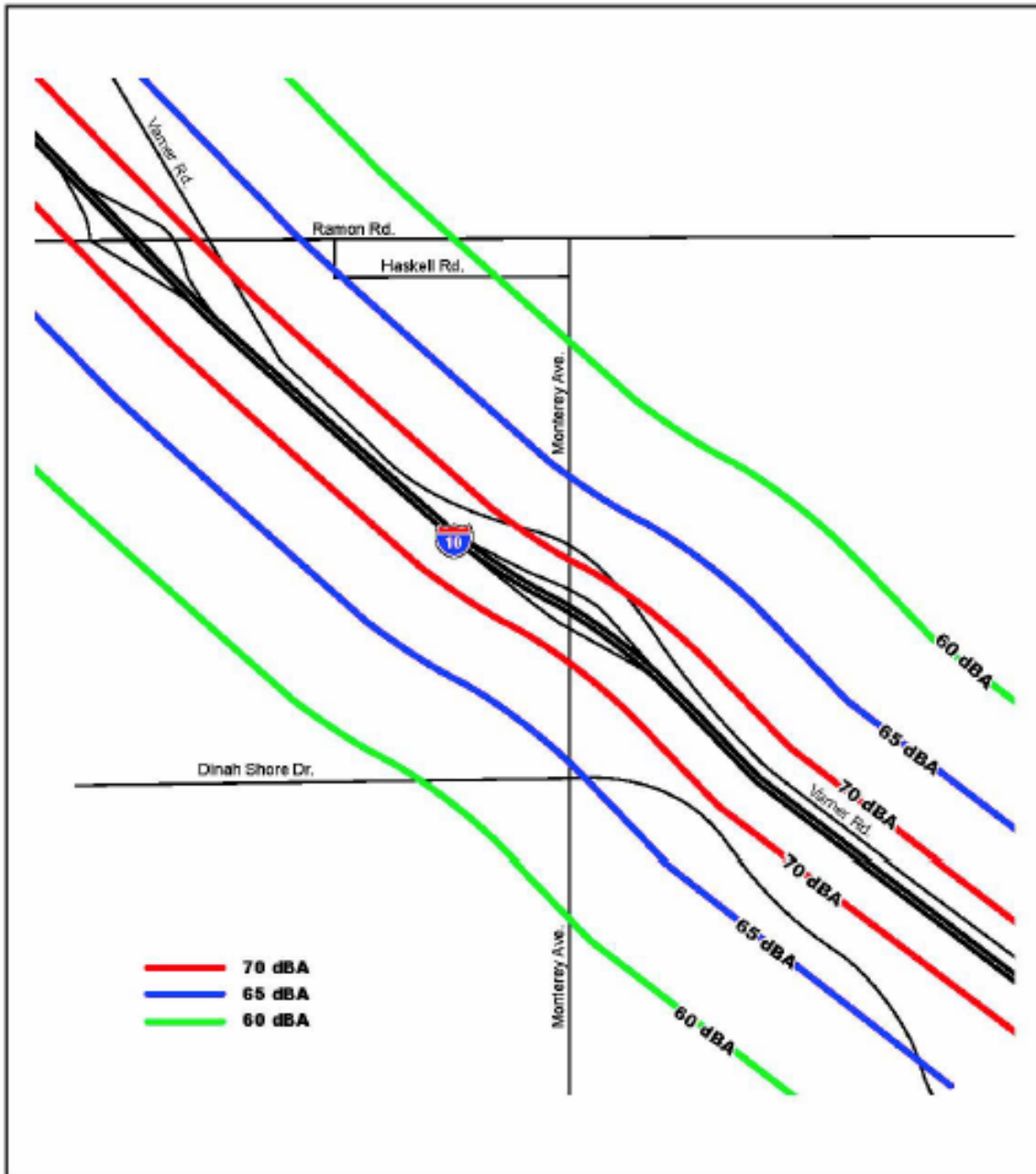


Figure 12



Projected Noise Contours Along Freeways and Major Highways:
I-10 at Monterey Avenue

J:\CGS\06100\Noise\GIS\maps\Final\Noise_Contours_I-10 at Monterey.dwg (6/15/11)



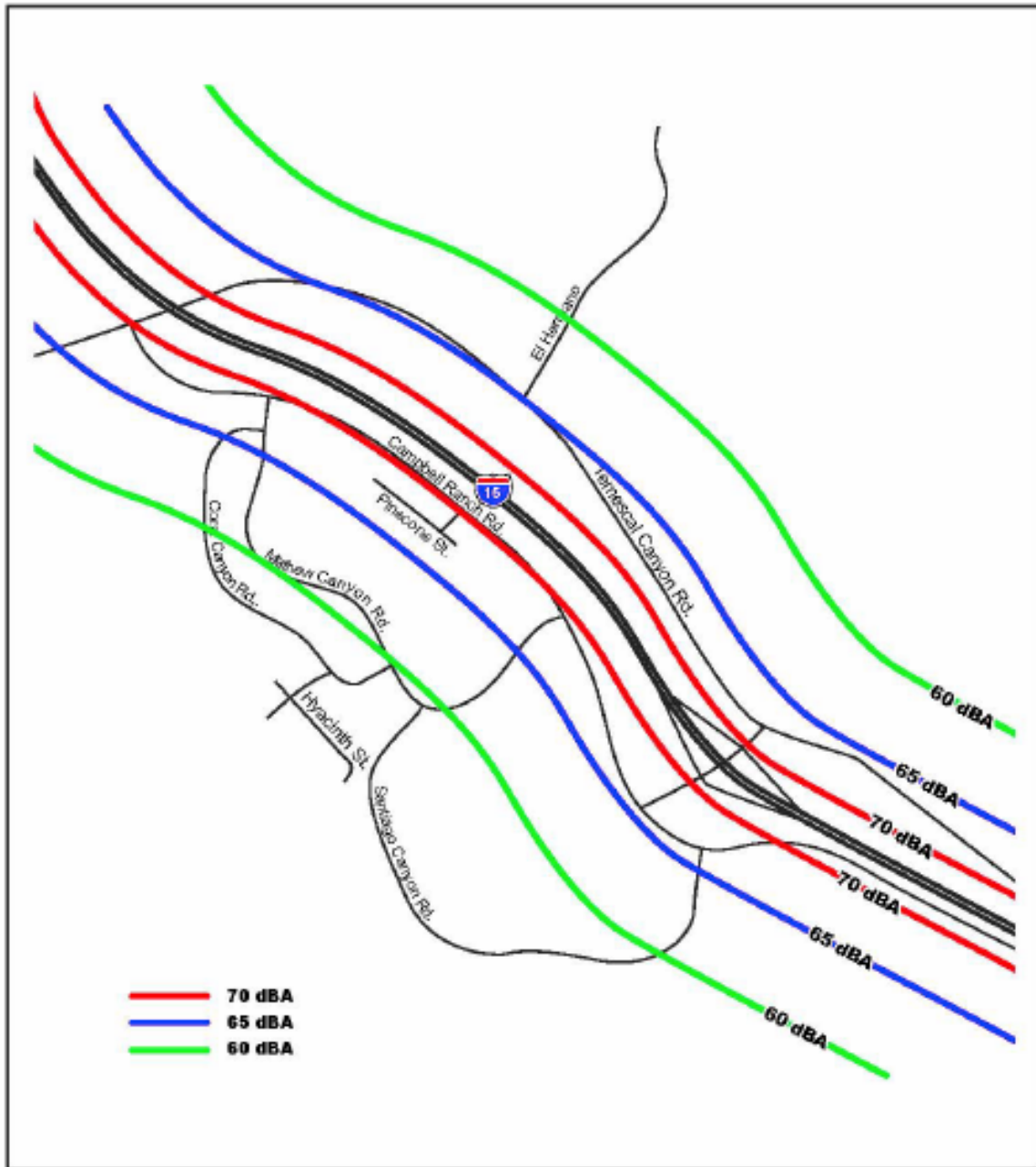


Figure 13



Projected Noise Contours Along Freeways and Major Highways:
 I-15 between Weirick Road and Temescal Canyon Road

J:\GIS\0610306\0610306.mxd; Project Noise Contours_I-15 at Weirick_Temescal.rxd (6/25/10)



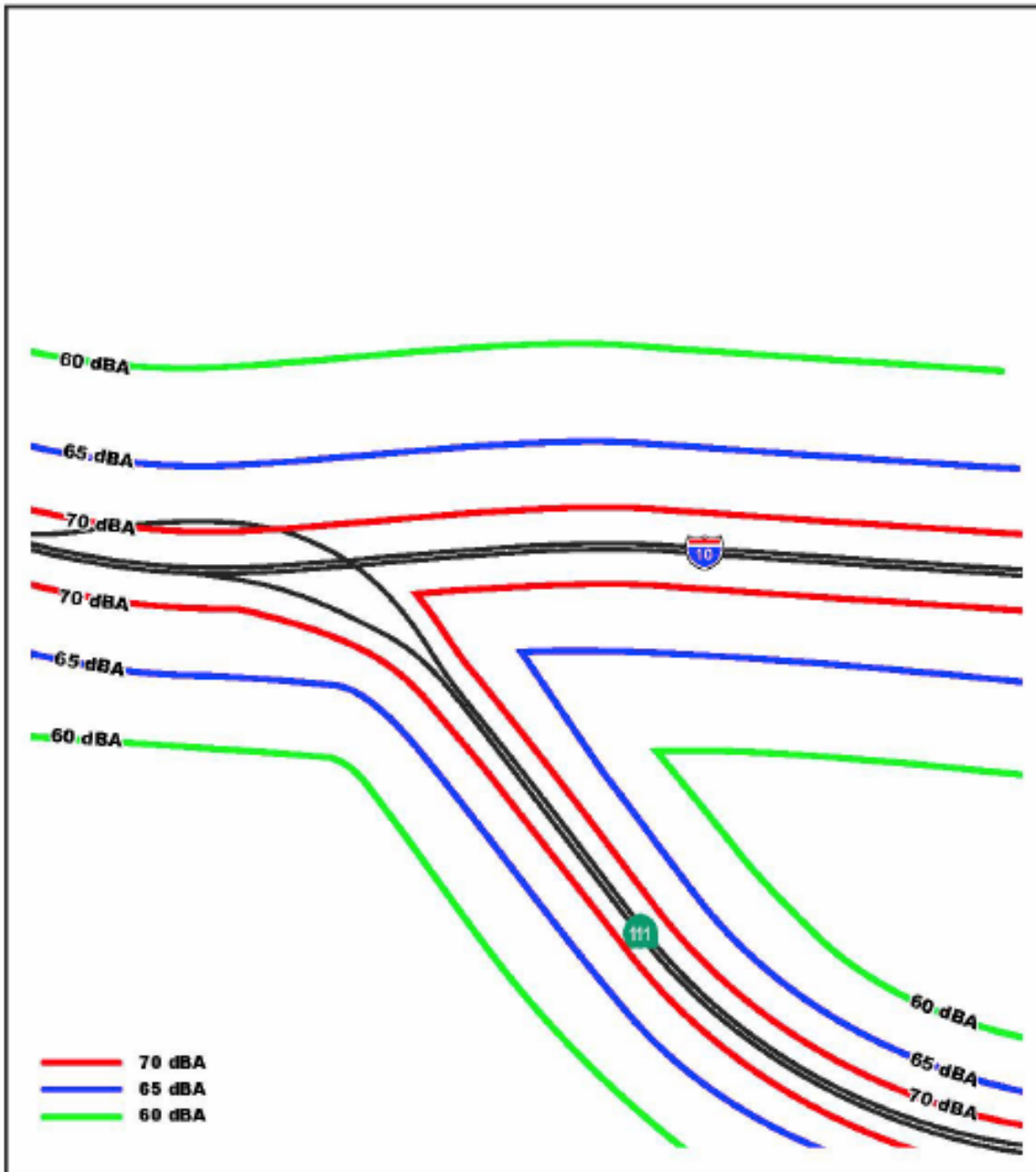


Figure 14



Projected Noise Contours Along Freeways and Major Highways:
I-10 at State Highway 111

(\COM\56918\Noise\Contours_Proposed_Centers_10 at SR 111 at 10/15/11)



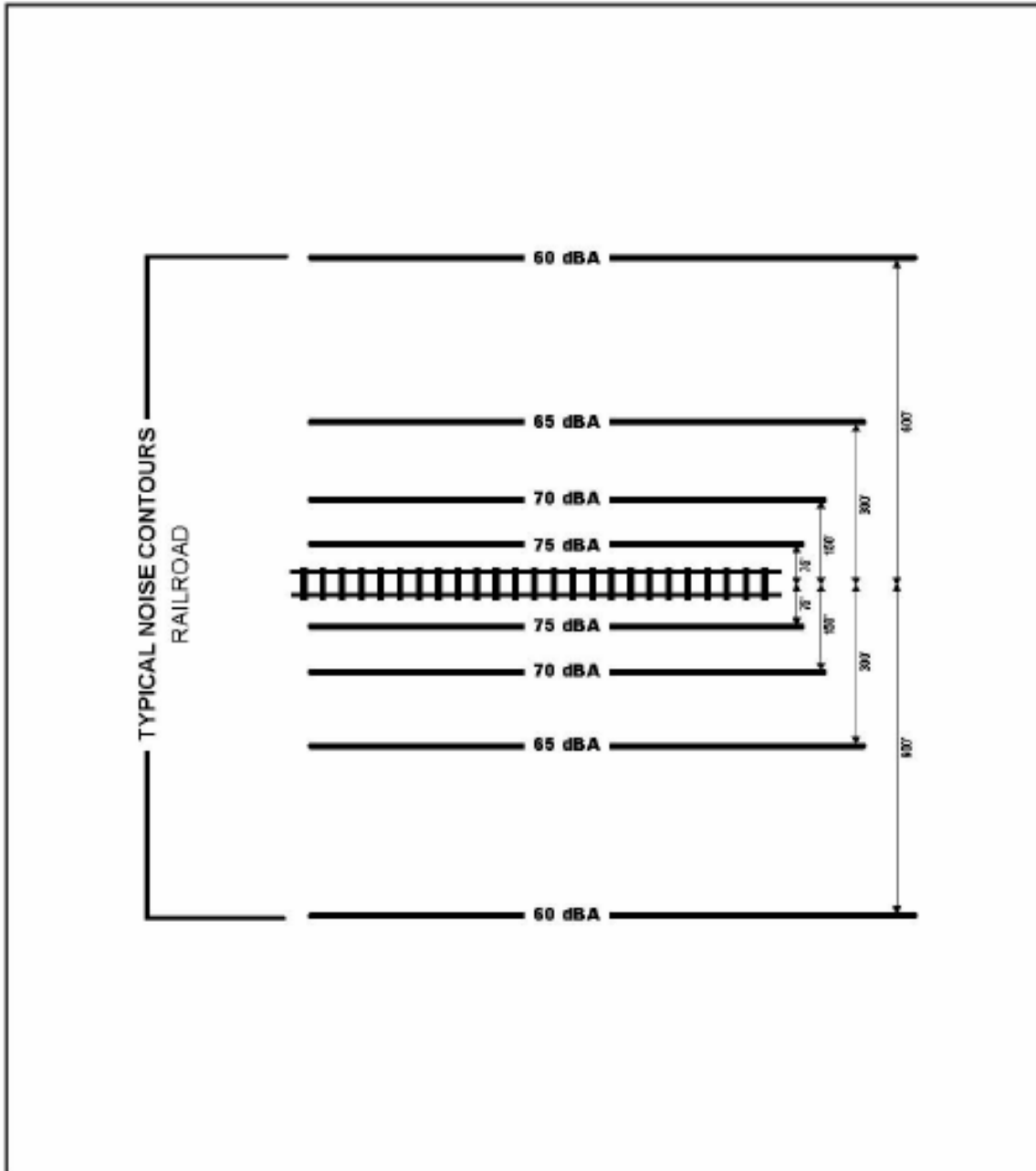


Figure 15

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

Typical Railroad Noise Contours:
 1 Locomotive and 5 Cars with Horns (a Commuter Train)

ENCLOSURE: Noise Contours Railroad Proj. Contour_Railroad_Locom & 5 Cars at 01/16/11



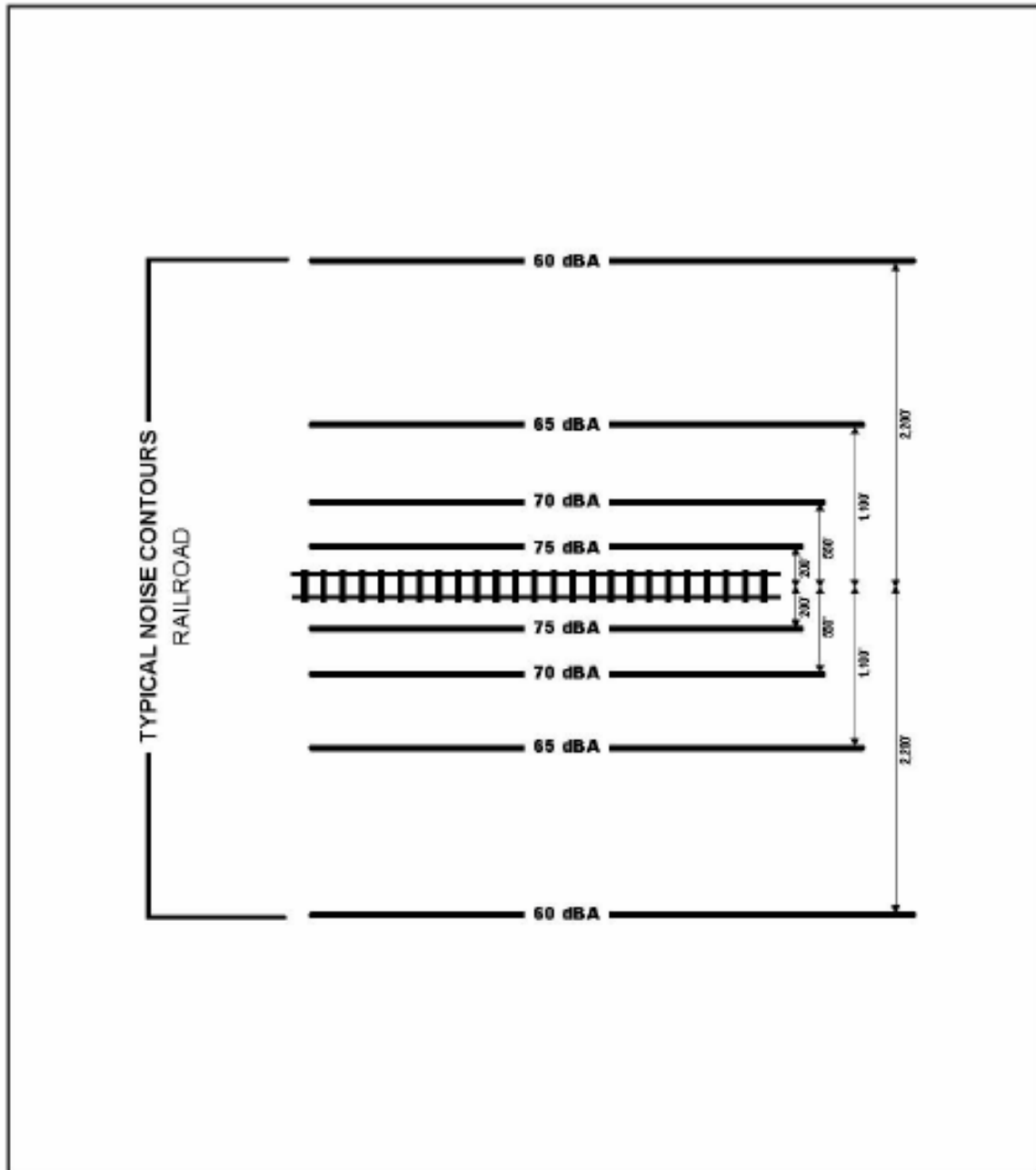


Figure 16

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

Typical Railroad Noise Contours:
2 Locomotives and 50 Cars with Horns (a Freight Train)

J:\2006\0611\0611\Noise\0611\Noise\Railroad\Proj\Contour_Railroad_2 Loco & 50 Cars.dwg (2/10/11)



