

## ***APPENDIX F***

### ***AIRCRAFT NOISE MEASUREMENT PROGRAM***

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Although the FAA does not consider noise sampling in the evaluation of Noise Exposure Maps, it is allowable for 14 CFR Part 150 studies to collect field measurements so that airports can compare the computer-predicted values generated to the FAA's Aviation Environmental Design Tool (AEDT 3e) modeling output. Because the Department of Airports understands the value of including the direct measurement of noise experienced by neighboring communities, the decision was made to request the inclusion of the Aircraft Noise Measurement Program in the project. This Appendix provides the results of the comparison. It is important to note that these noise measurements are not used to determine impacts as part of a 14 CFR Part 150 study.

Noise measurements were conducted near Camarillo Airport during the following periods: May 15 through May 23, 2023; June 30 through July 2, 2023; and July 26 through August 1, 2023.

It should be noted that discrepancies may exist when comparing field measurements to computer-generated noise levels. The 24-hour field measurements represent noise conditions for individual days, while the computer model represents an annualized average day for the measurement site. In other words, the AEDT model simulates the noise levels an individual monitor would have observed had it been deployed for the entire year, and then averages the values to represent a single 24-hour period. As a result, field-measured noise levels collected in a particular 24-hour period may be greater or less than the average condition represented by the model. These differences can be attributed to a number of variables, including: the number and type of aircraft operations during the sampling period; operations from other area airports; interference from non-aviation noise; and climatic conditions.

Information collected during the noise measurement program includes 24-hour measurements at 10 different sites, ranging in duration from 24 hours to 72 hours, for comparison with the computer-modeled Community Noise Equivalent Level (CNEL) for each specific location. CNEL is a measure of cumulative sound energy during a 24-hour period. As with the AEDT, all noise events occurring from 7:00 p.m. to 10:00 p.m. are assigned a 4.77 decibel (dB) penalty and noise events occurring between 10:00 p.m. to 7:00 a.m. are assigned a 10 dB penalty to account for the potentially greater annoyance caused by evening and nighttime noise. In this context, a "penalty" can also be thought of as a multiplier: the model counts operations during evening and nighttime hours as more annoying.

In addition to the cumulative noise data, information was collected for single-event measurements. This information is used as an indicator of typical dB and sound exposure levels (SEL) within the airport area. All procedures and equipment involved in the aircraft noise measurement program were performed pursuant to guidelines set forth by Title 14, Code of Federal Regulations, Part 150 (14 CFR Part 150 or Part 150), §A150.3.

## ACOUSTICAL MEASUREMENTS

Two (2) Larson Davis Model 831 sound level meters were used to collect data during the noise measurement program. Each unit was equipped with an external microphone and a weatherproof case to protect the equipment from inclement weather.

To ensure consistency between measurement locations, each unit was calibrated with a Larson Davis calibration device: a calibrator with an accuracy of 0.5 dB was used for all instruments. The devices were recalibrated at the completion of each field measurement.

Logged noise data were retrieved from the devices during routine site visits and stored on a laptop computer. The raw data from each unit are included in the analysis discussed later in this section.

### Measurement Procedures

To minimize the potential for non-aircraft noise measurements, thresholds for noise levels and duration were established. These thresholds were programmed as part of the initial setup for the noise measurement equipment. A minimum threshold of approximately five to 10 dB greater than the ambient level was established for the noise measurements. This excluded any noise event below the threshold. Additionally, a minimum event duration of five seconds was set to ensure that brief events (e.g., door slam, dog barking, etc.) were not recorded. These two thresholds effectively filtered the single noise events logged by the noise measurement devices to noise events most likely to be caused by aircraft in flight. Only events which exceeded both thresholds were noted as noise events and included as part of the raw data.

Single events that met both criteria were retained and analyzed to consider all noise present at the site, regardless of its level, and were used to provide hourly summations of equivalent noise levels ( $L_{eq}$ ). Additionally, the equipment optionally provided information on SEL values for each event which exceeded the preset threshold and duration, as well as distributions of decibel levels throughout the measurement period. The Larson Davis Model 831 sound level meters are equipped to make a digital recording of an event that exceeds the programmed thresholds; this feature aids the user in identifying aviation-related events when calculating noise exposure for a location. A 15-second sound file is saved within the instrument's memory and is downloaded during routine site visits. This 15-second sound file can then be used to identify the source of the noise event.

## Weather Information

Weather can influence aviation activity at an airport. For example, low overcast conditions are likely to reduce the number of operations at an airport, while unseasonably warm weather may increase the number of operations at an airport. **Table F1** summarizes the weather observed during the noise measurement program, as reported from the Camarillo Airport weather station. As indicated in the table, daily high temperatures ranged between 64 and 89 degrees Fahrenheit (F), while low temperatures ranged between 56 and 65 degrees F. In comparison to the monthly average for May, the daily high and low temperatures ranged between 64 degrees F (high) and 54 degrees F (low), which were below the averages of 68 degrees F (average high) and 55 degrees F (average low). In comparison to the monthly average for July, the daily high and low temperatures ranged between 89 degrees F (high) and 59 degrees F (low). Six days were above the average high of 68 degrees F (average high) and average low of 60 degrees F, and three days were below the above referenced averages. During May, average wind speeds ranged from 9 to 13 miles per hour (MPH), with maximum wind speeds of up to 18 MPH. During July, average wind speeds ranged from 4 to 6 MPH, with maximum wind speeds of up to 32 MPH. There were only trace amounts of precipitation on two of the measurement days in May and no precipitation in July. No severe weather events were recorded during the noise measurement program.

**TABLE F1 | Noise Measurement Program Weather Conditions  
Camarillo Airport**

	May Daily Average	DATE								
		5/15	5/16	5/17	5/18	5/19	5/20	5/21	5/22	5/23
Mean Temperature (°F)	61	65	63	62	61	63	64	64	64	61
Maximum Temperature (°F)	68	70	68	67	64	67	70	69	70	64
Minimum Temperature (°F)	55	59	58	56	57	58	58	58	57	57
Precipitation (inches)	T <sup>1</sup>	T <sup>1</sup>	0	0	0	0	0	0	T <sup>1</sup>	0
Average Wind Speed (MPH)	6	5	5	4	3	5	5	4	4	4
Wind Direction	SW	SW	SW	W	SW	SW	W	W	SW	SW
Maximum Wind Speed (MPH)	40	18	17	16	16	17	16	17	16	13

<sup>1</sup> T = indicates a trace amount of precipitation recorded on that date

Source: Camarillo Airport Weather Reporting Station, May 2023

<https://www.ncdc.noaa.gov/cdo-web/datasets/LCD/stations/WBAN:23136/detail>

	July Daily Average	DATE										
		6/30	7/1	7/2	7/3	7/26	7/27	7/28	7/29	7/30	7/31	8/1
Mean Temperature (°F)	70	65	68	67	66	77	73	74	74	74	76	73
Maximum Temperature (°F)	79	72	77	74	73	89	84	84	84	83	86	81
Minimum Temperature (°F)	60	57	59	59	59	65	62	63	64	64	65	64
Precipitation (inches)	0	0	0	0	0	0	0	0	0	0	0	T <sup>1</sup>
Average Wind Speed (MPH)	5	5	5	4	5	5	4	5	5	6	5	6
Wind Direction	SW	W	SW	SW	SW	W	W	SW	W	W	W	W
Maximum Wind Speed (MPH)	32	23	20	21	20	24	19	22	18	32	22	25

<sup>1</sup> T = indicates a trace amount of precipitation recorded on that date

Source: Camarillo Airport Weather Reporting Station, June, July, and August 2023;

<https://www.ncdc.noaa.gov/cdo-web/datasets/LCD/stations/WBAN:23136/detail>

## Aircraft Noise Measurement Sites and Summary

Noise measurement devices were positioned in locations that did not include unusual terrain characteristics, such as berms, or other loud non-aviation noise sources which could adversely affect the quality of the measurements. Examples of non-aviation noise sources include trains, automobiles, landscaping equipment, construction activities, and air conditioner units. Prior to selecting the sites, input on potential locations for the monitors was solicited from the Planning Advisory Committee and the general public. The original program included eight sites over nine days; however, the Department of Airports arranged to have sampling repeated for 11 additional days based on an analysis of aircraft activity during the initial sampling, for a total of 20 days.