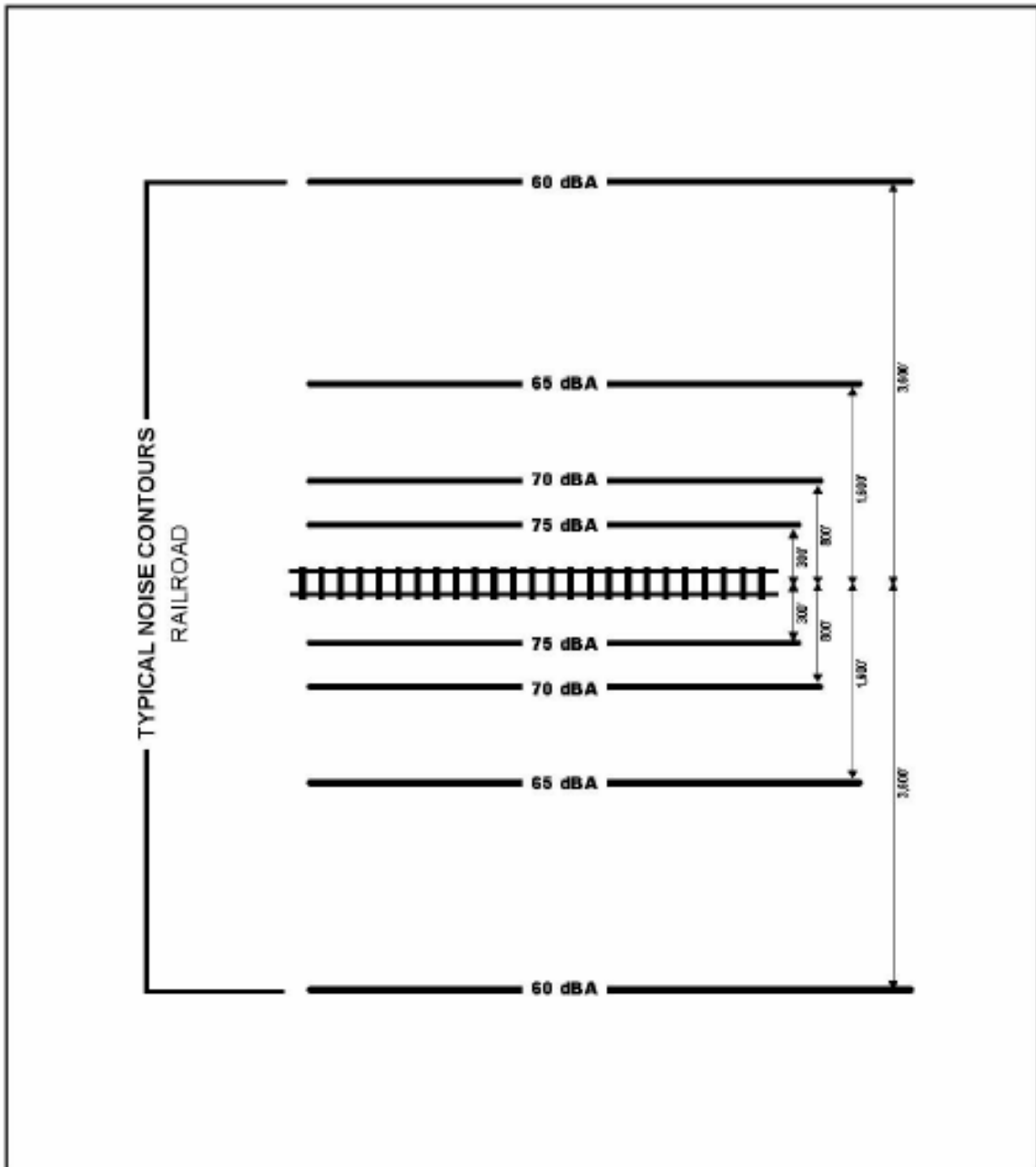


Figure 17

SOURCE: COUNTY OF RIVERSIDE GENERAL PLAN - NOISE ELEMENT DATA

**Typical Railroad Noise Contours:
3 Locomotives and 100 Cars with Horns (a Freight Train)**

FIGURE 17: Typical Railroad Noise Contours (a Freight Train) (NO. 0100010101)



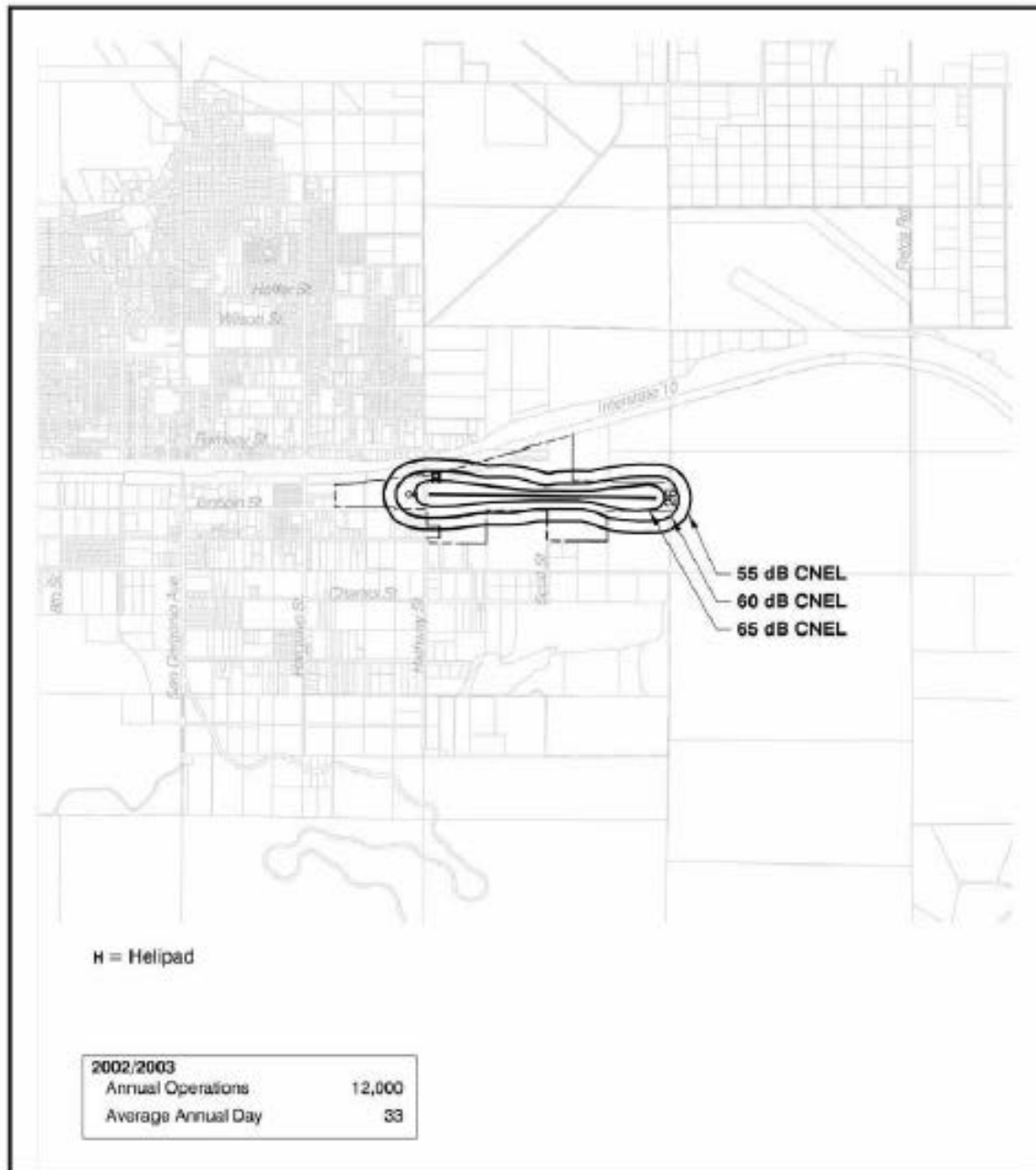


Figure 18

SOURCE: RIVERSIDE COUNTY AIRPORT
EAST COUNTY AIRPORT STRATEGIC/NOISE DATA (OCT 2006)



J:\COR\GIS\RA\Banning Municipal Airport.mxd (10/11/11)

**Banning Municipal Airport
Existing Noise Contours**





Figure 19

SOURCE: RIVERSIDE COUNTY AIRPORT
 EAST COUNTY AIRPORT'S EXISTING NOISE DATA (OCT 2006)



**Bermuda Dunes Airport Existing Noise Contours:
 Average Annual Day**



J:\CDM\001916\01\Bermuda Dunes - Existing_410.mxd (2/15/11)

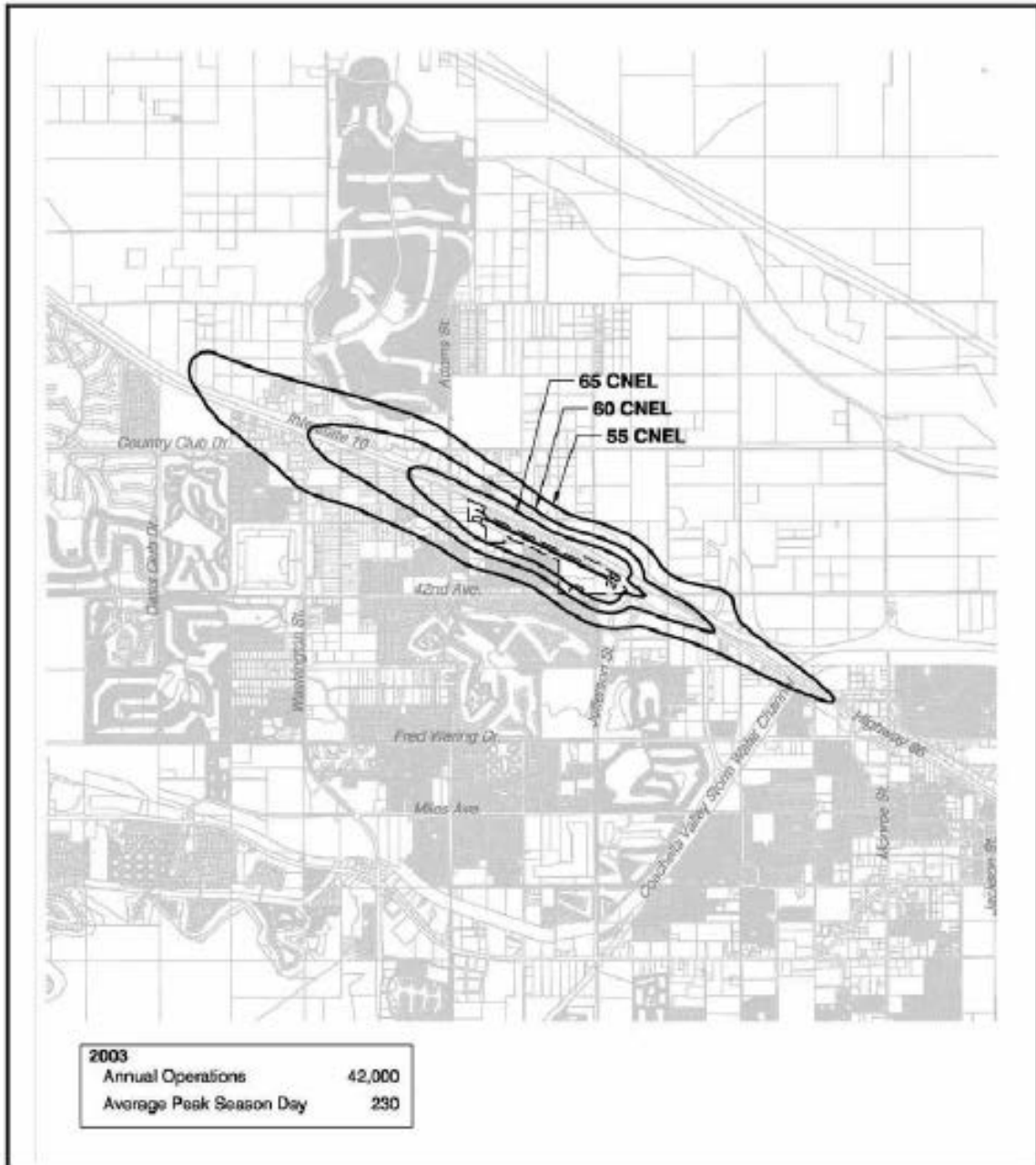


Figure 20

SOURCE: RIVERSIDE COUNTY AIRPORT - EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2006)



**Bermuda Dunes Airport Existing Noise Contours:
Average Peak Season Day**

J:\COR16019\Aerial\Bermuda Dunes - Printing_4P50.apr (3/1/11)



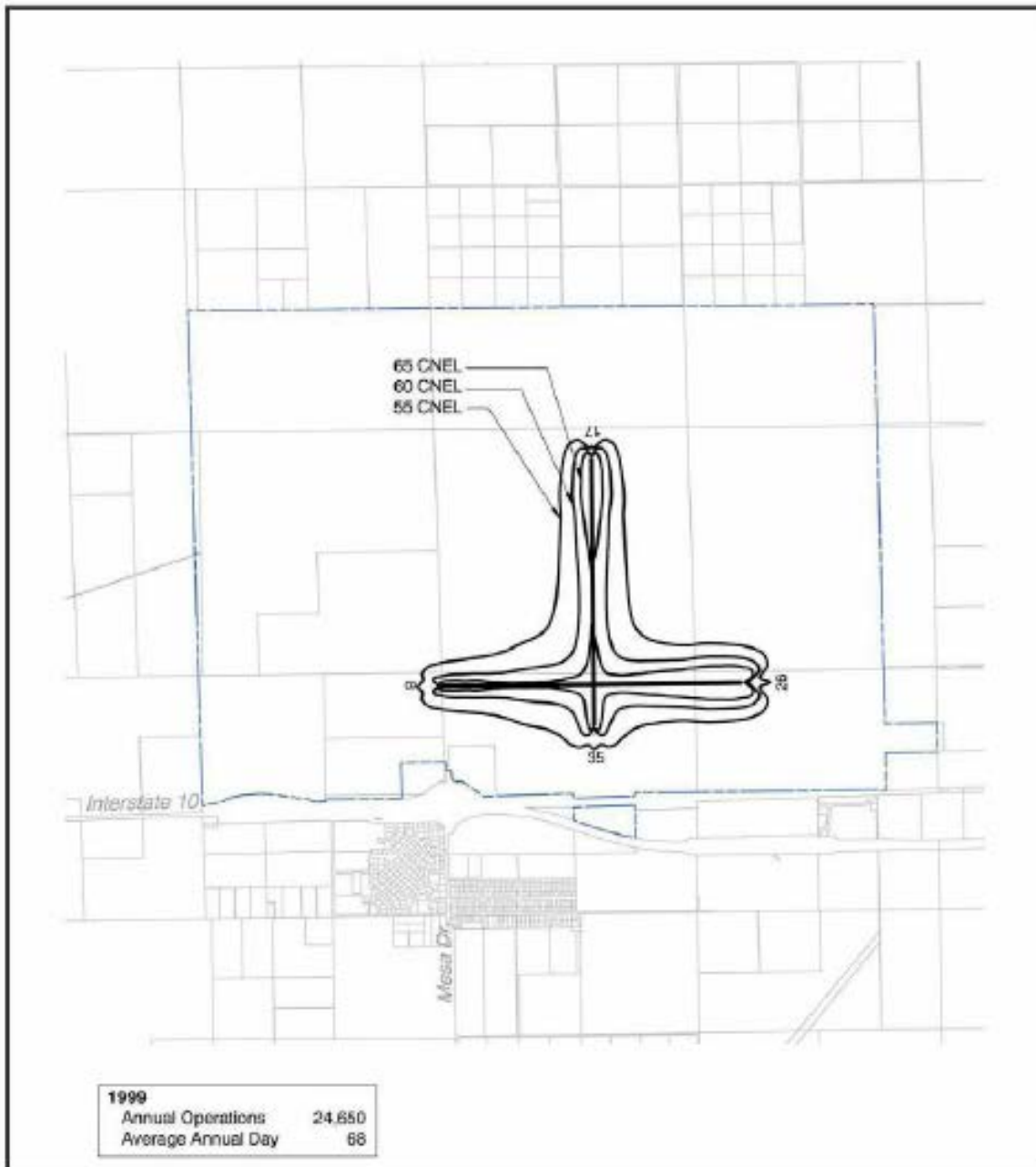


Figure 21

©2010 RIVERSIDE COUNTY AIRPORT - EAST COUNTY AIRPORT BACKGROUND DATA (OCT 2009)



EXCERPT FROM BLYTHE MUNICIPAL AIRPORT (2011)

**Blythe Municipal Airport
 Existing Noise Contours**



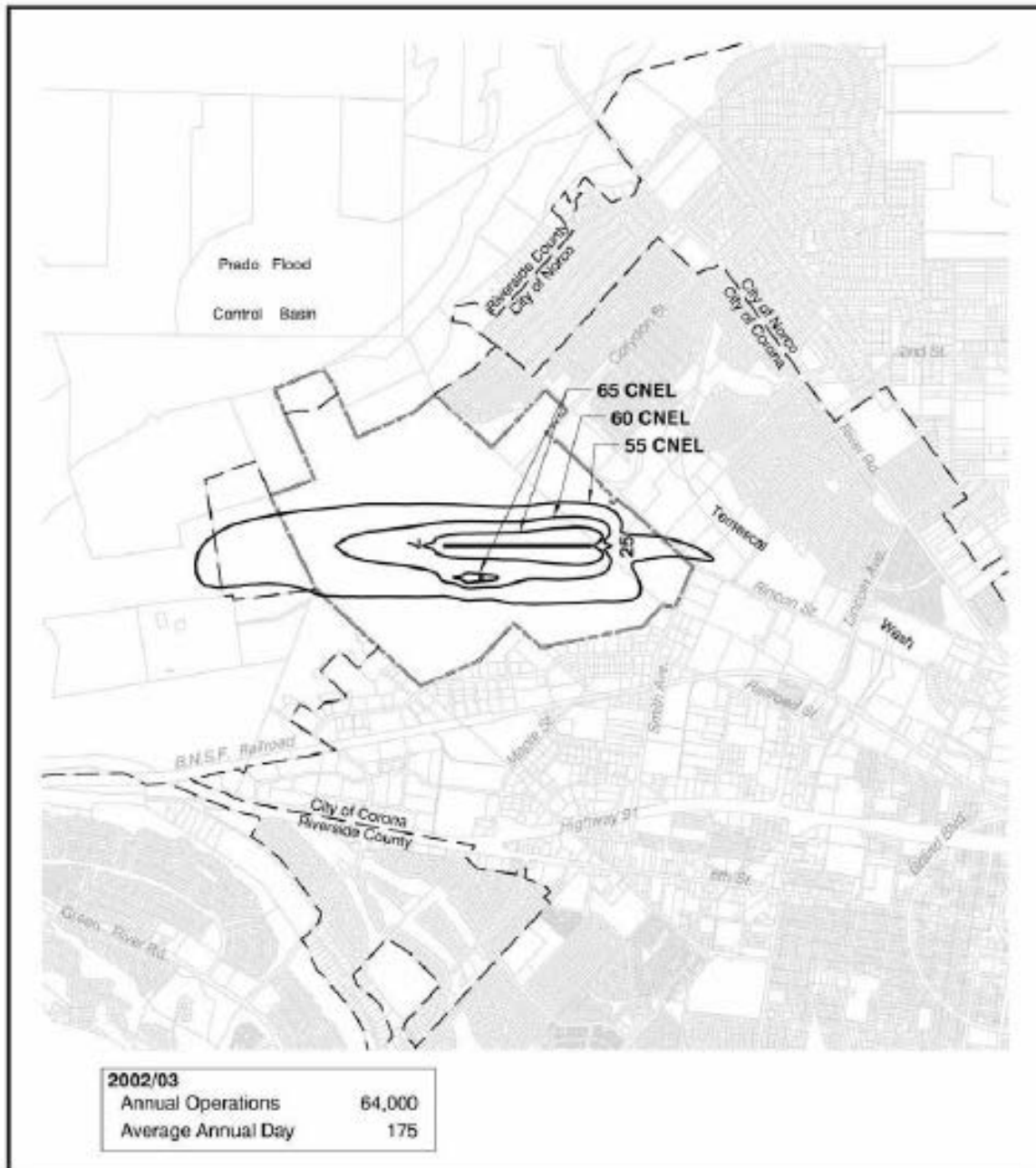


Figure 22

SOURCE: RIVERSIDE COUNTY AIRPORT
EAST COUNTY AIRPORT'S EXISTING NOISE DATA (OCT 2006)



**Corona Municipal Airport
Existing Noise Contours**



7/1/2008/09/09/Corona Municipal - Existing noise (2/15/11)