While multiple sites met the desired criteria for sampling, the selected sites fulfill the above criteria and provide a representative sampling of the varying noise conditions in the airport vicinity. The locations of the noise measurement sites are depicted on **Exhibit 3J** in **Chapter 3 – Aviation Noise**, and the sites are summarized below in **Table F2**. As indicated in the table, five of the measurements were conducted at residential locations within communities near the airport. Additionally, two noise measurement devices were placed on City of Camarillo property and two devices were placed at Camarillo Airport.

TABLE F2   Noise Measurement Sites Camarillo Airport		
Site	Location	Duration (hours)
1	Residence on Avocado Place, Spanish Hills neighborhood, Camarillo	96
2	Residence near Grandview and Elm Drive, Old Town, Camarillo	96
3	Roof of City Hall building, 601 Carmen Drive, Camarillo	48
4	Water tower near Grandview and Cedar Drive, Old Town, Camarillo	168
5	Residence near Central Avenue and West Ponderosa Drive, Camarillo	120
6	Residence near Geneive Circle and Kenneth Street, Old Town, Camarillo	144
7	Camarillo Airport, Runway 26 east end	24
8	Residence near Nancy Bush Park, Spanish Hills neighborhood, Camarillo	48

A summary of the single-event noise data collected during the measurement period is presented in **Table F3**. This information includes:

- Maximum recorded noise level in dB ( $L_{max}$ );
- Longest single event duration in seconds (Max Duration);
- Total number of events above 60 dB SEL;
- Number of single events within the ranges of 60-70 dB, 70-80 dB, 80-90 dB, 90-100 dB, and above 100 dB SEL; and
- Number of events identified as aircraft operations based on audio recordings of the events.

As indicated in **Table F3**, the maximum recorded sound level ( $L_{max}$ ) for all measurement periods ranged between 68.1 dB at Site 1, at a residence on Avocado Place in the Spanish Hills neighborhood, and 103.34 dB at Site 5, at a residence near Central Avenue and West Ponderosa Drive. Of the 32 days on which measurements were collected, 17 had  $L_{max}$  values attributed to aircraft operations and 15 (at Sites 1, 2, 3, 4, 5, 6, and 8) had  $L_{max}$  values identified as non-aviation noise (residents, passing traffic, construction, wildlife, and landscaping). As noted in the table, the maximum duration of events at the sites ranged

between 18.3 seconds and 2,116 seconds. It is important to note that the  $L_{max}$  and maximum duration are from different events in many cases. While it is possible that overflight contributed to the extended period of elevated noise, other non-aircraft events may be accountable for extended noise events.

TABLE F3   Noise Measurement Single Event Data Summary Camarillo Airport									
Site/Day	$L_{max}$	Max Duration (sec)	SOUND EXPOSURE LEVEL EVENT SUMMARY						Aircraft Events
			Below 60 dB	60-70 dB	70-80 dB	80-90 dB	90-100 dB	100+ dB	
<b>Site 1 – Residence on Avocado Place, Spanish Hills neighborhood, Camarillo</b>									
Day 1	71.4	247.3	131	132	22	0	0	0	148
Day 2	81.0 <sup>1</sup>	377.7	113	120	28	2	0	0	98
Day 3	68.1	158.7	0	91	37	1	0	0	22
Day 4	69.1	156.9	0	86	58	3	0	0	43
<b>Site 2 – Residence near Grandview and Elm Drive, Old Town, Camarillo</b>									
Day 1	84.8	2116.0	50	398	95	32	2	0	119
Day 2	85.5 <sup>2</sup>	1202.9	89	463	121	28	4	0	115
Day 3	85.1 <sup>3</sup>	1011.5	0	156	165	56	9	0	97
Day 4	84.4 <sup>2</sup>	366.5	0	129	122	37	3	0	98
<b>Site 3 – Roof of City Hall building, 601 Carmen Drive, Camarillo</b>									
Day 1	79.3 <sup>2</sup>	58.2	0	39	46	6	1	0	21
Day 2	80.6 <sup>2</sup>	86.0	0	50	52	7	0	0	18
<b>Site 4 – Water tower near Grandview and Cedar Drive, Old Town, Camarillo</b>									
Day 1	84.3	275.3	12	385	124	47	0	0	105
Day 2	83.6	396.1	24	437	85	45	1	0	110
Day 3	81.1 <sup>2</sup>	280.8	60	535	151	30	2	0	149
Day 4	90.4 <sup>2</sup>	119.4	39	363	106	28	2	0	155
Day 5	87.5 <sup>2</sup>	265.4	40	424	140	29	3	0	112
Day 6	82.3 <sup>3</sup>	157.5	0	0	109	90	7	0	62
Day 7	89.7 <sup>3</sup>	59.3	0	0	74	63	5	0	46
<b>Site 5 – Residence near Central Avenue and West Ponderosa Drive, Camarillo</b>									
Day 1	85.6	60.1	0	52	49	4	1	0	79
Day 2	103.3 <sup>4</sup>	121.5	0	125	68	21	2	2	99
Day 3	80.1 <sup>2</sup>	350.6	0	130	72	2	0	0	70
Day 4	73.7	39.1	0	15	66	7	0	0	77
Day 5	80.2	31.3	0	32	93	12	0	0	100
<b>Site 6 – Residence near Genevieve Circle and Kenneth Street, Old Town, Camarillo</b>									
Day 1	96.5	37.8	0	44	50	27	1	1	74
Day 2	89.3	315.9	0	73	105	34	2	0	92
Day 3	85.0	31.0	0	42	38	20	0	0	59
Day 4	89.8 <sup>4</sup>	214.0	169	174	110	29	1	0	354
Day 5	80.6	325.5	118	142	72	29	0	0	221
Day 6	78.3	325.5	176	155	75	28	2	0	198
<b>Site 7 – Camarillo Airport, Runway 26 east end</b>									
Day 1	89.3	344.0	0	8	143	31	12	0	167
<b>Site 8 – Residence near Nancy Bush Park, Spanish Hills neighborhood, Camarillo</b>									
Day 1	89.0 <sup>5</sup>	110.2	0	0	17	11	3	0	4
Day 2	73.8	18.3	0	0	12	1	0	0	10

Note:  $L_{max}$  and Maximum Duration may be from different events.

<sup>1</sup> Noise value generated by wildlife.

<sup>2</sup> Noise value generated by passing traffic.

<sup>3</sup> Noise value generated by construction.

<sup>4</sup> Noise value generated by resident.

<sup>5</sup> Noise value generated by landscaping.

Source: Coffman Associates analysis

**Table F4** includes a summary of the cumulative data collected for each site, which includes the 24-hour LEQ (equivalent sound level), CNEL(24), and CNEL(24t) for each site. The LEQ metric is derived by accumulating all noise events logged during a given period and logarithmically averaging them. The LEQ metric is similar to the CNEL metric, except that no extra weight is attached to nighttime or evening noise events. The CNEL(24) value represents the noise condition from all noise sources logged with the sound level meter. The CNEL(24t) is a reasonable approximation of the CNEL attributable to aircraft noise alone; only those events identified as aircraft noise, based on sound recordings, are included in the CNEL(24t) calculation. In some cases, CNEL(24t) may include noise from operations associated with airports other than Camarillo Airport. For sites with multiple 24-hour measurements, a logarithmic average of each individual 24-hour period is provided as an estimate of the average overall measurement for that site.