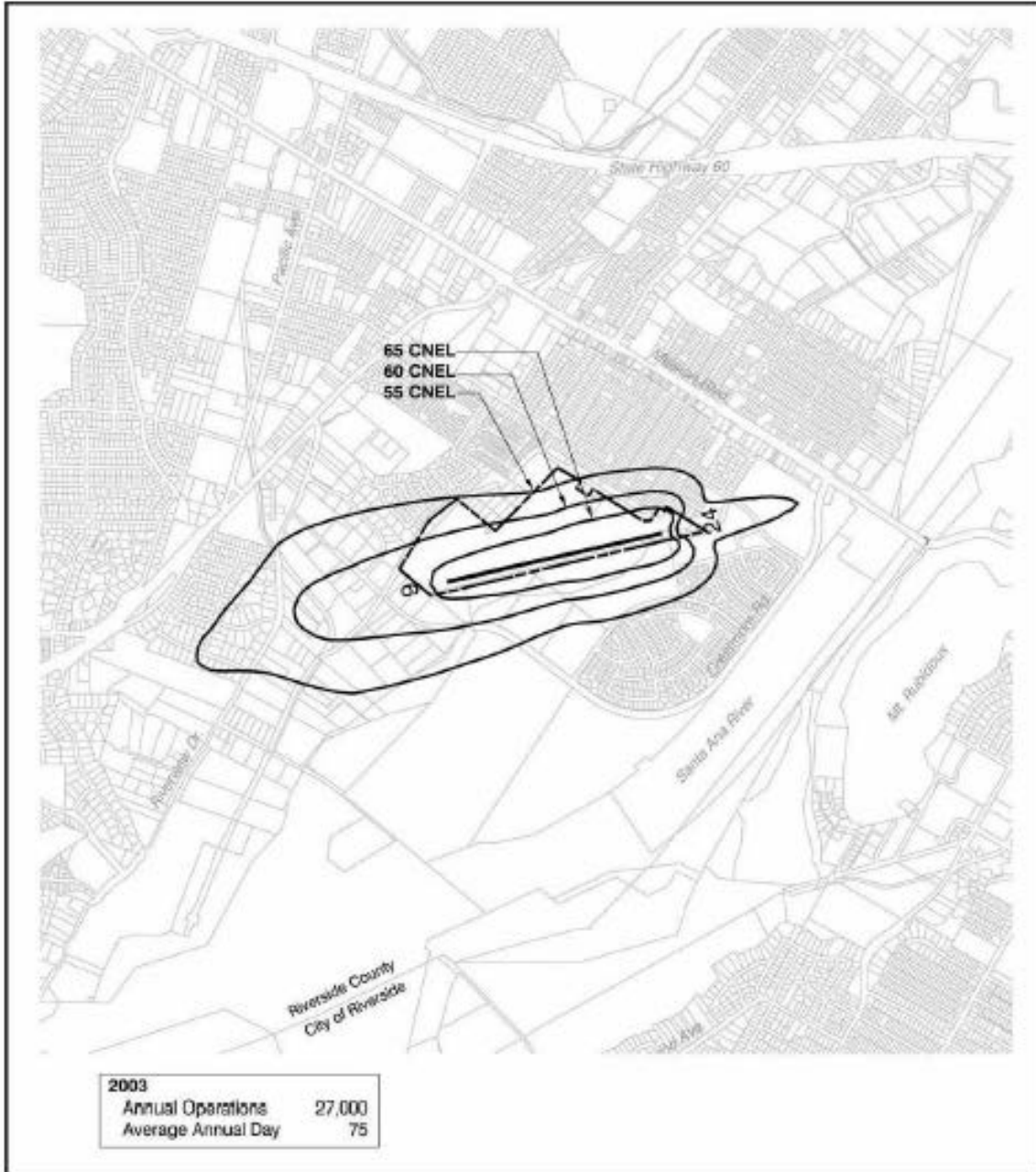


Figure 23

SOURCE: RIVERSIDE COUNTY ALIUP
 WEST COUNTY AIRPORTS BACKGROUND DATA (DECEMBER 2004)



J:\COM\GIS\Noise\Flabob-Building.apr (01.11.15)

Flabob Airport
 Existing Noise Contours



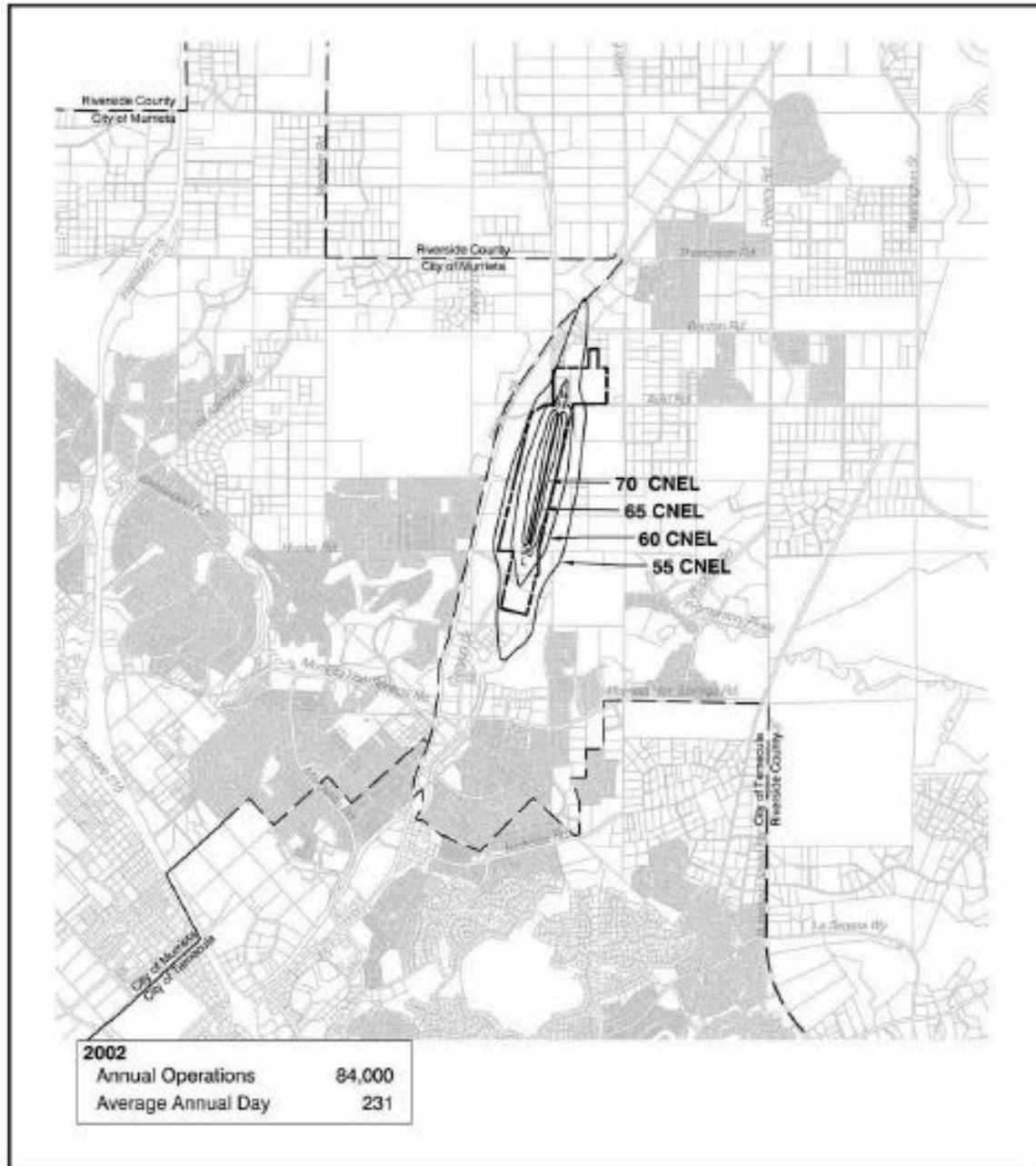


Figure 24

SOURCE: RIVERSIDE COUNTY ALUTP
WEST COUNTY AIRPORT'S BACKGROUND DATA (DECEMBER 2004)



2:\2008\091\0216\of French Valley-Building.cpl (01/17/0)

French Valley Airport
Existing Noise Contours



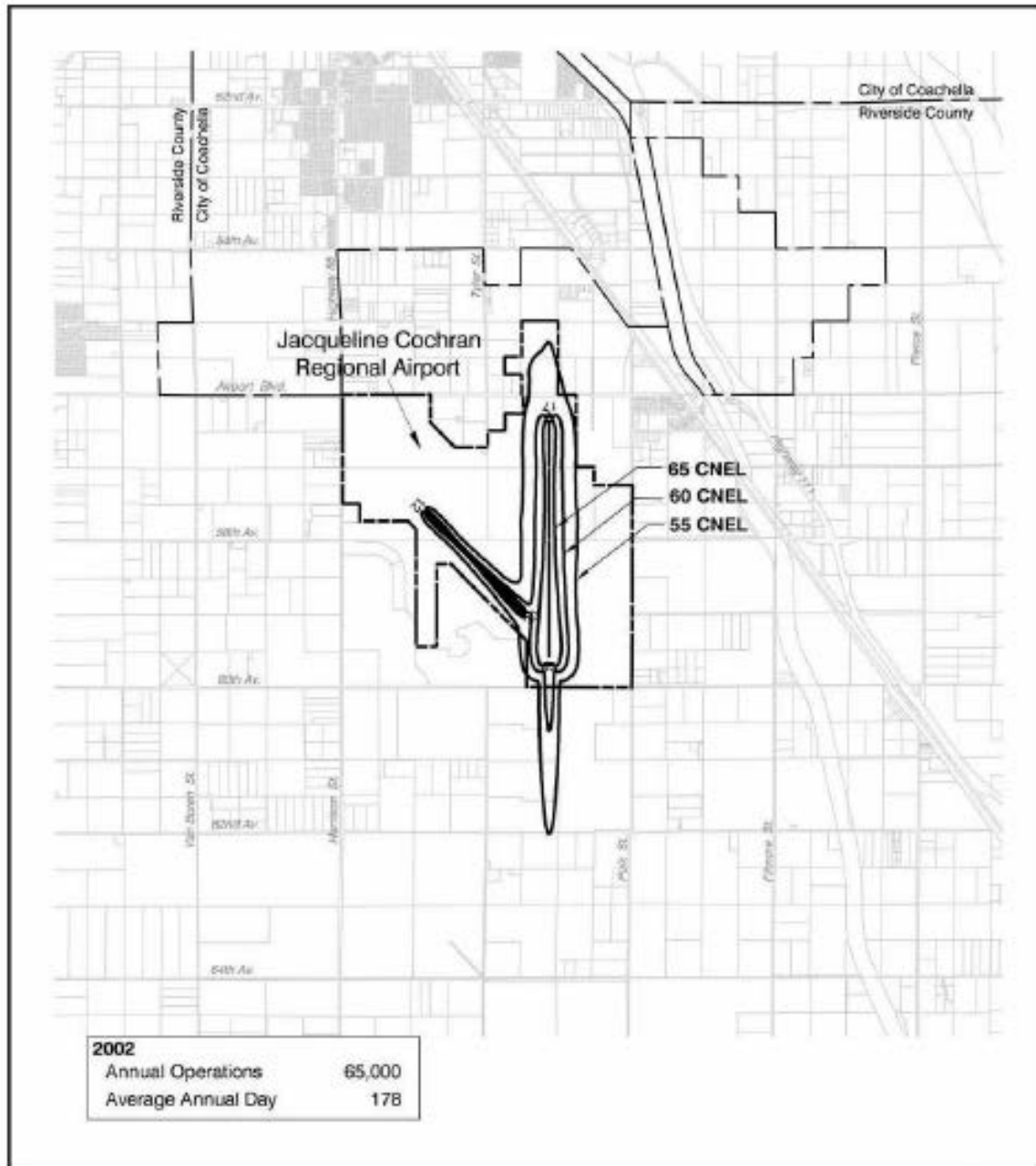


Figure 26

SOURCE: RIVERSIDE COUNTY ALUCP
WEST COUNTY AIRPORTS BACKGROUND DATA (DECEMBER 2004)



Jacqueline Cochran Regional Airport
Existing Noise Contours



J:\COM\081\0810004\0810004\Jacqueline Cochran Regional-Existing.caf (01/13/11)

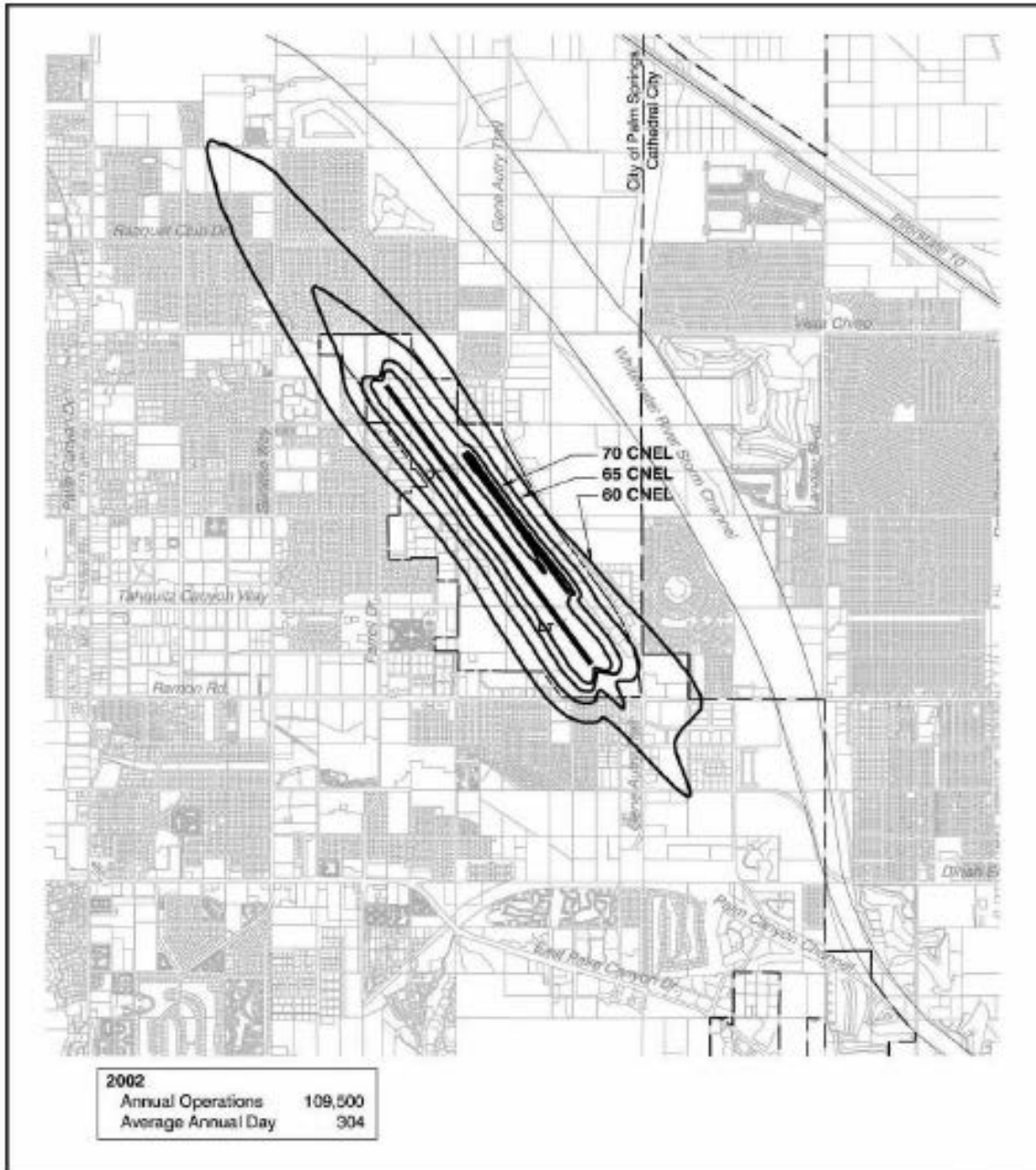


Figure 27

SOURCE: RIVERSIDE COUNTY ALIUP
 WEST COAST COUNTY AIRPORTS BACKGROUND DATA (DECEMBER 2004)



**Palm Springs International Airport
 Existing Noise Contours**



2:KCM091001 Noise Palm Springs International Existing air (1/1/07)

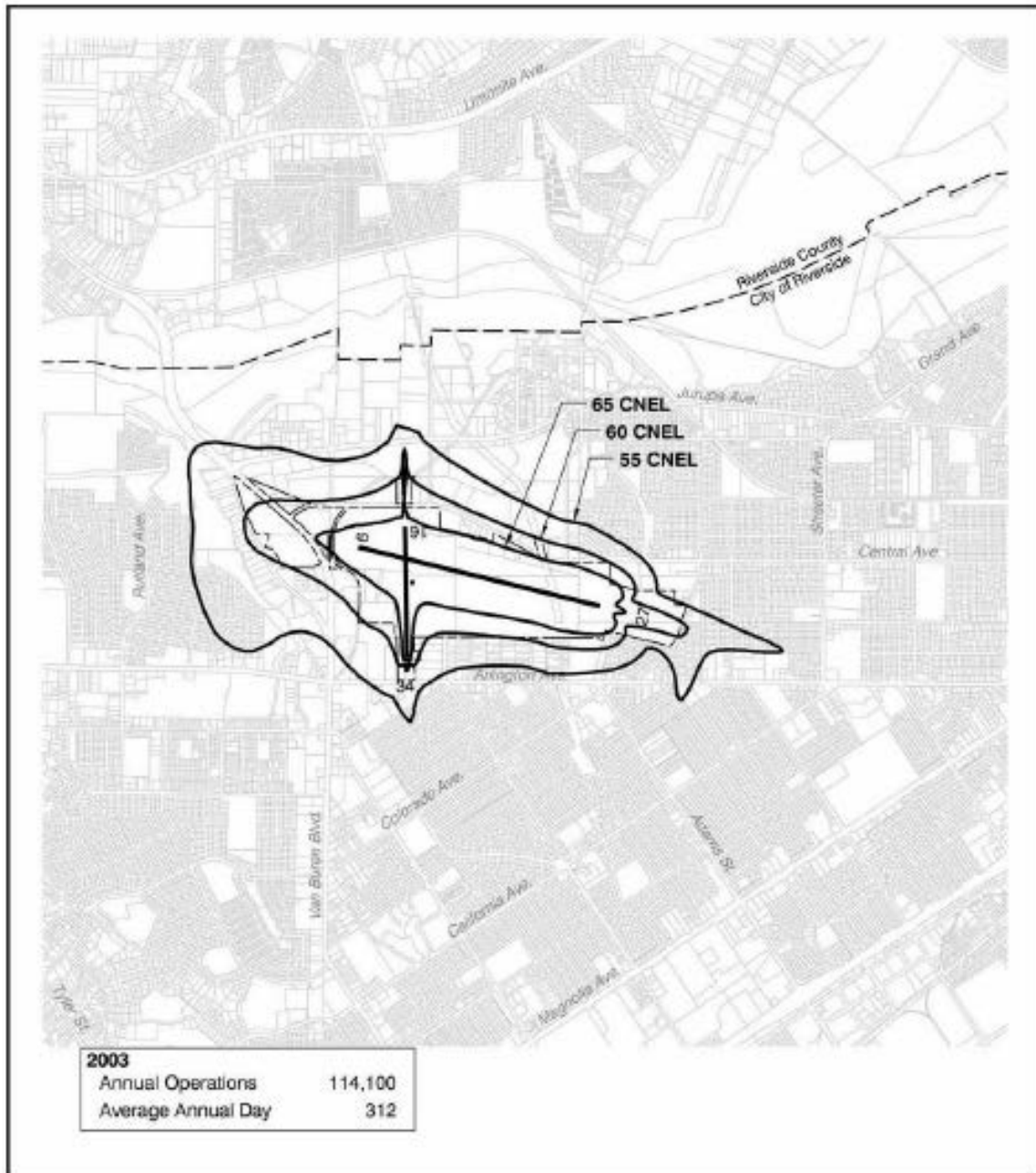


Figure 29

SOURCE: RIVERSIDE COUNTY ALIUP
 WEST COUNTY AIRPORT'S BACKGROUND DATA (DECEMBER 2004)



2008 09/10/10 Noise@riverside.ca.gov/4-21-2008-04 (2/2/11)

Riverside Municipal Airport
 Existing Noise Contours



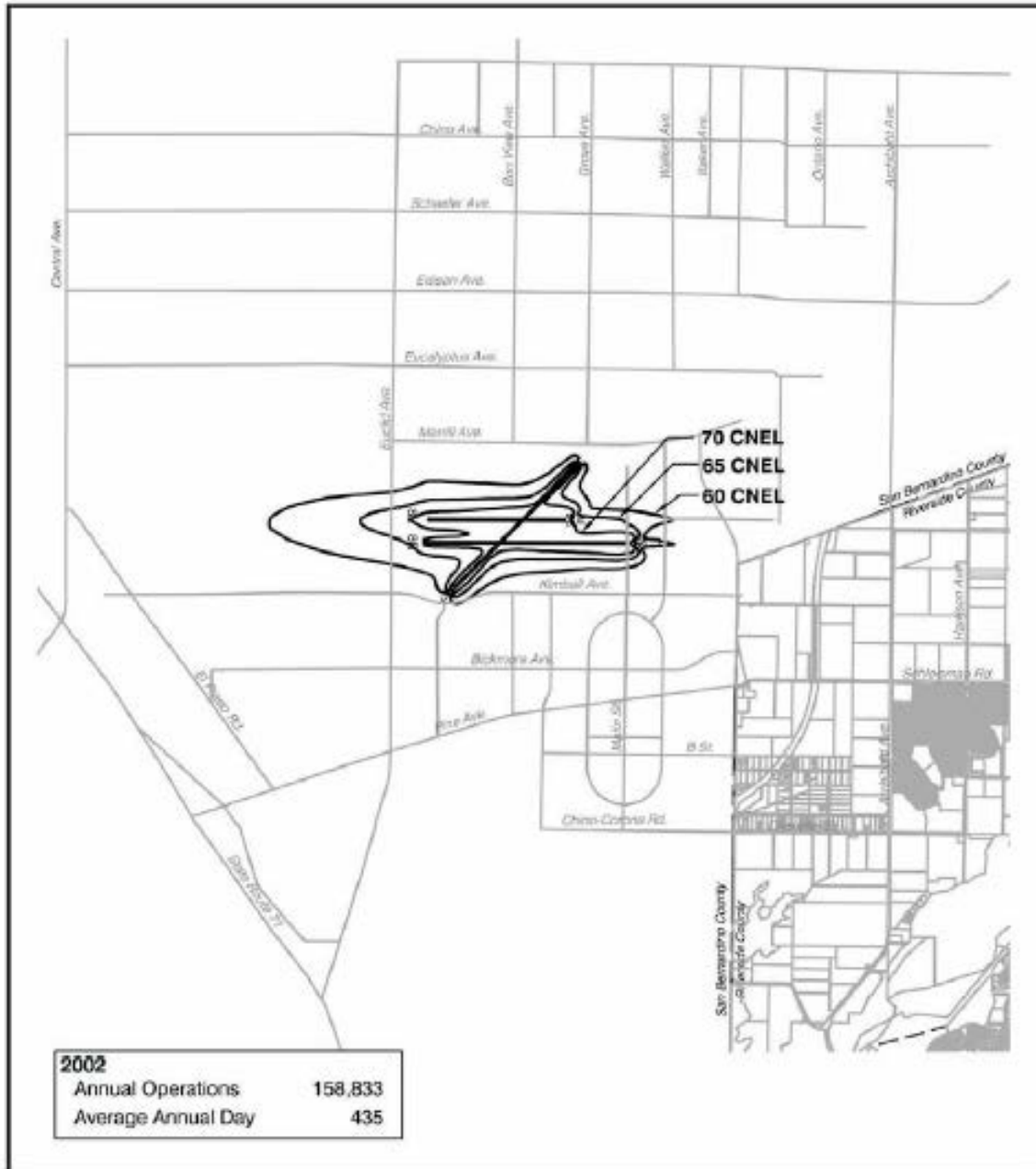


Figure 30

SOURCE: RIVERSIDE COUNTY AEROD - EAST COUNTY AIRPORT FACILITIES DATA (OCT 2006)



J:\COR\GIS\Projects\Noise - Planning\rd (2/11/1)

**Chino Airport
Existing Noise Contours**



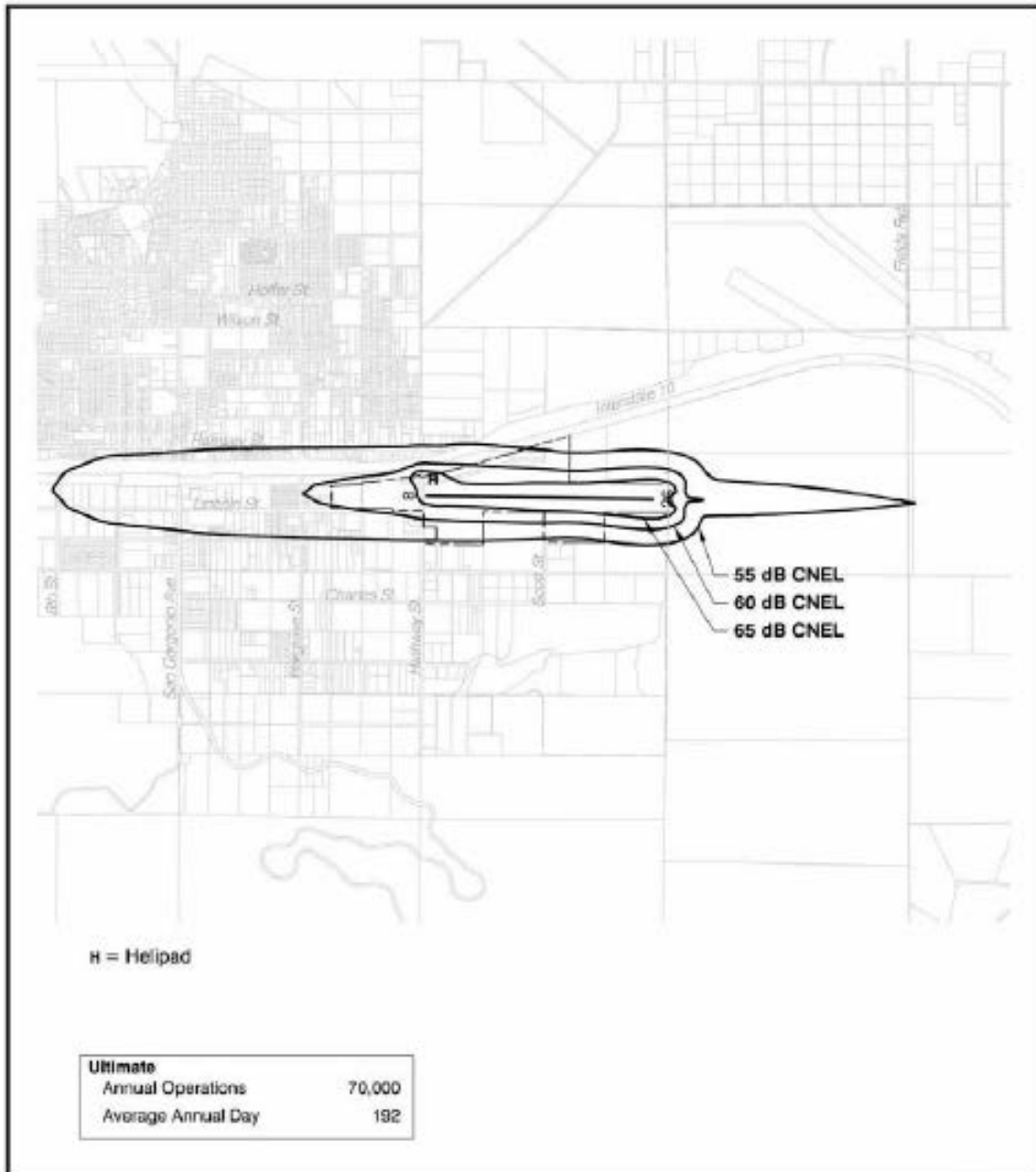


Figure 31

SOURCE: RIVERSIDE COUNTY ASD/CIP -
 EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2004)



**Banning Municipal Airport
 Future Noise Contours**



Z:\COR1501\SP\Noise\Banning Municipal - Future.dwg (2/1/10)

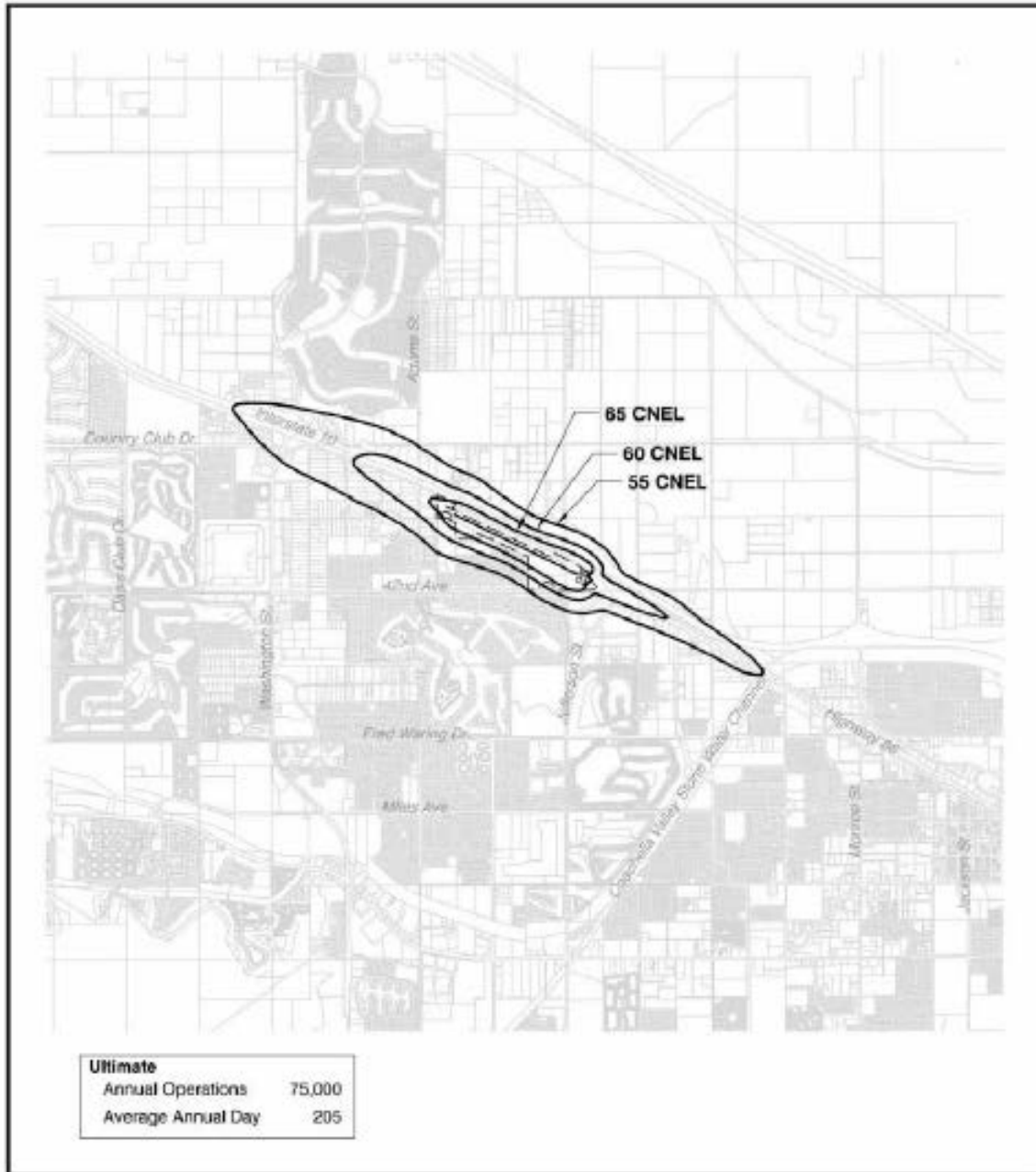


Figure 32

SOURCE: RIVERSIDE COUNTY A2010P -
EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2009)



**Bermuda Dunes Airport Future Noise Contours:
Average Annual Day**

J:\C081603\FW\Bermuda Dunes - Plans_4410.rvt (2/7/10)



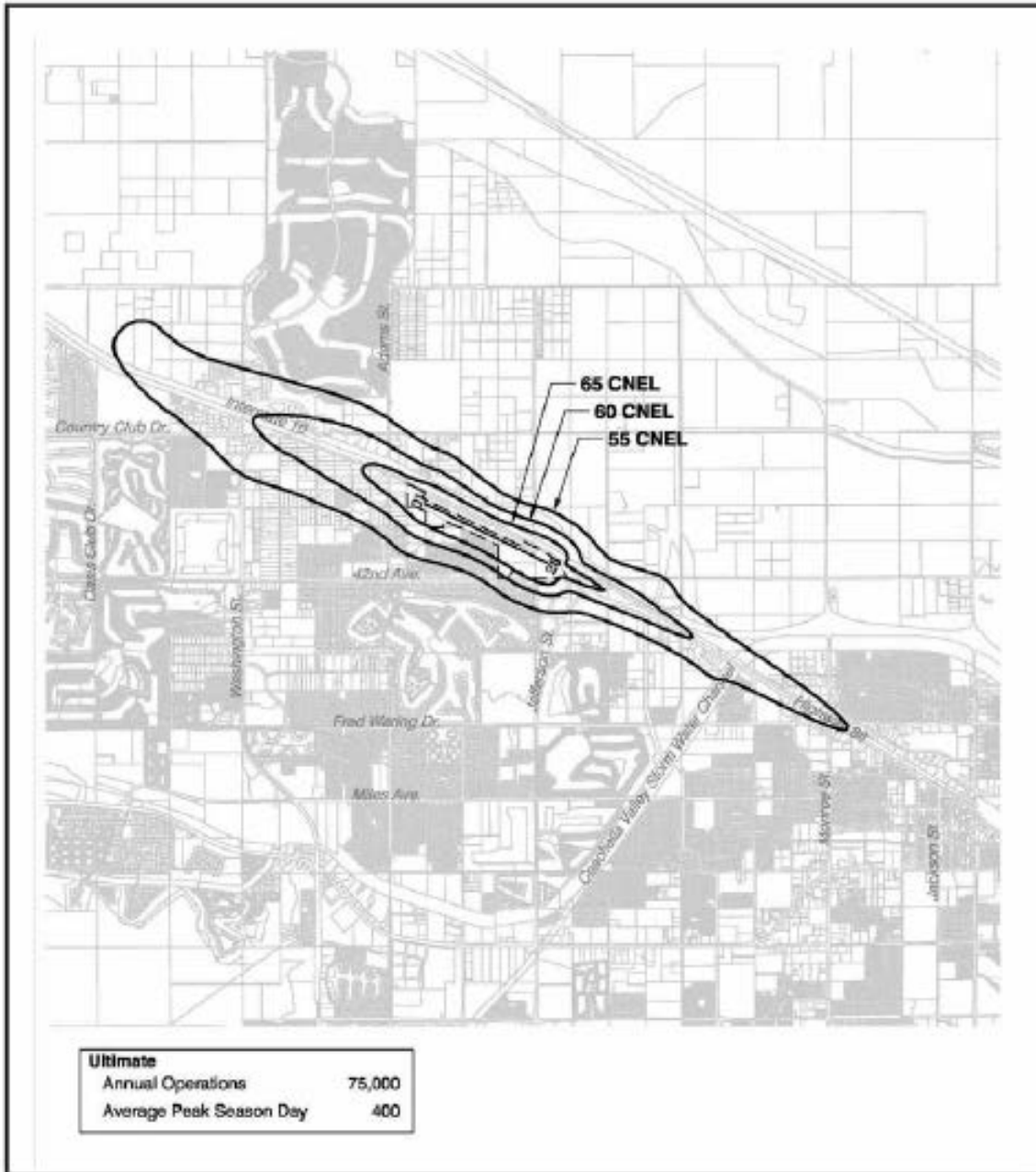


Figure 33

SOURCE: RIVERSIDE COUNTY AEDCP - EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2006)



**Bermuda Dunes Airport Future Noise Contours:
 Average Peak Season Day**



J:\COR\GIS\Projects\Bermuda Dunes - Final - AEDCP.rvt (2/13/11)

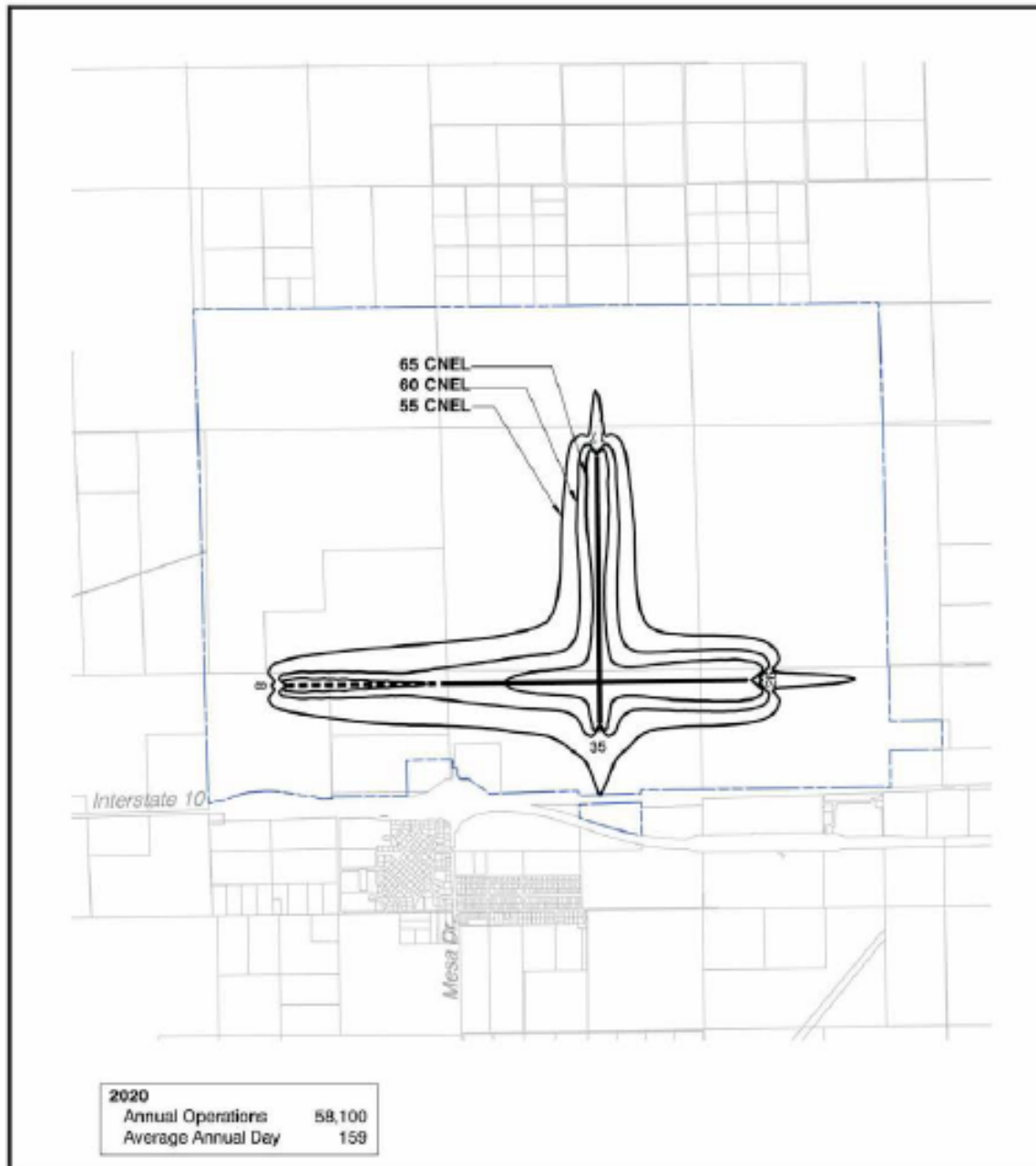


Figure 34

SOURCE: RIVERSIDE COUNTY A2010P -
EAST COUNTY AIRPORTS BACKGROUND DATA (OCT. 2004)



J:\COR160\WR\West Blythe Masterplan - Future.cdr (2017)