<b>TABLE F4   Noise Measurement Cumulative Data Summary – Camarillo Airport</b>			
<b>Site/Day</b>	<b>LEQ(24)</b>	<b>CNEL(24)</b>	<b>CNEL(24t)</b>
<b>Site 1 – Residence on Avocado Place, Spanish Hills neighborhood, Camarillo</b>			
Day 1	41.0	47.9	36.4
Day 2	43.0	46.9	40.0
Day 3	47.7	50.8	35.9
Day 4	44.5	49.8	39.8
<b>Average</b>	<b>44.3</b>	<b>49.8</b>	<b>39.6</b>
<b>Site 2 – Residence near Grandview and Elm Drive, Old Town, Camarillo</b>			
Day 1	53.2	54.9	51.5
Day 2	53.1	57.4	48.1
Day 3	57.6	57.9	49.7
Day 4	53.5	54.2	50.3
<b>Average</b>	<b>54.4</b>	<b>55.9</b>	<b>49.4</b>
<b>Site 3 – Roof of City Hall building, 601 Carmen Drive, Camarillo</b>			
Day 1	44.4	47.2	39.2
Day 2	46.3	47.4	39.2
<b>Average</b>	<b>45.4</b>	<b>47.3</b>	<b>39.2</b>
<b>Site 4 – Water tower near Grandview and Cedar Drive, Old Town, Camarillo</b>			
Day 1	53.2	54.0	51.3
Day 2	53.6	58.1	59.2
Day 3	52.6	54.5	50.3
Day 4	52.3	53.7	49.9
Day 5	53.3	54.1	47.9
Day 6	56.7	57.1	51.7
Day 7	55.3	56.0	49.1
<b>Average</b>	<b>54.1</b>	<b>55.7</b>	<b>53.2</b>
<b>Site 5 – Residence near Central Avenue and West Ponderosa Drive, Camarillo</b>			
Day 1	47.1	47.3	46.8
Day 2	57.9	57.9	46.5
Day 3	46.0	51.8	41.0
Day 4	45.9	46.4	45.4
Day 5	48.0	49.3	47.2
<b>Average</b>	<b>53.0</b>	<b>53.7</b>	<b>46.8</b>
<b>Site 6 – Residence near Geneive Circle and Kenneth Street, Old Town, Camarillo</b>			
Day 1	54.5	55.2	54.3
Day 2	52.3	52.4	50.7
Day 3	49.7	52.6	49.4
Day 4	51.7	52.7	50.8
Day 5	50.4	52.7	50.1
Day 6	51.7	55.8	48.9
<b>Average</b>	<b>52.0</b>	<b>53.8</b>	<b>51.1</b>
<b>Site 7 – Camarillo Airport, Runway 26 east end</b>			
<b>Day 1</b>	<b>55.6</b>	<b>56.3</b>	<b>55.2</b>
<b>Site 8 – Residence near Nancy Bush Park, Spanish Hills neighborhood, Camarillo</b>			
Day 1	53.2	56.0	37.2
Day 2	39.2	40.2	38.6
<b>Average</b>	<b>50.3</b>	<b>53.1</b>	<b>38.0</b>

Source: Coffman Associates analysis

As indicated in the table, the site with the greatest average LEQ(24), CNEL(24), and CNEL(24t) values is located on airport property at Site 7. The greatest off-airport LEQ(24) and CNEL(24) values were measured at Site 2 (residence near Grandview and Elm Drive, Old Town, Camarillo), and the greatest CNEL(24t), which is noise attributed only to aircraft events, was measured at Site 4 (water tower near Grandview and Cedar Drive, Old Town, Camarillo).

## COMPARATIVE MEASUREMENT ANALYSIS

The CNEL values derived from the field noise measurements have been compared to the computer-modeled noise values for the same geographic locations. It is important to note the distinction between the two values. The computer-modeled CNEL values are analogous to the climate of an area and represent the noise levels on an average day of the period under consideration; in contrast, the field measurements only reflect the noise levels on the specific days of measurement. With this understanding, it is useful to evaluate the comparative aircraft CNEL levels of the measurement sites. As previously discussed, the CNEL(24t) was used as it is a reasonable approximation of the CNEL attributable to aircraft noise alone.

### CNEL Comparison

This analysis provides a direct comparison of the measured and predicted values for each noise measurement site. To facilitate such a comparison, it is necessary to ensure that the computer model inputs represent the observed reality as accurately as possible within the capabilities of the model. The differences between the modeled and measured CNEL(24t) values are depicted on **Exhibit F1** and within **Table F5**. A positive number in the difference column represents a modeled value which is greater than the measured value, while a negative number in the difference column indicates a modeled value which is less than the measured value.