**Blythe Municipal Airport
Future Noise Contours**



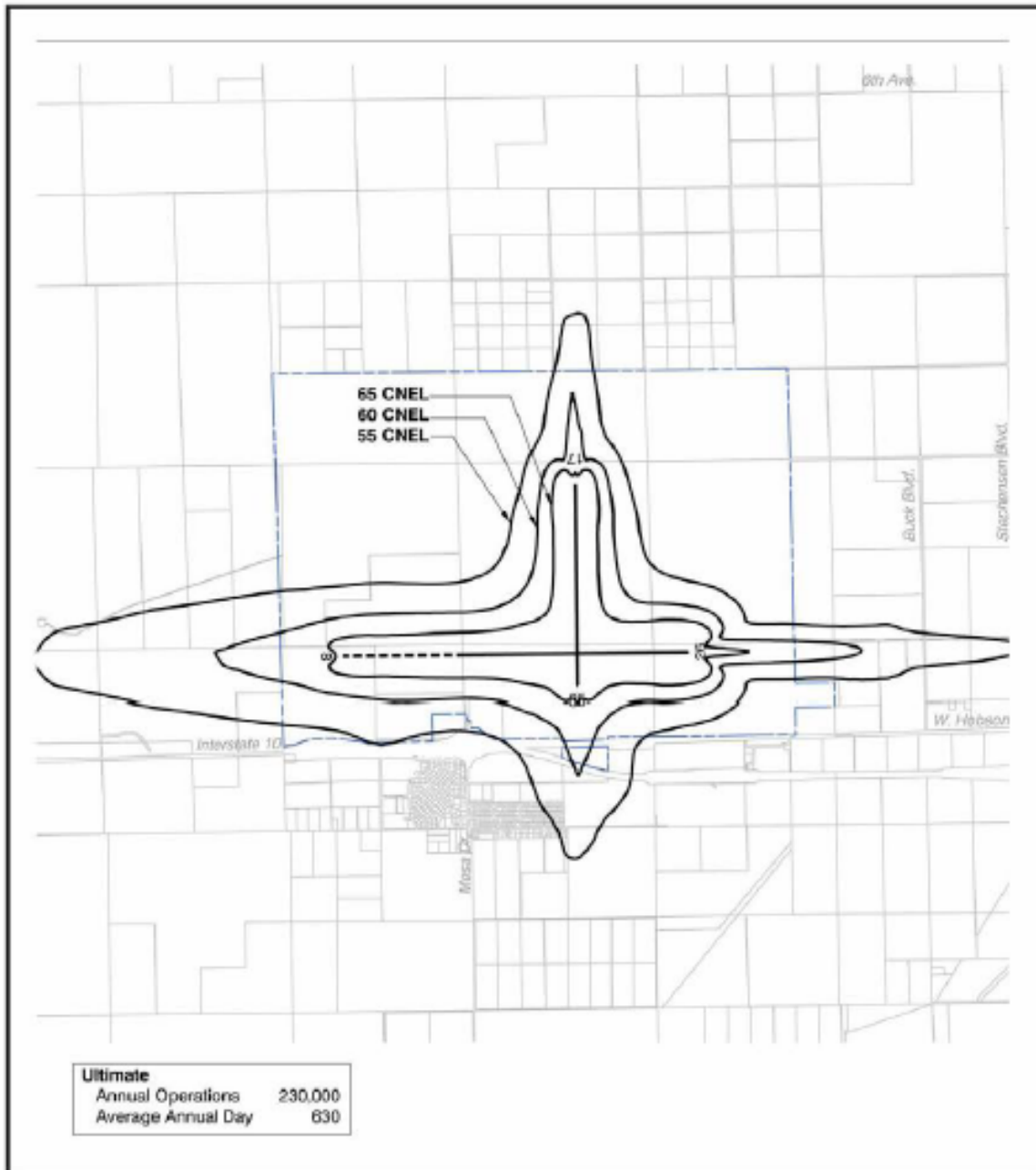


Figure 35

SOURCE: RIVERSIDE COUNTY AIRPORT - EAST COUNTY AIRPORT'S BACKGROUND DATA (OCT 2004)



**Blythe Municipal Airport
 Ultimate Noise Contours**



J:\COR\GIS\Noise\Blythe Municipal - Ultimate.apr (2/7/15)

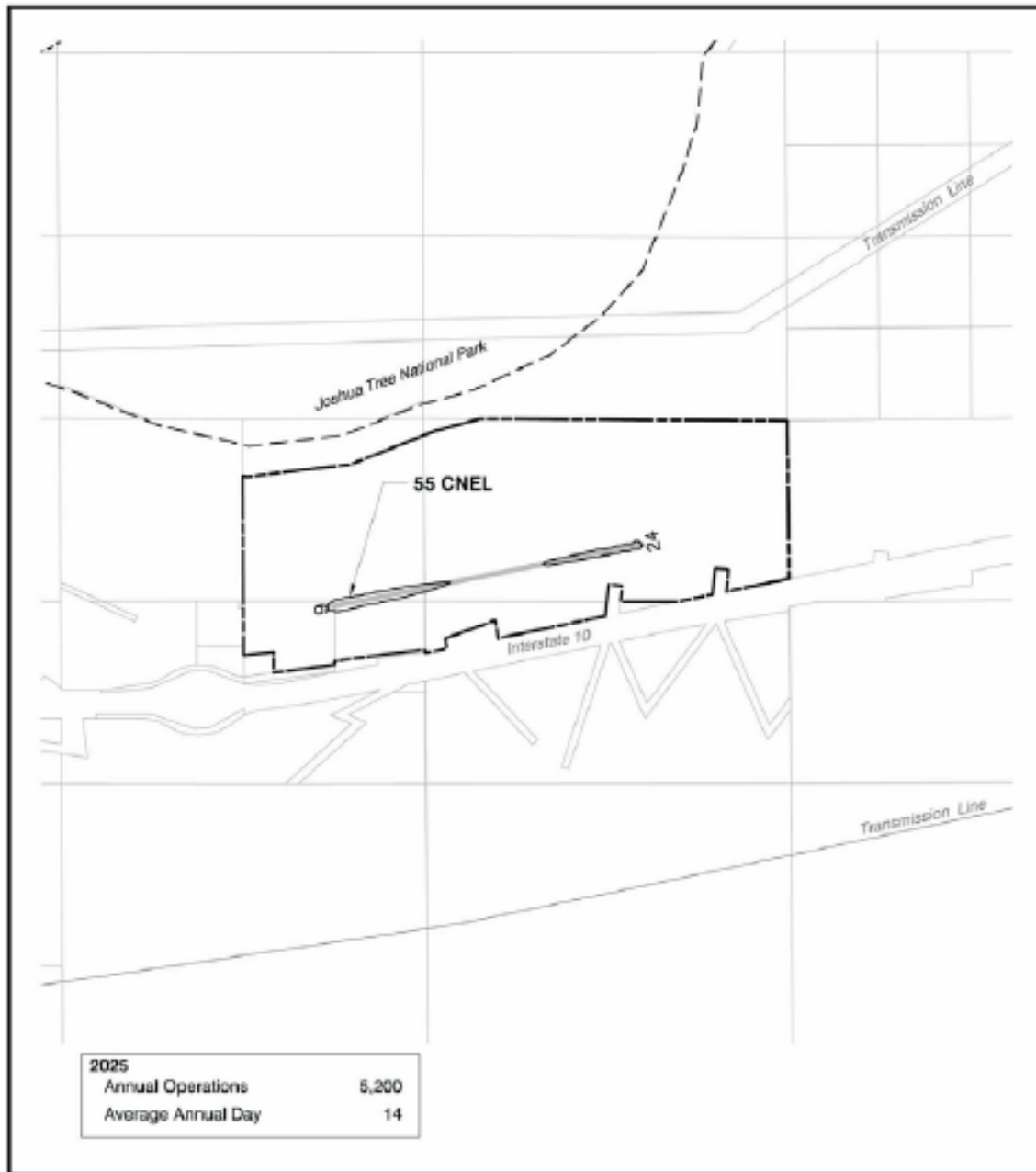


Figure 36

SOURCE: RIVERSIDE COUNTY AEDCP -
EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2006)



**Chiriaco Summit Airport
Future Noise Contours**



J:\COR\GIS\Projects\Chiriaco Summit - Plans\cslp (2/1/17)

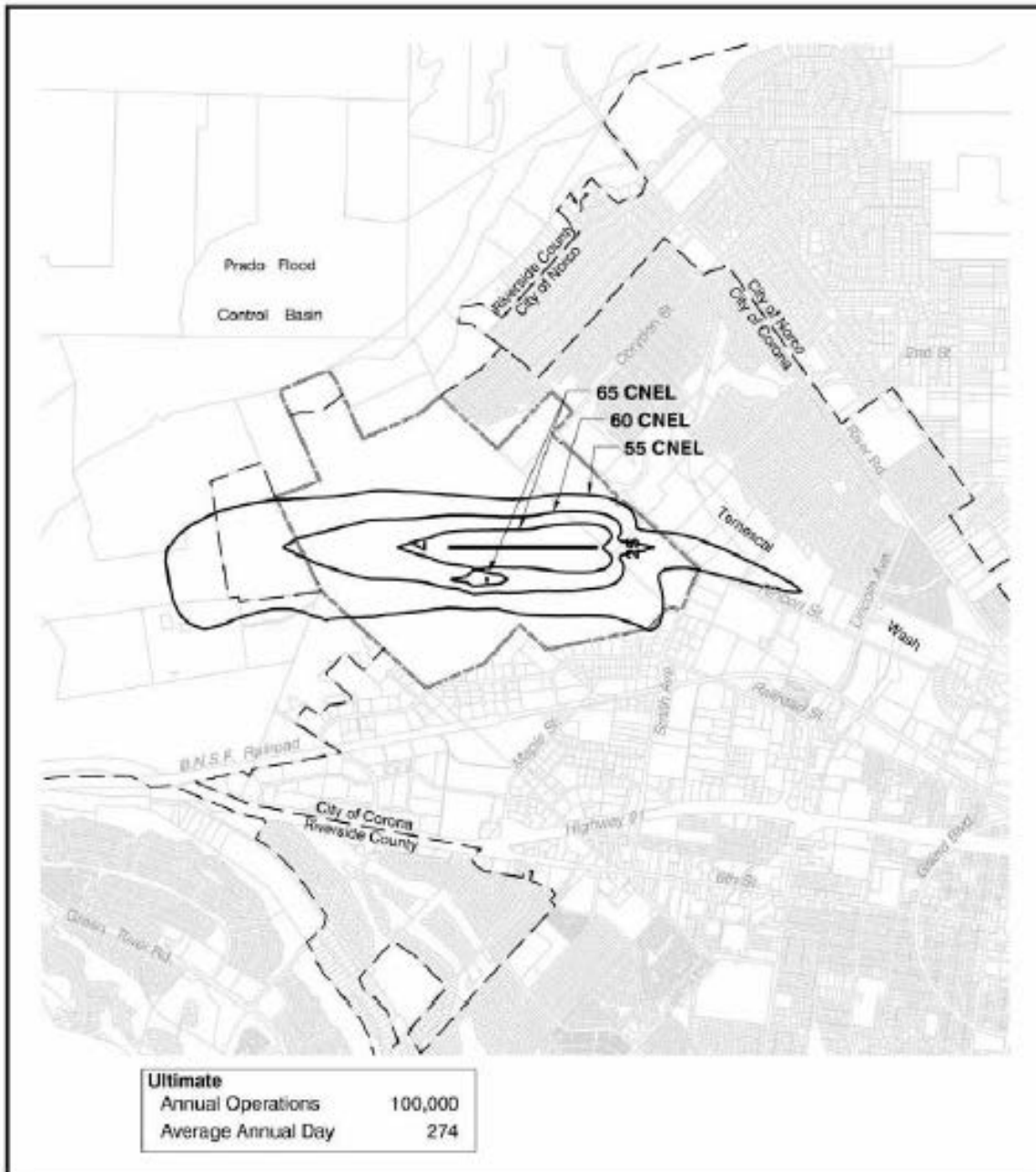


Figure 37

SOURCE: RIVERSIDE COUNTY AEDD - EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2004)



Corona Municipal Airport
 Future Noise Contours



J:\COMPL\GIS\Noise\Corona Municipal - Plans.rdr (2/25/12)

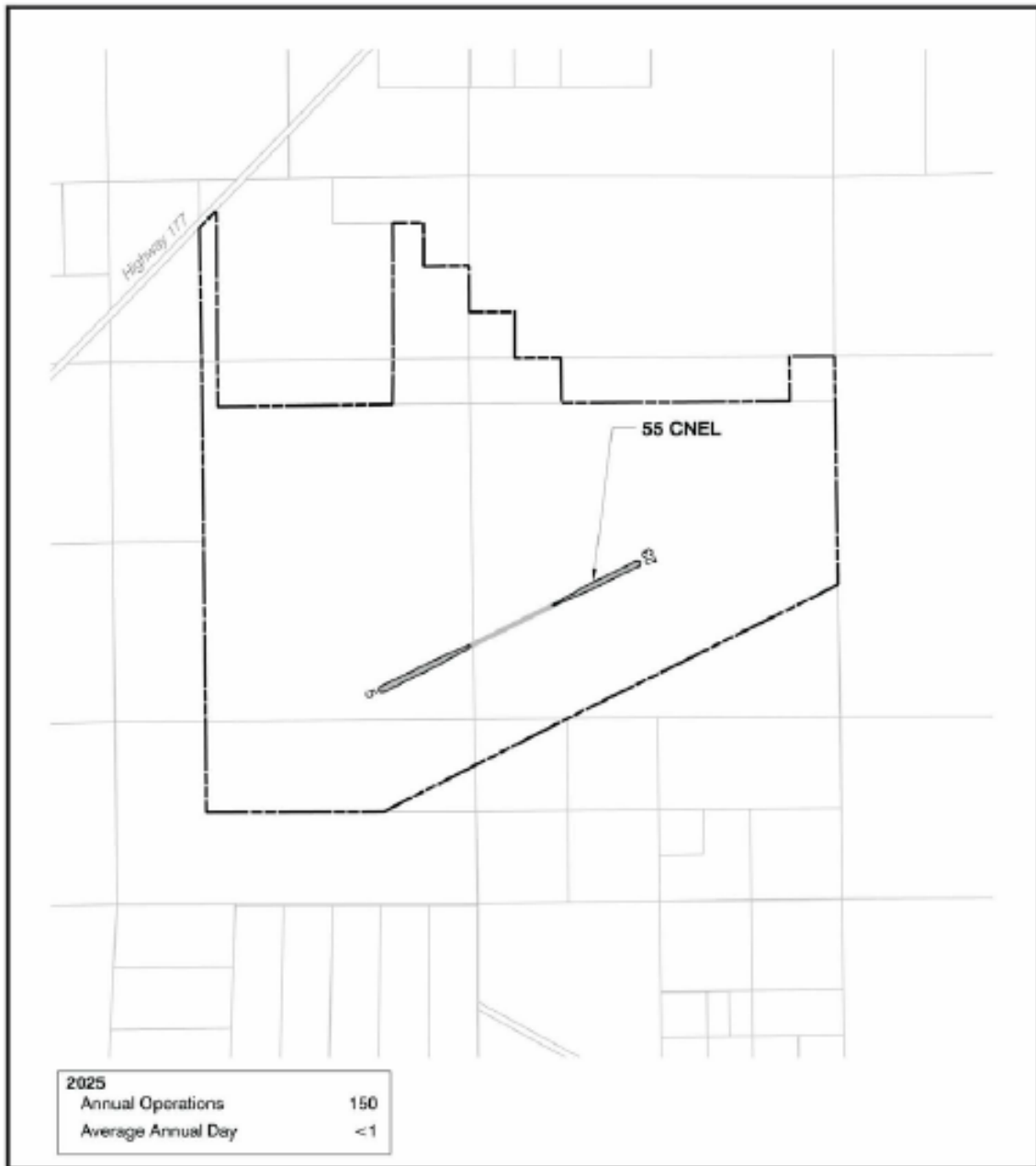


Figure 38

SOURCE: RIVERSIDE COUNTY ALCOP -
DESERT CENTER AIRPORT'S BACKGROUND DATA (OCT 2004)



0 1,000 2,000 FEET

**Desert Center Airport
Future Noise Contours**



2/10/06/10/06/Desert Center - Riverside (2/2/11)

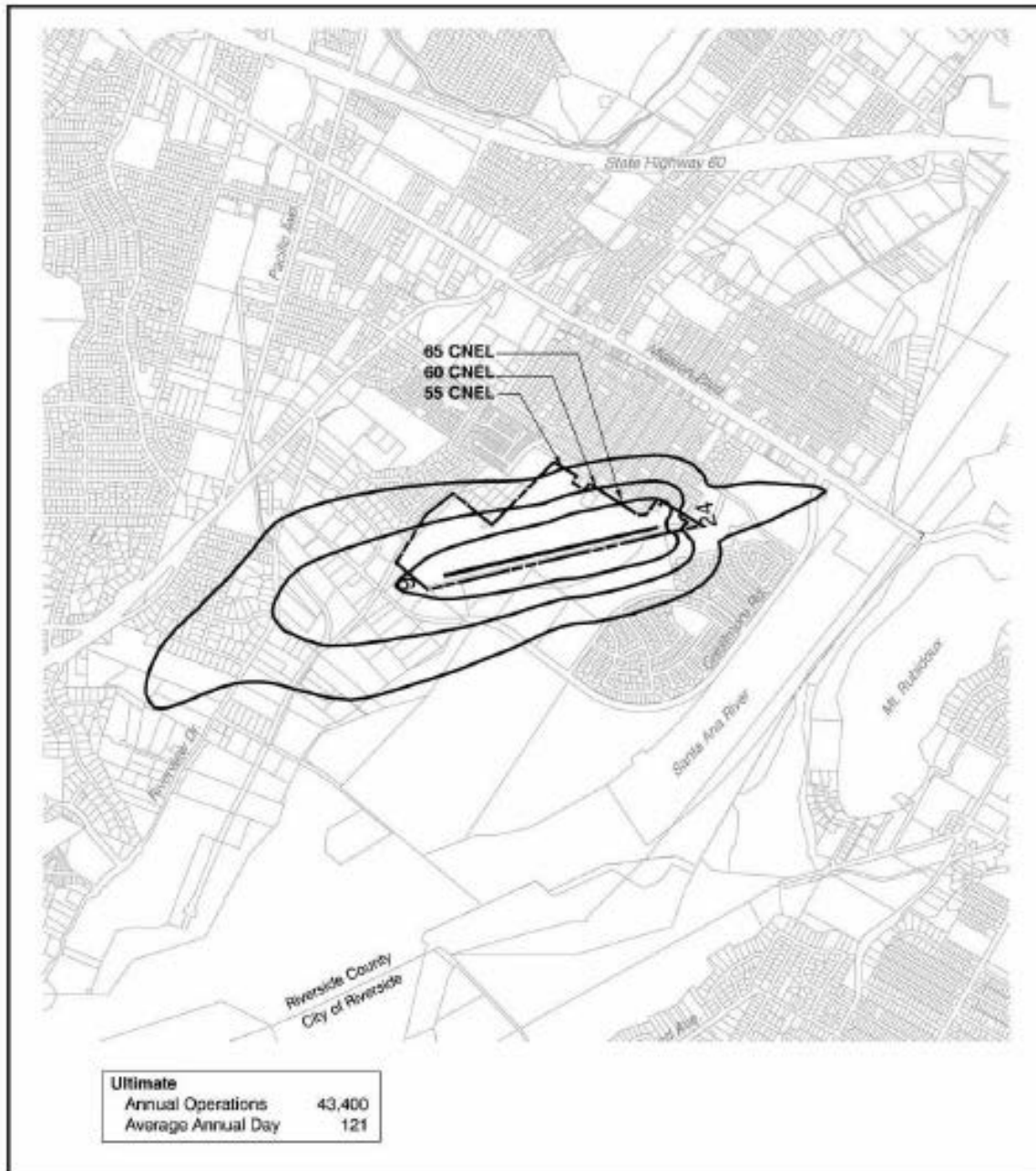


Figure 39

SOURCE: RIVERSIDE COUNTY ALCOF
 WEST COUNTY AIRPORTS BACKGROUND DATA (DECEMBER 2000)



2:100M (09/11/01) Riverside-Flabob-Future.cdr (2/2/07)

**Flabob Airport
 Future Noise Contours**



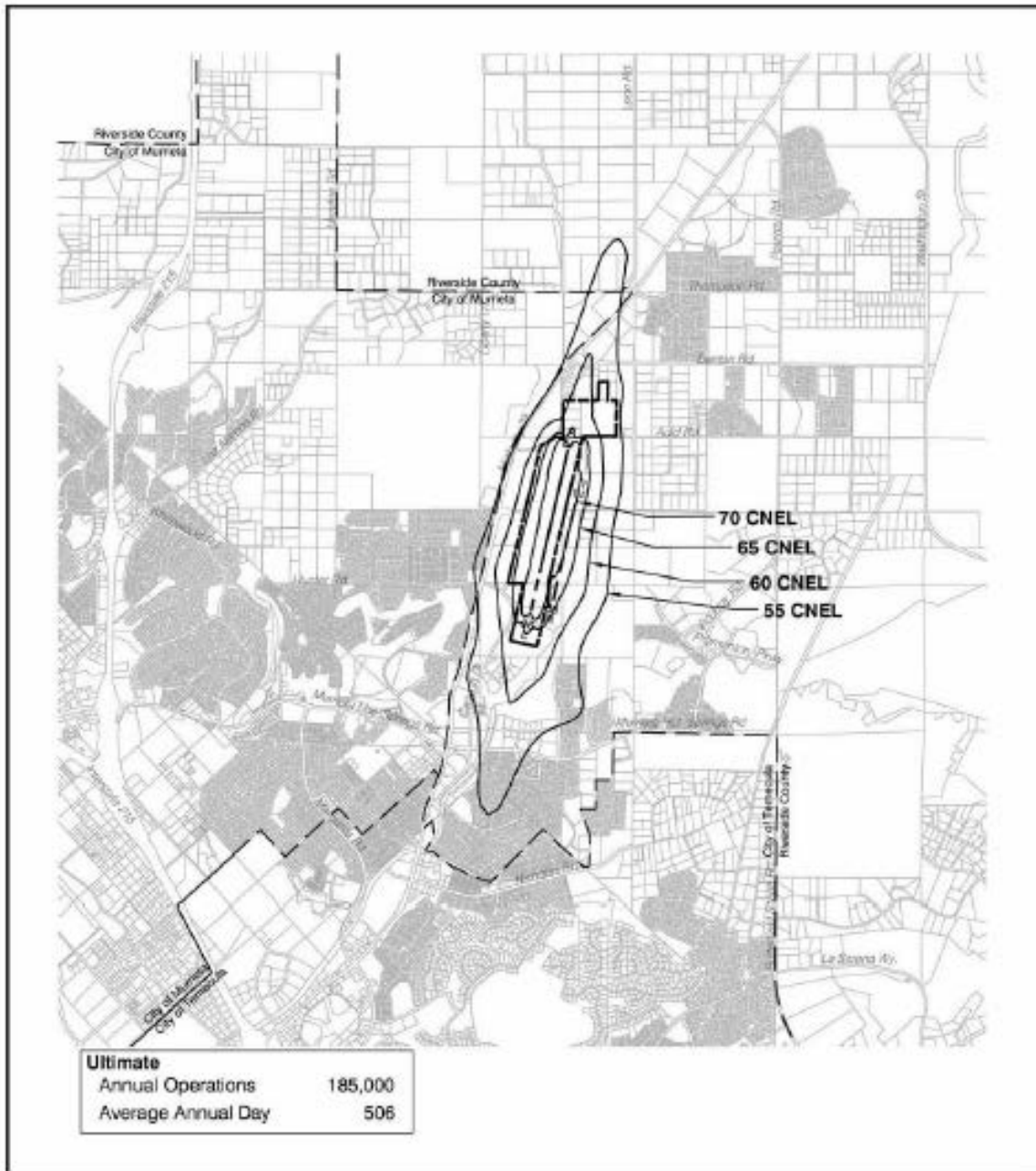


Figure 40

SOURCE: RIVERSIDE COUNTY AEDDP
WEST COUNTY AIRPORTS BACKGROUND NOISE DATA (DECEMBER 2004)