TABLE F5   Noise Measurement vs. AEDT-Predicted CNEL Values – Camarillo Airport			
Site/Day	Measured (CNEL[24t] <sup>1</sup> )	AEDT-Predicted – 2022 <sup>2</sup>	Difference <sup>3</sup>
Site 1 – Residence on Avocado Place, Spanish Hills neighborhood, Camarillo	39.6	46.1	6.5
Site 2 – Residence near Grandview and Elm Drive, Old Town, Camarillo	49.4	53.2	3.8
Site 3 – Roof of City Hall building, 601 Carmen Drive, Camarillo	39.2	44.1	4.9
Site 4 – Water tower near Grandview and Cedar Drive, Old Town, Camarillo	53.2	54.2	1.0
Site 5 – Residence near Central Ave and West Ponderosa Drive, Camarillo	46.8	54.0	7.2
Site 6 – Residence near Geneive Circle and Kenneth Street, Old Town, Camarillo	51.1	54.7	3.6
Site 7 – Camarillo Airport, Runway 26 east end	55.2	63.6	8.4
Site 8 – Residence near Nancy Bush Park, Spanish Hills neighborhood, Camarillo	38.0	45.2	7.2

<sup>1</sup> May include events from airports other than Camarillo Airport.

<sup>2</sup> 2022 noise exposure contours are based on 513 daily operations.

<sup>3</sup> A positive number in the difference column represents a modeled value that is greater than the measured value, while a negative number in the column indicates a modeled value that is less than the measured value.

Source: Coffman Associates analysis

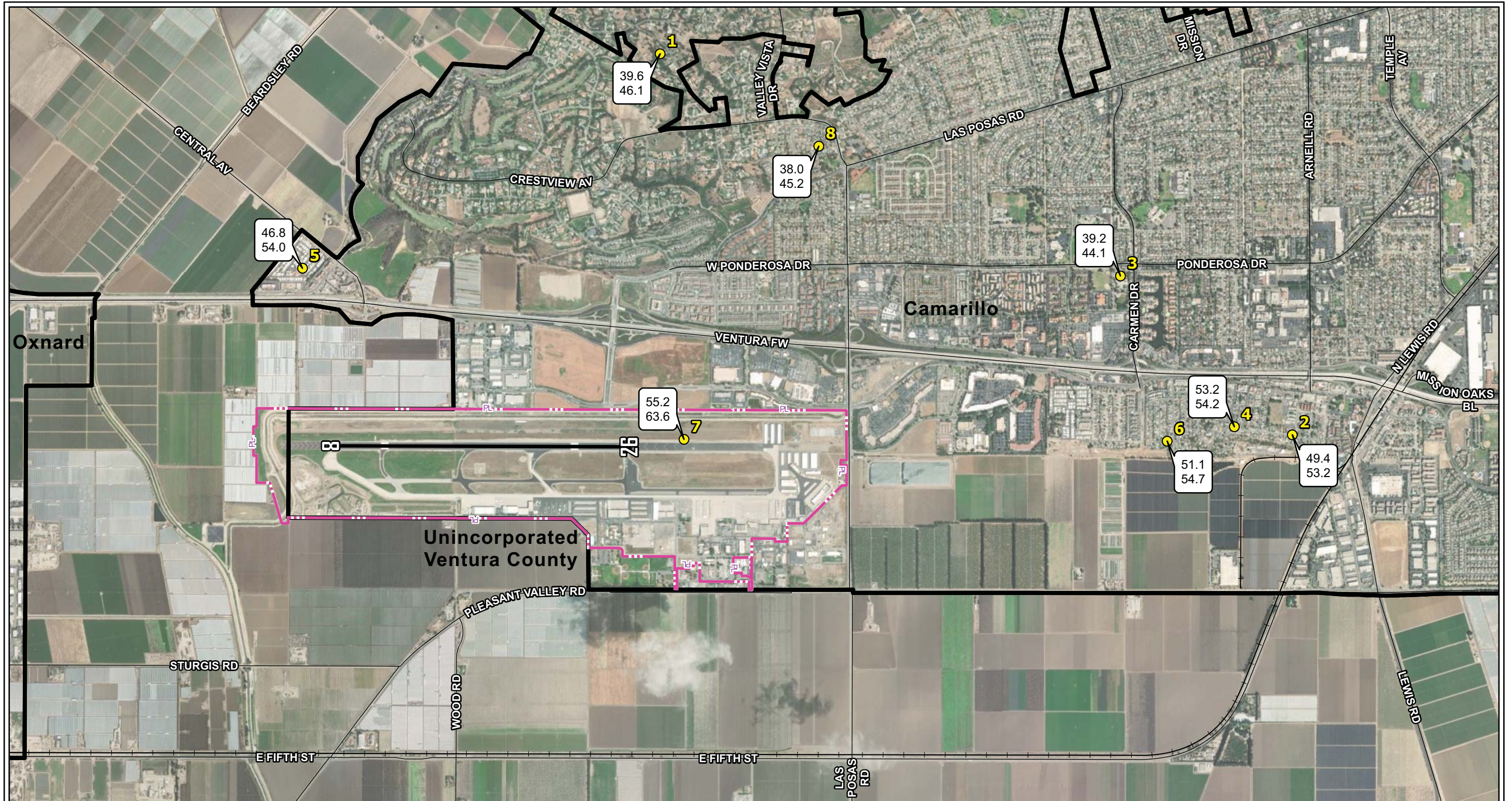
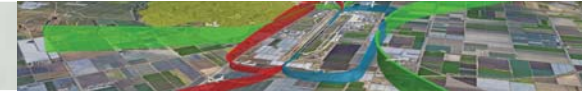
As indicated in **Table F5**, many of the AEDT-modeled values are greater than the individual 24-hour measurements and logarithmic averages for each site. These differences indicate that the model predicts more noise at each site compared to the measured noise. This may be attributed to the number of operations occurring at Camarillo Airport during the measurement period. As stated in **Table F6**, the 2022 contours are based on 187,076 annual operations, which equates to approximately 513 daily operations. In comparison, based on radar flight track data obtained for the noise measurement period, daily operations totals presented in **Table F6** for the five-day measurement period ranged between 140 and 616, which represents 27.3 to 120 percent of modeled operations. The average number of daily operations for the measurement period was 366, which represents 71 percent of modeled operations. This may also be a result of contamination by passing traffic, construction, landscaping, or ambient neighborhood noise (e.g., dogs barking, children playing, passing friendly conversation, etc.).