2:IC08 (09/10) Noise/French Valley-Planec.pdf (2/13/12)

French Valley Airport
Future Noise Contours



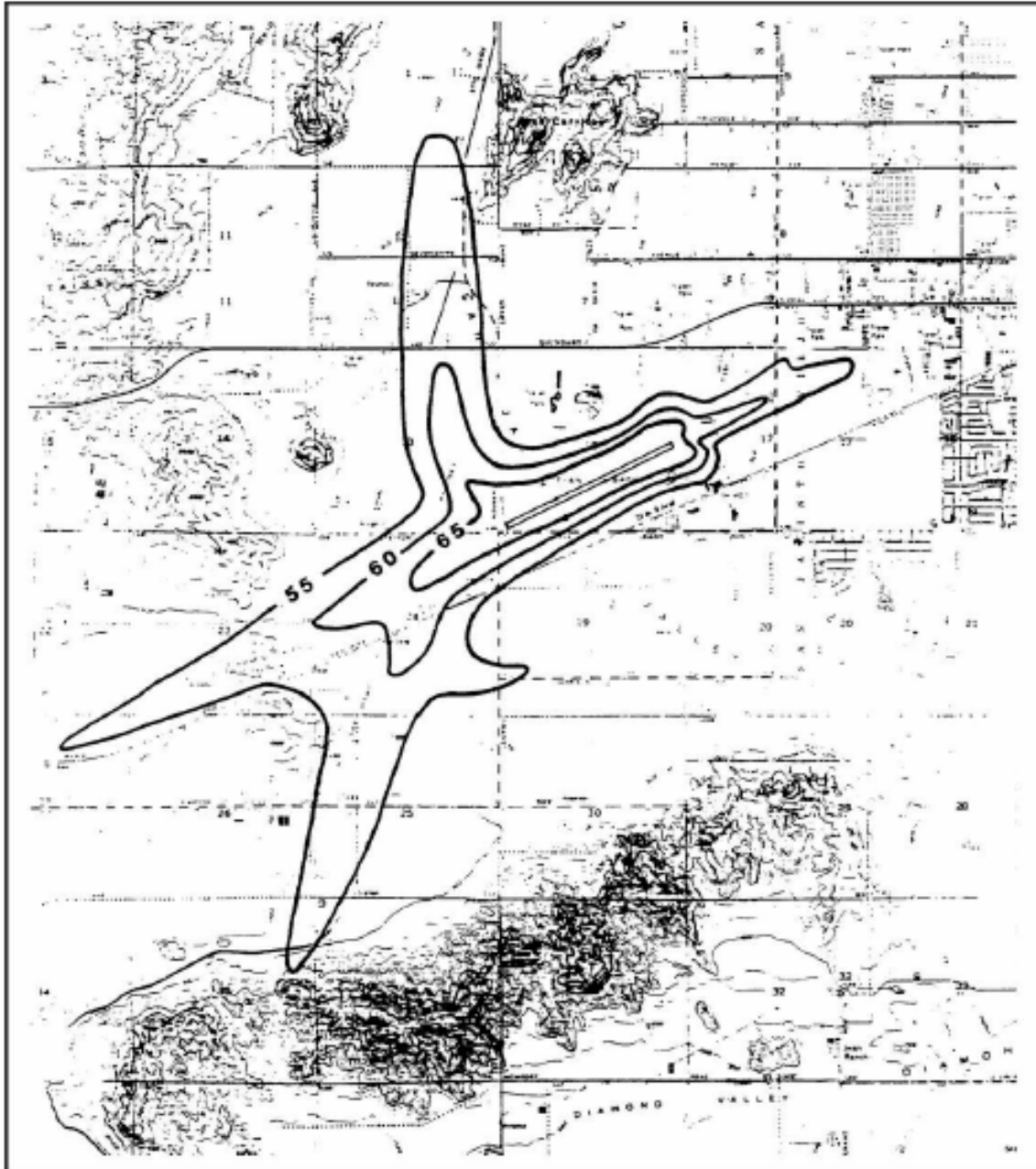


Figure 41

SOURCE: RIVERSIDE COUNTY ALDER
WEST COUNTY AIRPORTS BACKGROUND DATA, DECEMBER 2009



Hemet Ryan Airport
Future (2005) Noise Contours



Z:\COM\091008\rcip\Background-Picture-2010.dwg (2/1/10)

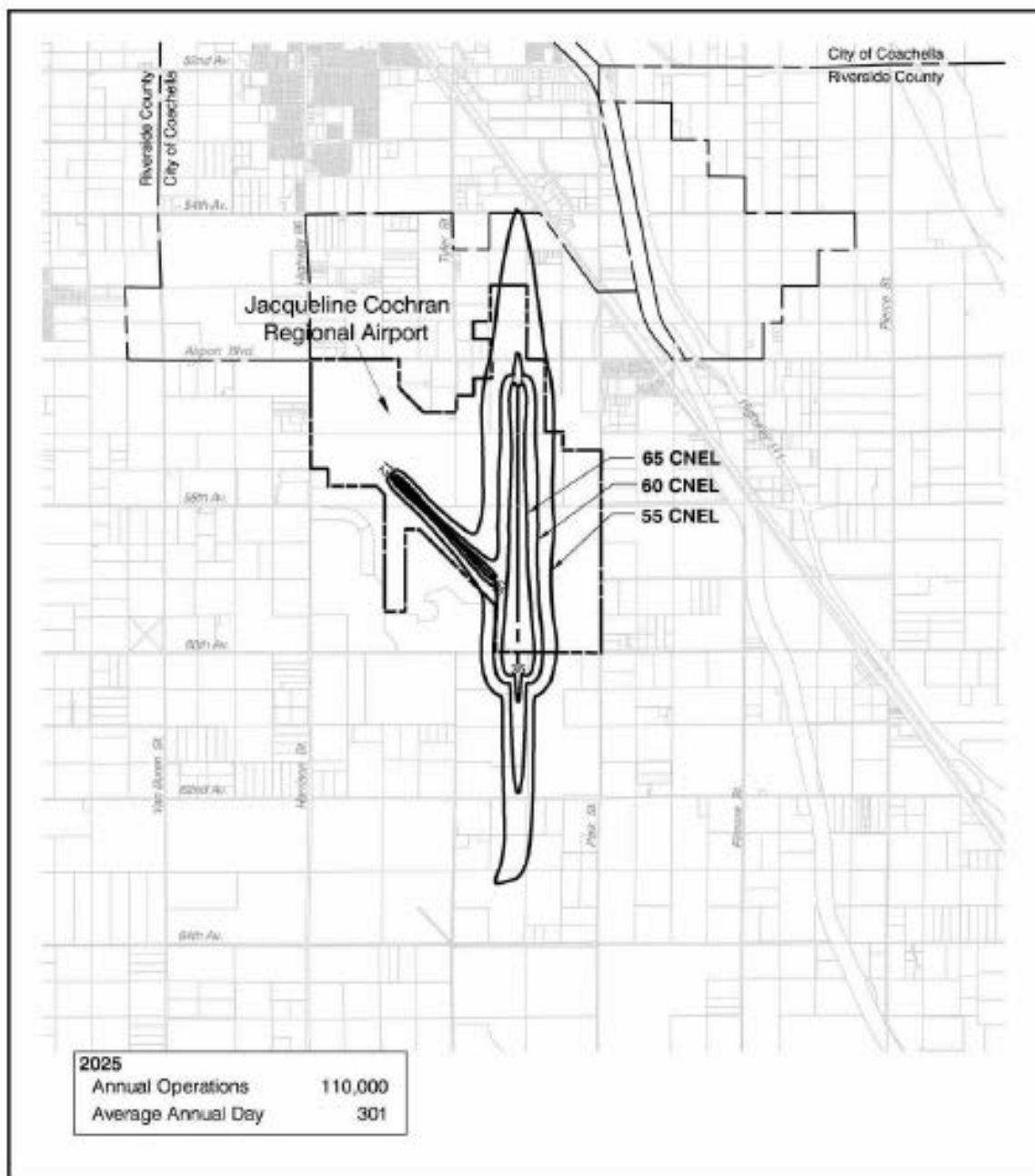


Figure 42

SOURCE: RIVERSIDE COUNTY AIRPORT WEST COUNTY AIRPORT'S BACKGROUND DATA, DECEMBER 2009.



0 2,500 5,000 FEET

**Jacqueline Cochran Regional Airport
Future Noise Contours**



RIVERSIDE COUNTY AIRPORT'S BACKGROUND DATA, DECEMBER 2009.

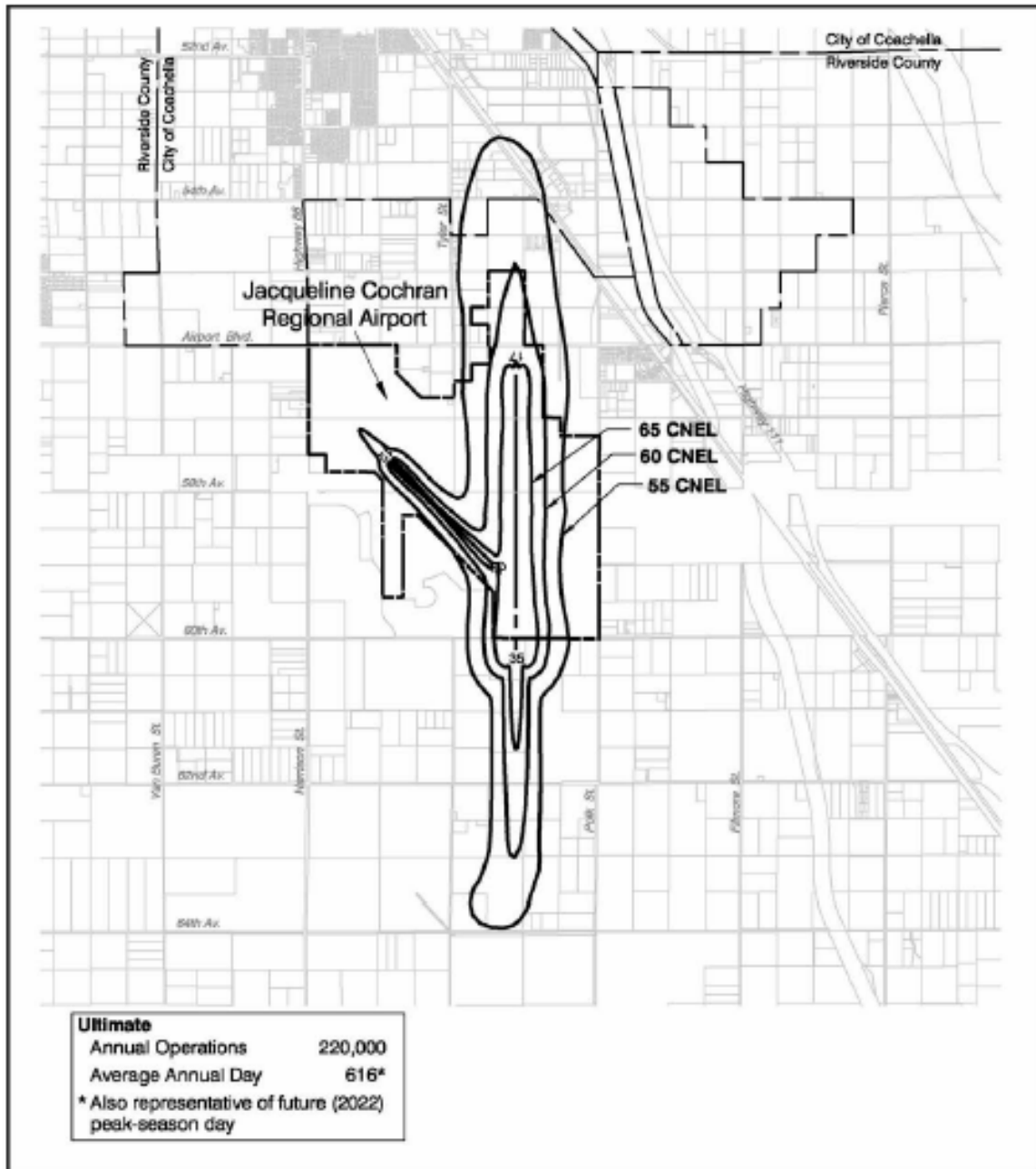
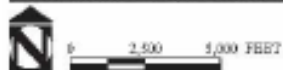


Figure 43

SOURCE: RIVERSIDE COUNTY ALCOP
 WEST COUNTY AIRPORT'S BACKGROUND DATA, 2006/2007



Jacqueline Cochran Regional Airport
 Ultimate Noise Contours



2:\C08\091\01\06\Noise\Cochrane_Regional-07\map.cir (2/13/11)

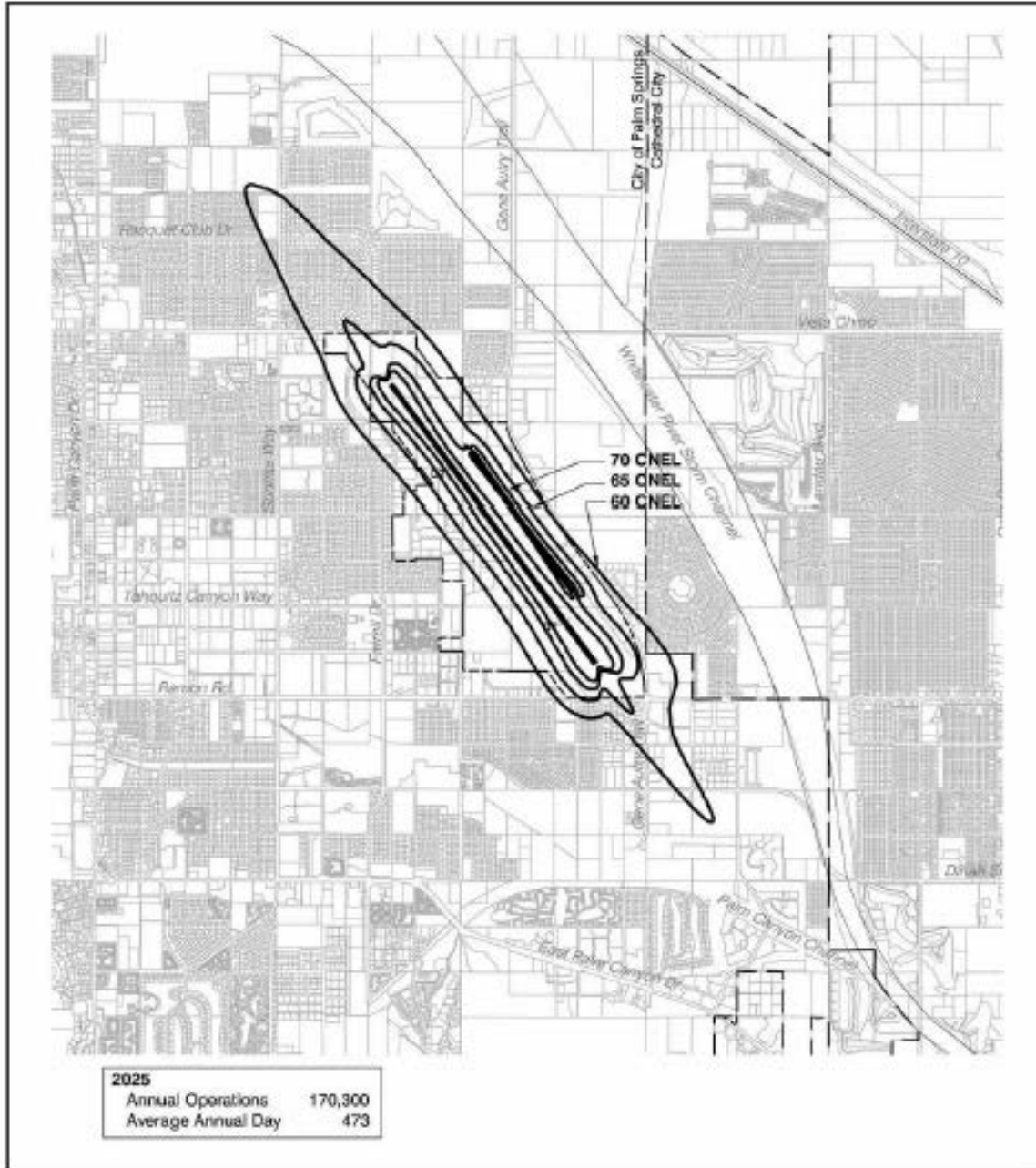


Figure 44

SOURCE: RIVERSIDE COUNTY AECOM
WEST COUNTY AIRPORTS BACKGROUND DATA (RRCB) (PER 2014)



J:\C0202\0210\0205\Palm_Springs_International_Palm_Springs_011011

Palm Springs International Airport
Future Noise Contours



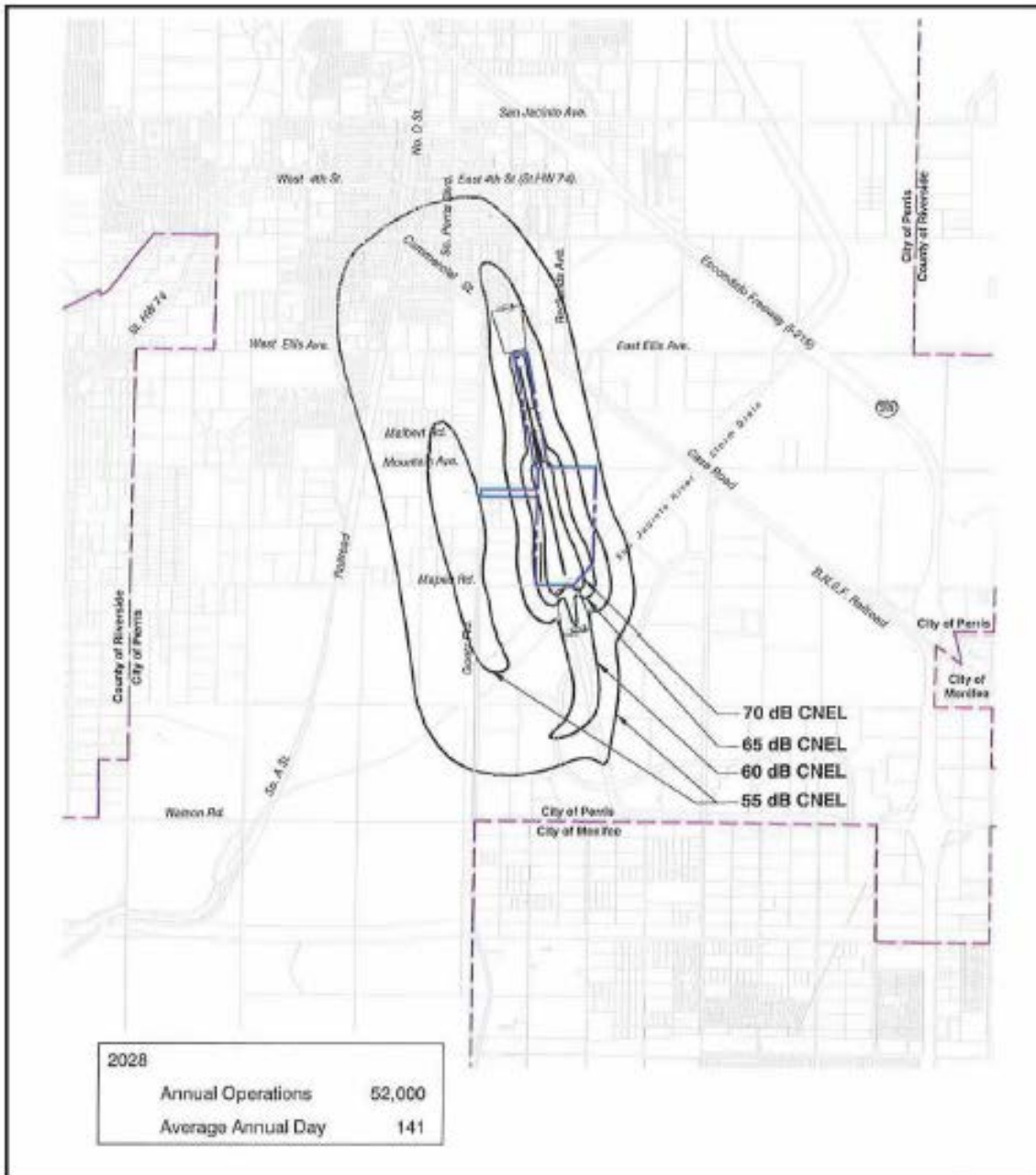


Figure 45

SOURCE: RIVERSIDE COUNTY AIRPORT
 WEST COUNTY AIRPORT'S BACKGROUND DATA, (DECEMBER 2009)



2/2008 (9/10/08) Riverside Policy-GIS/arcgis (2/12/10)

**Perris Valley Airport
 Ultimate Noise Contours**



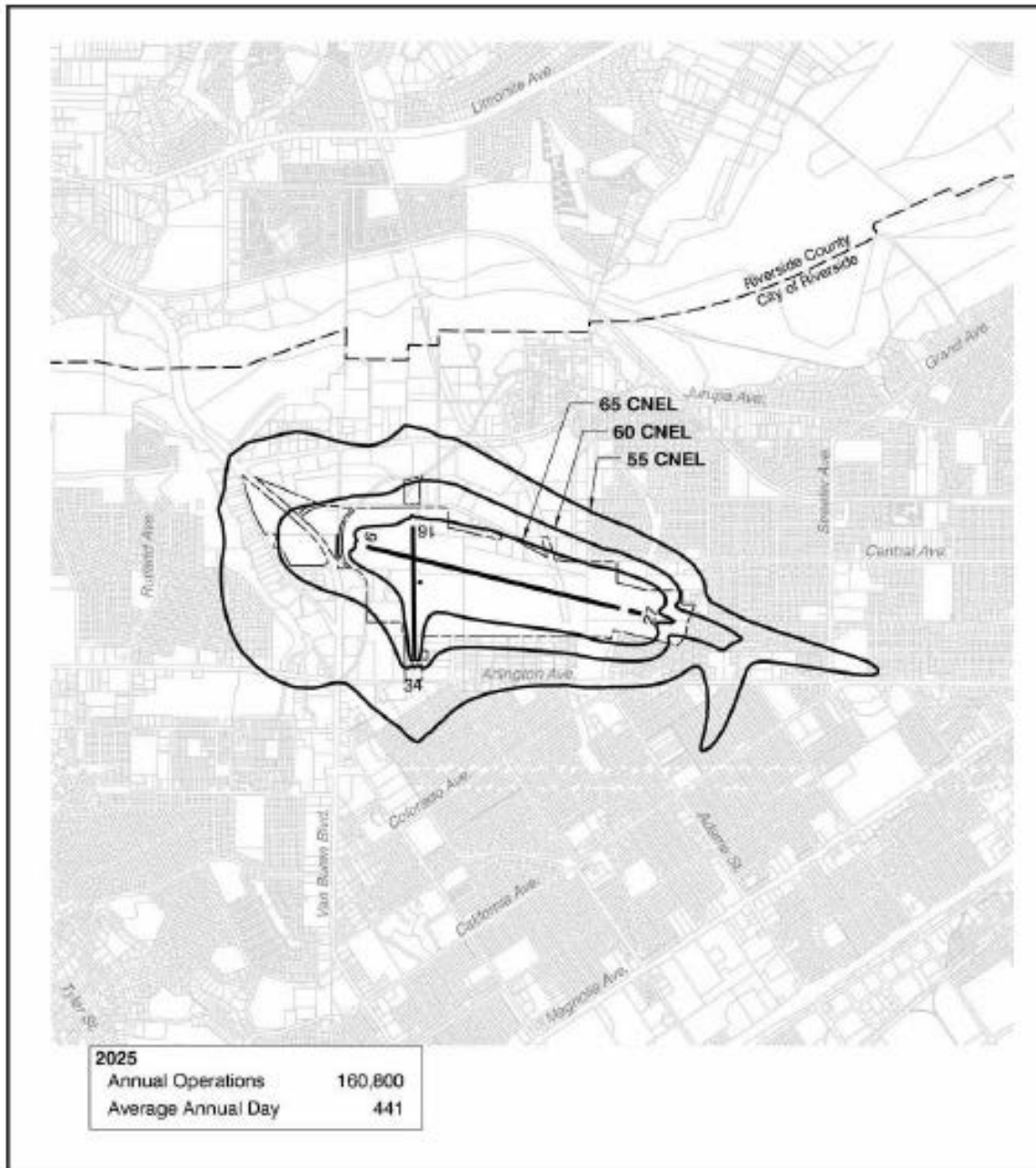


Figure 46

SOURCE: RIVERSIDE COUNTY ALCUP
WEST COUNTY AIRPORT'S BACKGROUND DATA (RECORDED 2896)



Riverside Municipal Airport
Future Noise Contours



2/10/11 09:10:04 \\wms\m\Map\Map\Airport\Noise\110311.mxd

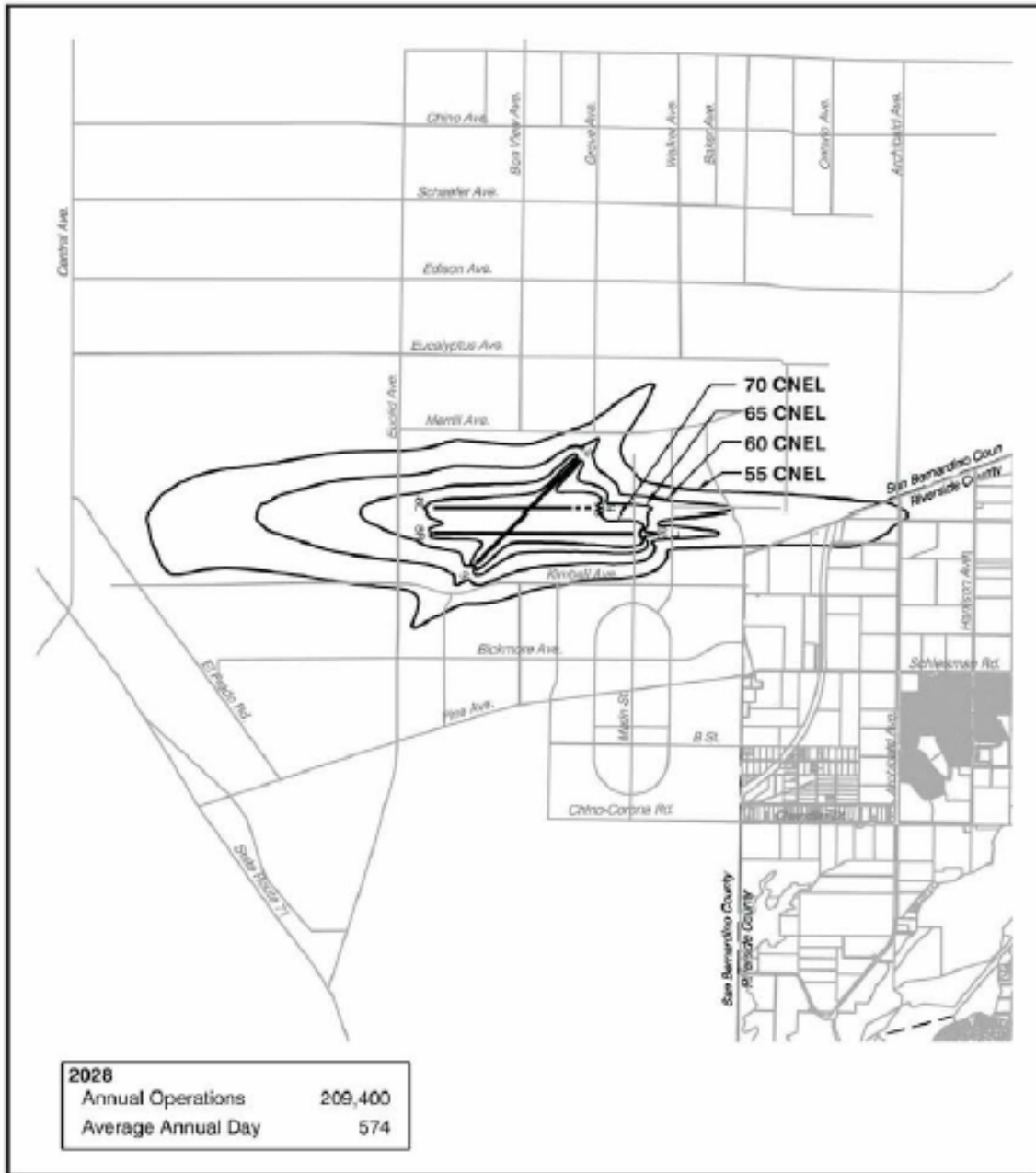


Figure 47

SOURCE: RIVERSIDE COUNTY AIRPORT - EAST COUNTY AIRPORTS BACKGROUND DATA (OCT 2006)



J:\COR\10\10\Noise\Chino - Future.apr (201511)

**Chino Airport
 Future Noise Contours**





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MEMO: Requirements for Determining and Mitigating Non-transportation Noise Source Impacts to Residential Properties.

APPLICATION:

This document is intended to provide guidelines for the determination of community noise impact due to non-transportation (hereafter known as "stationary") noise sources. Noise sources covered by this standard include, but are not limited to: industrial facilities, mining activities, loading dock activities, loud speakers operation, sporting events, musical performances, well pumps, equipment, vehicles operated off the public roadways, or any noise producing activities associated with a permanent fixed base of operation (hereafter referred to as the "facility"). Temporary construction activities are not covered by the standard.

NOISE STANDARDS FOR STATIONARY NOISE SOURCES:

Facility-related noise, as projected to any portion of any surrounding property containing a "habitable dwelling, hospital, school, library or nursing home", must not exceed the following worst-case noise levels.

- A) 45 dB(A) - 10 minute noise equivalent level ("leq"), between the hours of 10:00 p.m. to 7:00 a.m. (nighttime standard).
- B) 65 dB(A) - 10 minute leq, between 7:00 a.m. and 10:00 p.m. (daytime standard).

REQUIREMENTS FOR DETERMINATION OF COMMUNITY NOISE IMPACT:

1. Noise originating from operations within the facility grounds shall be treated as "stationary" noise sources for which this standard will apply.
2. Noise Modeling Methodology: Noise predictions are to be made by an engineer, acoustical consultant, or other similar professional with experience in predicting community noise exposure using standard methods and practices of the noise consulting industry.
3. Required Modeling Parameters for Stationary Sources:
 - i. Stationary sources are to be modeled as "point" sources.
 - ii. Mobile point sources are to be modeled as emanating from the acoustical centroid of the activity, or at its closest approach to potentially impacted residential property lines, which ever yields the worst-case results.
 - iii. Noise modeling for each piece of acoustically significant equipment, process or activity must be based on Reference Noise Levels (RNL). RNL may be obtained directly from the manufacturer (in the case of equipment) or generated from field studies. Regardless, the data must be representative of worst-case conditions. Directionality of the noise source must be taken into consideration if applicable.
 - iv. Predicted noise levels are to be expressed in germs of worst-case "equivalent continuous sound levels" [or, Leq] averaged over a ten minute period.
 - v. For modeling purposes, receivers are assumed to be positioned at the property line boundary at an elevation of five feet off the ground.

- vi. Terrain conditions for modeling noise propagation: Assumptions regarding ground effects, atmospheric absorption and other forms of noise attenuation must be fully justified.

NOISE REPORT FORMAT AND REQUIRED SUBMITTALS:

The noise Consultant's findings and recommendations must be submitted for review, and receive approval from, the Office of Industrial Hygiene. The resulting report must incorporate the requirements above and, at a minimum, contain the following information:

- a) an adequate and accurate characterization of the current ambient noise environment;
- b) a clear description of the proposed facility and its activities including a step-by-step flow chart of manufacturing processes if applicable;
- c) the identity and characterization of all acoustically significant equipment and/or activities;
- d) a discussion of analytical methodology and parameters used for noise modeling;
- e) a table containing reference noise data accompanied by a detailed description of how it was obtained;
- f) the facilities hours of operation;
- g) a discussion of anticipated production volume, how it is expected to change over time and how such change will effect community noise;
- h) a discussion of worst-case unmitigated noise impact;
- i) a discussion of mitigation (if necessary);
- j) a printed copy of computer input/output (if available) or manual calculations clearly illustrating the rationale for the Consultant's conclusions.

In addition, the final noise report must contain a scaled map(s) defining the acoustical contours surrounding the facility. Minimally, this map(s) must show:

- a) The facility relative to the residential properties surrounding it. Include both unincorporated and incorporated (any adjoining Cities) area surrounding the project and potentially affected by project-related noise.
- b) The 65 dB(A) 10 minute Leq noise contour reflecting the anticipated "worst-case" conditions between the hours of 7AM - 10 PM (daytime hours).
- c) The 45 dB(A) 10 minute Leq noise contour reflecting the anticipated "worst-case" conditions between the hours of 10 PM - 7AM (nighttime hours).
- d) The location and number of residential structures located within these contours.



MEMO: Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures.

NOISE STANDARDS:

1. The Noise Element of the General Plan indicates that to avoid future noise hazard, the maximum capacity design standard for highways and major roads will be used for determining the maximum future noise level or, in the case of freeways and airports, the estimated conditions 20 years in the future.
2. The interior noise levels in residential dwellings shall not exceed 45 Ldn/CNEL.
3. The exterior noise level shall not exceed 65 Ldn/CNEL.
4. Required Noise Prediction Model B Traffic Noise: FHWA RD 77-108 Highway Traffic Prediction Model, Sound 32 or the equivalent.

REQUIRED TRAFFIC NOISE MODELING PARAMETERS:

1. Roadway Classification: All roadways must be classified into one of the following categories as defined in the General Plan: Secondary, Major, Arterial, Urban Arterial, Expressway, Freeway, and Specific Plan Road.
2. Roadway Traffic Volume: All roadways must be modeled using Average Daily Trip (ADT) Level of Service “C” design capacities. For roadways classified by the General Plan as variable, future build-out traffic volumes must be obtained from the County’s Transportation Department
3. or in the case of freeways, from Caltrans.
4. Required vehicle mix.
 - Freeways: Vehicle mix information must be obtained from Caltrans.
 - Roadways designated as major, arterial highways, or expressways:

VEHICLE	OVERALL %	DAY (7AM-7PM) %	EVENING (7PM-10PM) %	NIGHT (10PM-7AM) %
Auto	92	69.5	12.9	9.6
Medium Truck	3	1.44	0.06	1.5
Heavy Truck	5	2.4	0.1	2.5

- Roadways designated as secondary, collectors, or smaller:

VEHICLE	OVERALL %	DAY (7AM-7PM) %	EVENING (7PM-10PM) %	NIGHT (10PM-7AM) %
Auto	97.4	73.6	13.6	10.22
Medium Truck	1.84	0.9	0.04	0.9
Heavy Truck	0.74	0.35	0.04	0.35

5. Traffic Speed: For County roads assume an average traffic speed of 40 MPH. For freeways, contact CALTRANS and use what speed they recommend.
6. Terrain conditions for modeling noise propagation: Assume Ahard site@ conditions in determining noise propagation (no more than 3 dB of attenuation per doubling of distance between source and receiver).
7. Noise attenuation attributed to standard residential architecture: It is assumed that standard residential design (with windows closed) will provide no more than 20 dB (A) of attenuation. Additional mitigation must be demonstrated via modeling.

8. Receiver placement for modeling exterior noise levels (unmitigated): Noise levels must be estimated at the exterior face of the nearest residence at an elevation of five feet above the finished pad.
 - Receiver placement for noise barrier design: Set back: Barrier calculations shall be based on a hypothetical outdoor receiver located ten (10) feet behind the intervening noise barrier.
 - Receiver height: Initial calculations shall be based on a receiver height of five (5) feet above the ground. If these calculations result in a barrier less than or equal to six (6) feet in height, no further barrier calculations are necessary and this shall be selected as the required wall height.
9. However, if the resulting barrier height is calculated to be greater than six feet, it shall be re-calculated using a receiver height of three (3) feet. The resulting re-calculated wall height shall be then selected as the required wall height.
10. Receiver placement for architectural-based (indoor) noise mitigation B first floor: First floor interior noise level predictions are to be calculated assuming a hypothetical receiver is located in the center of the room nearest the noise source and elevated 5 feet above the pad (finished floor).

NOISE REPORT FORMAT AND REQUIRED SUBMITTALS:

The noise Consultants findings and recommendations must be submitted for review, and receive approval from, the Office of Industrial Hygiene. The resulting report must incorporate the requirements above and, at a minimum, contain the following information: a) a clear description of the proposed project; b) the identity and characterization of all acoustically significant roadways; c) a discussion of analytical methodology and parameters used for noise modeling; d) information obtained from applying requirements 6-10 (above); e) a discussion of mitigation (if necessary) including a clear diagram illustrating noise barrier placement; f) a printed copy of computer input/output (if available).

In addition to the report, Industrial Hygiene must be provided with the following depending on the design stage of the project. The first item that must be provided is a scaled map (blue-line) of the project. This map must clearly illustrate lot boundaries and the relative location of all acoustically significant roadways. Topographical elevations for lots and roadway centerlines must be included. Second, if architectural-based mitigation is necessary, and if the project has progressed to the point where plans for the homes have been drawn, copies must be provided (floor plans and exterior elevation drawings). Additionally, an updated blue-line showing exact pad location and finished floor elevation must be included.

MEMO: Potential Studies Requiring Input from Department of Public Health

I. STUDIES

Except for WECS (Wind Energy Conversion Systems) Noise, Department of Public Health input is discretionary as determined by the Planning Department. Regularly, the Planning Department requests Department of Public Health reviews concerning the acoustical issues associated with a project. Less frequently, the Department may be requested to comment on ground vibration from trains (may apply to noise sensitive receptor within 1,000 feet of a rail corridor) and release of silica dust from sand and gravel pit operations. In addition, in response to community and planning commissioners comments, the Planning Department may request Department reviews of projects having the following associated issues: nuisance dust, cement dust, electromagnetic fields from power lines, and asbestos dust.

A. Noise Appraisals

Noise appraisals fall into three groups each with distinct criteria; Transportation noise receptors, e.g. tracts receiving noise from highways and airports; stationary noise sources, e.g. projects emitting significant noise impacting neighboring communities; and Wind Energy Conversion Systems noise (WECS or Windturbine Farms). An applicant should be aware that a given project may fall into more than one group. The following outlines the minimum criteria associated with each group.

1. Transportation noise receptors:

- (a) Interior noise levels in residential dwellings shall not exceed 45 Ldn (or CNEL).
- (b) Exterior noise levels shall not exceed 65 Ldn (or CNEL).
- (c) Acoustical parameters are outlined in the memo of Dec. 21, 1990 (contact the Office of Industrial Hygiene).

2. Stationary noise sources:

During hours of 7 A.M. to 10 P.M. and 10 P.M. to 7 A.M., the noise levels shall not exceed 65 and 45 dB,A weighted ten minute Leq, respectively, as projected to any portion of a lot with occupied residence.

3. WECS Noise.:

WECS shall comply with criteria established by Ordinance No. 348.258 and Resolution No. 93-378.

4. Consultants Expertise:

The acoustical study demonstrating compliance with these categories shall be performed by a noise consultant with at least two years experience in acoustical design and mitigation. The consultant shall be able to utilize FHWA Highway Traffic Noise Prediction Model and Sound 32. Preferably the consultant shall be a member of the Institute of Noise Control Engineering or a Certified Industrial Hygienist.

B. Other Studies

For other studies requiring our input, the applicant shall contact Industrial Hygiene for guidelines in providing a study prior to conducting the assessment or study.

II. FEES

Our current man-hour fee (subject to change by ordinance) is \$95 per hour devoted to the project including review and comment, verbally and in writing. Any time consumed by traveling to and attending meetings (including public hearings) on behalf of the project is also included. In addition, incidental expenses such as mileage at .29/mile, meals, lodging, and miscellaneous transportation expenses may be incurred. Note, the incidental expenses other than mileage are rarely utilized.

III. DEPOSITS

For WECS, a \$500 deposit is required. Frequently, expenses exceed this deposit and additional deposits are requested prior to completion of reviews and participation at public hearings. For all others, a \$1,500 deposit is requested. This is generally sufficient, unless the project is complex and/or controversial, involving many revisions, and/or attendance at meetings.

COUNTY OF RIVERSIDE GENERAL PLAN UPDATE 2008: GENERAL PLAN AMENDMENT NO. 960
DRAFT ENVIRONMENTAL IMPACT REPORT NO. 521
APPENDIX EIR-7 NOISE STUDY (2011) – ADDITIONAL EXHIBITS



RIVERSIDE COUNTY
PLANNING DEPARTMENT

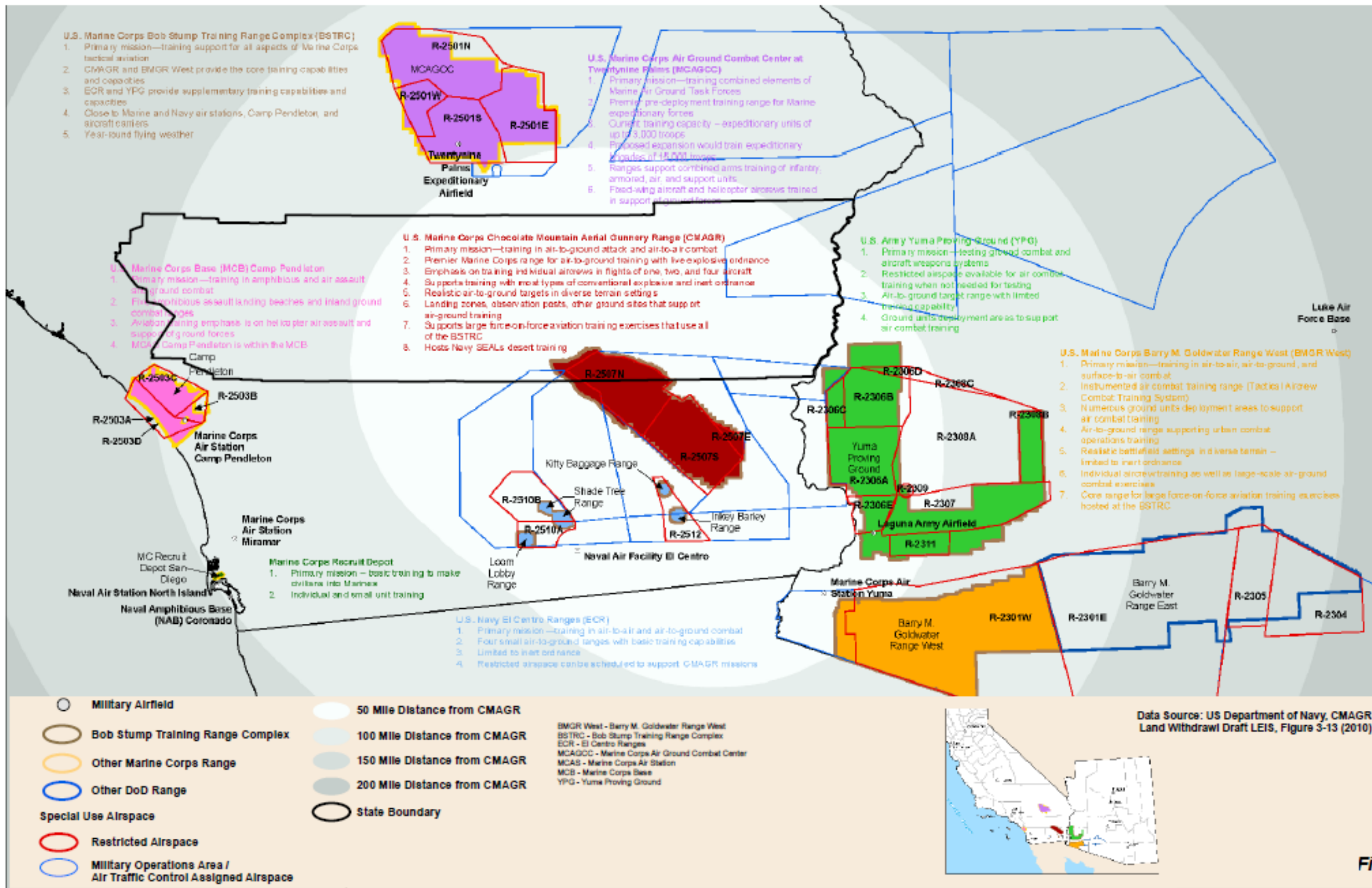


Figure 4.15.18

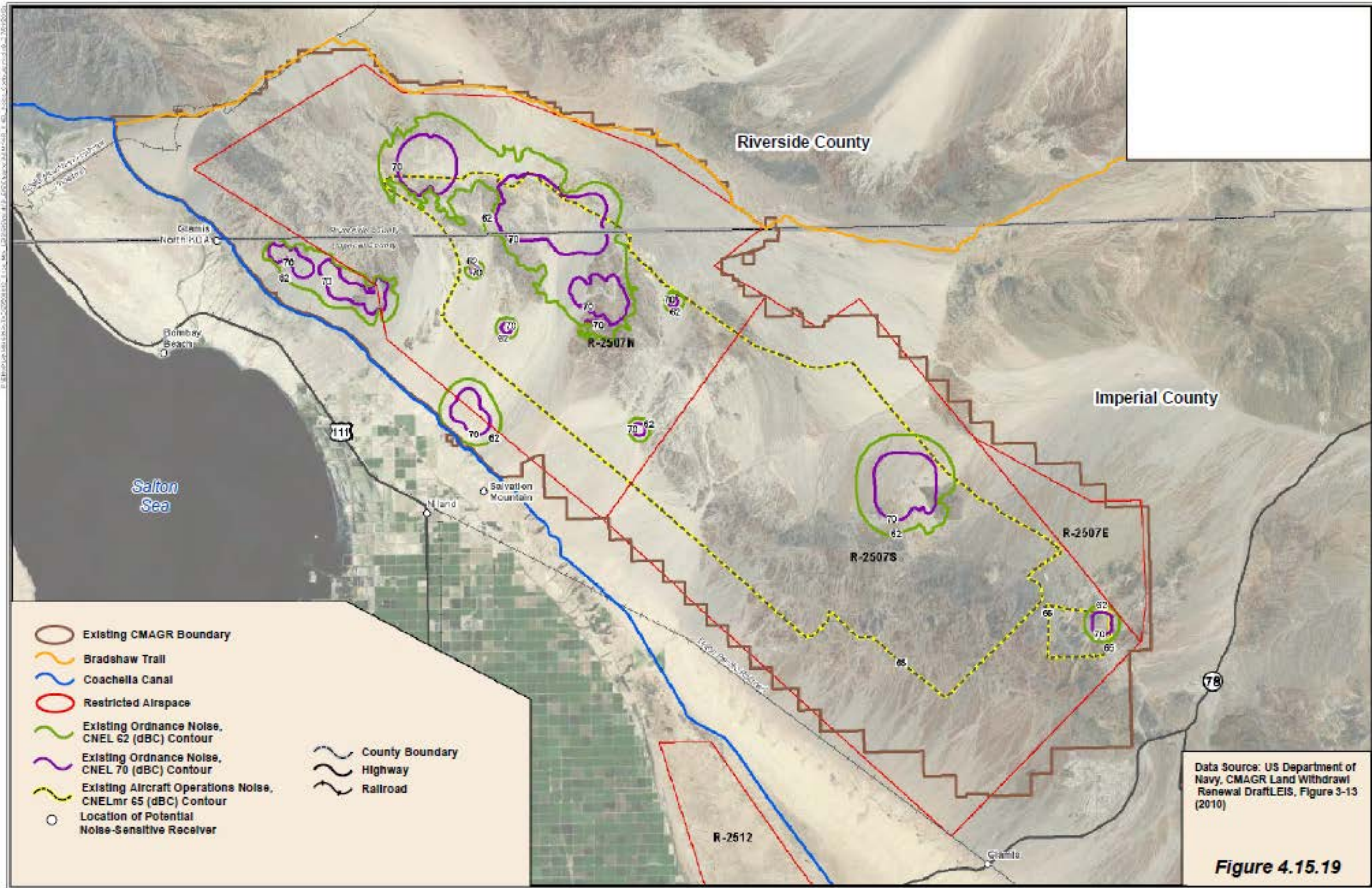
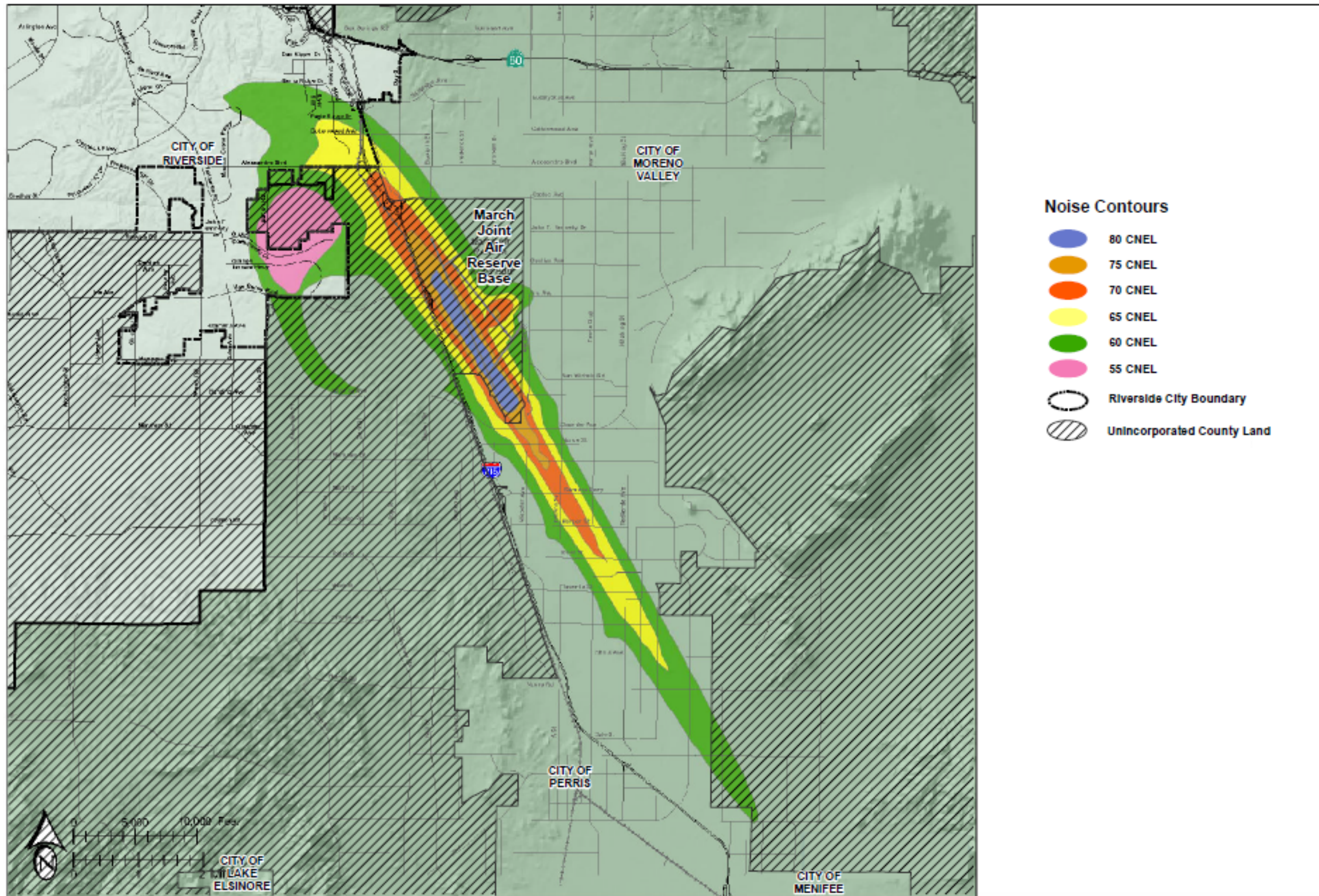


Figure 4.15.19



Data Source: City of Riverside
2025 General Plan (2010)

Figure 4.15.20

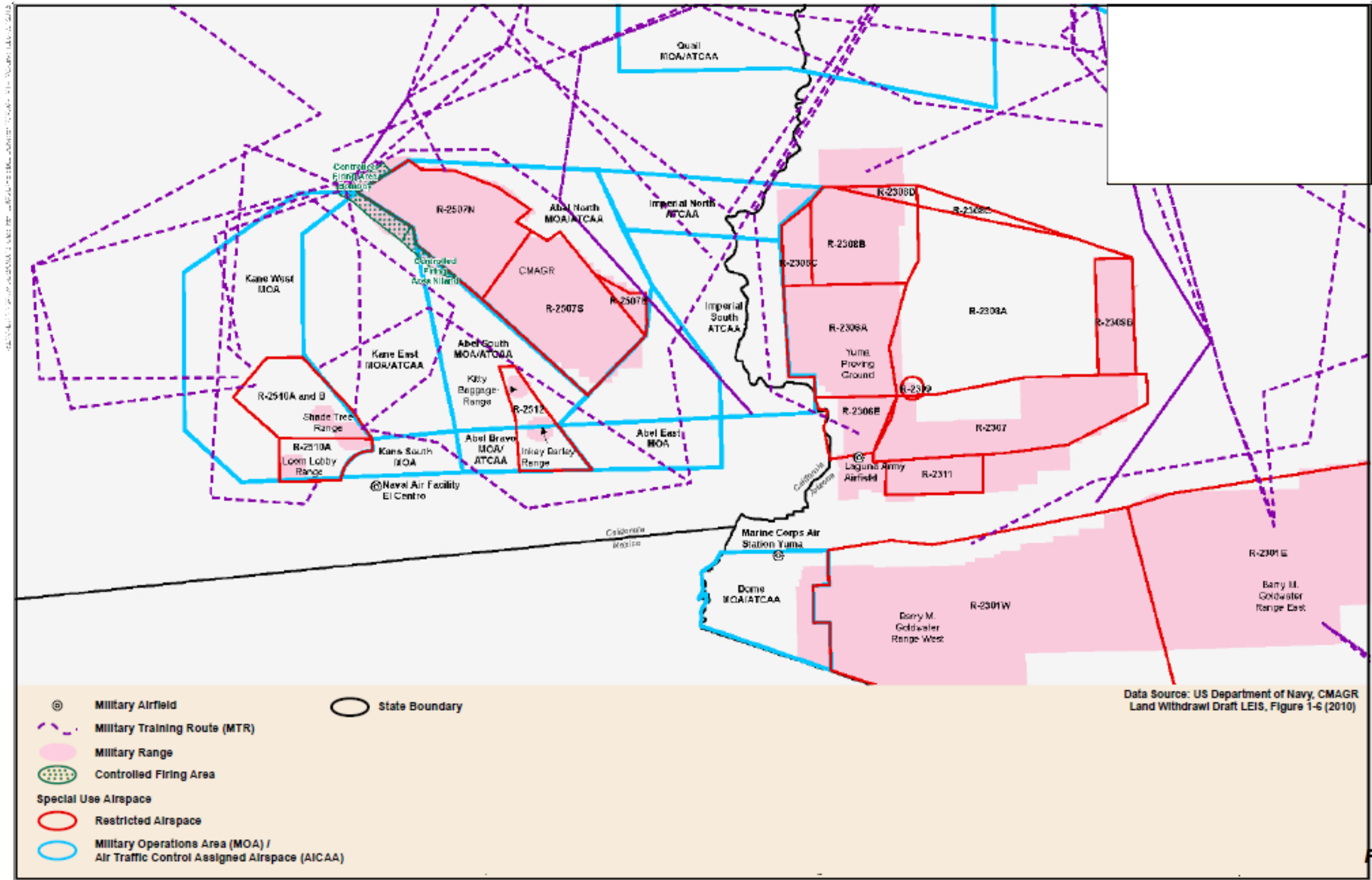
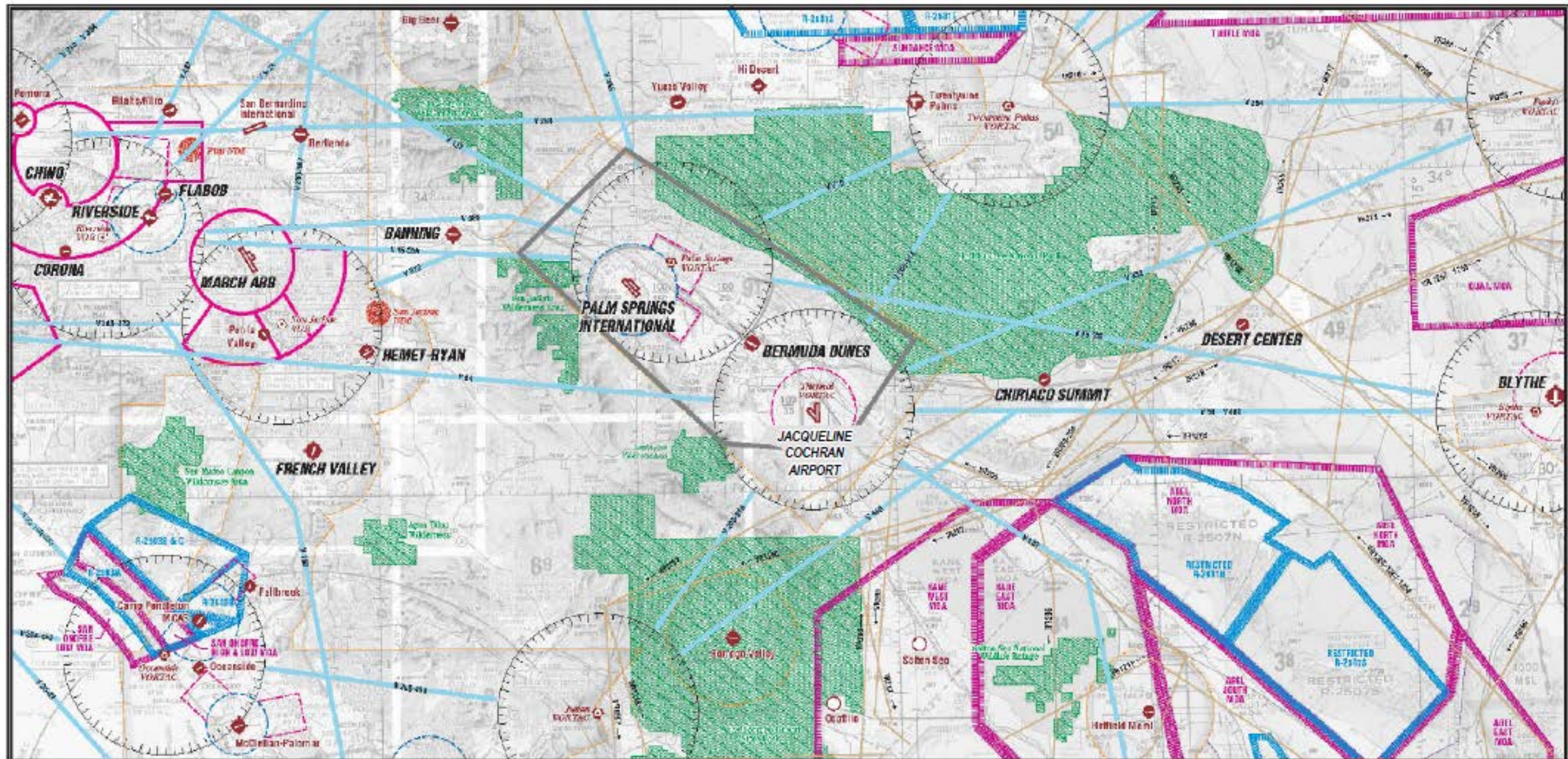


Figure 4.15.21



Data Source: Riverside County Airport Land Use Commission, Riverside County Airport Land Use Compatibility Plan Document, Map 2 (2004)

- | | | | |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------|
| Airport with hard-surfaced runways 1,500' to 8,065' in length | Wilderness Areas | VOR | Class D Airspace |
| Airport with other than hard-surfaced runways | Non-Directional Radiobeacon (NDB) | VORTAC | Class E Airspace |
| Airports with hard-surfaced runways greater than 8,065' or some multiple runways less than 8,065' | Compass Rose | Military Training Routes | Class E Airspace with floor 700' above surface |
| | Military Operations Area (MOA) | Victor Airways | Class E Airspace with floor 1200' or greater above surface that abuts Class G Airspace |
| | Prohibited, Restricted, Warning and Alert Areas | Class C Airspace | Terminal Radar Service Area (TRSA) |

Figure 4.15.22