<b>TABLE F6   Daily Operations During Noise Measurement Program – Camarillo Airport</b>	
<b>Date</b>	<b>Operations Estimated from Radar Flight Track Data</b>
May 15, 2023	218
May 16, 2023	245
May 17, 2023	240
May 18, 2023	140
May 19, 2023	352
May 20, 2023	257
May 21, 2023	180
May 22, 2023	319
May 23, 2023	193
June 30, 2023	361
July 1, 2023	387
July 2, 2023	348
July 26, 2023	602
July 27, 2023	569
July 28, 2023	616
July 29, 2023	510
July 30, 2023	395
July 31, 2023	495
August 1, 2023	534
<b>Average Day – Noise Measurement Period</b>	<b>366</b>
<b>Average Day – AEDT</b>	<b>513</b>
<i>Note: Operations represent counts starting at 12:00 a.m. on the stated date, which differs from the 24-hour measurement periods that varied by site. Equipment placement times at each location generally ranged from 8:00 a.m. to 1:00 p.m. on any one day; therefore, a direct comparison of the number of airport events is not possible.</i>	
<i>Source: Vector Airport Systems Noise and Operations Management System (VNOMS); Coffman Associates analysis</i>	

### **CNEL Comparison of 70 Percent Operations Model**

As previously discussed, the average number of operations during the measurement period was 366, which is 71 percent of the average daily operations that were used for the AEDT modeling. To better compare the measurement results, the existing condition operations count (513) was reduced to 70 percent (359) of daily operations. Exhibit F2 and Table F7 show the differences between the modeled 70 percent operations condition and measured CNEL(24t) values. As shown in the table, the difference between the measured and modeled results decreased, with the exception of Site 4, when compared to the results in Table F6. This is due to the previously discussed reduction in modeled operations, which resulted in an overall reduction in the AEDT-predicted values for the monitored locations.





## Legend

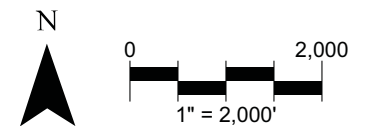
— Roads  
—+— Railroad

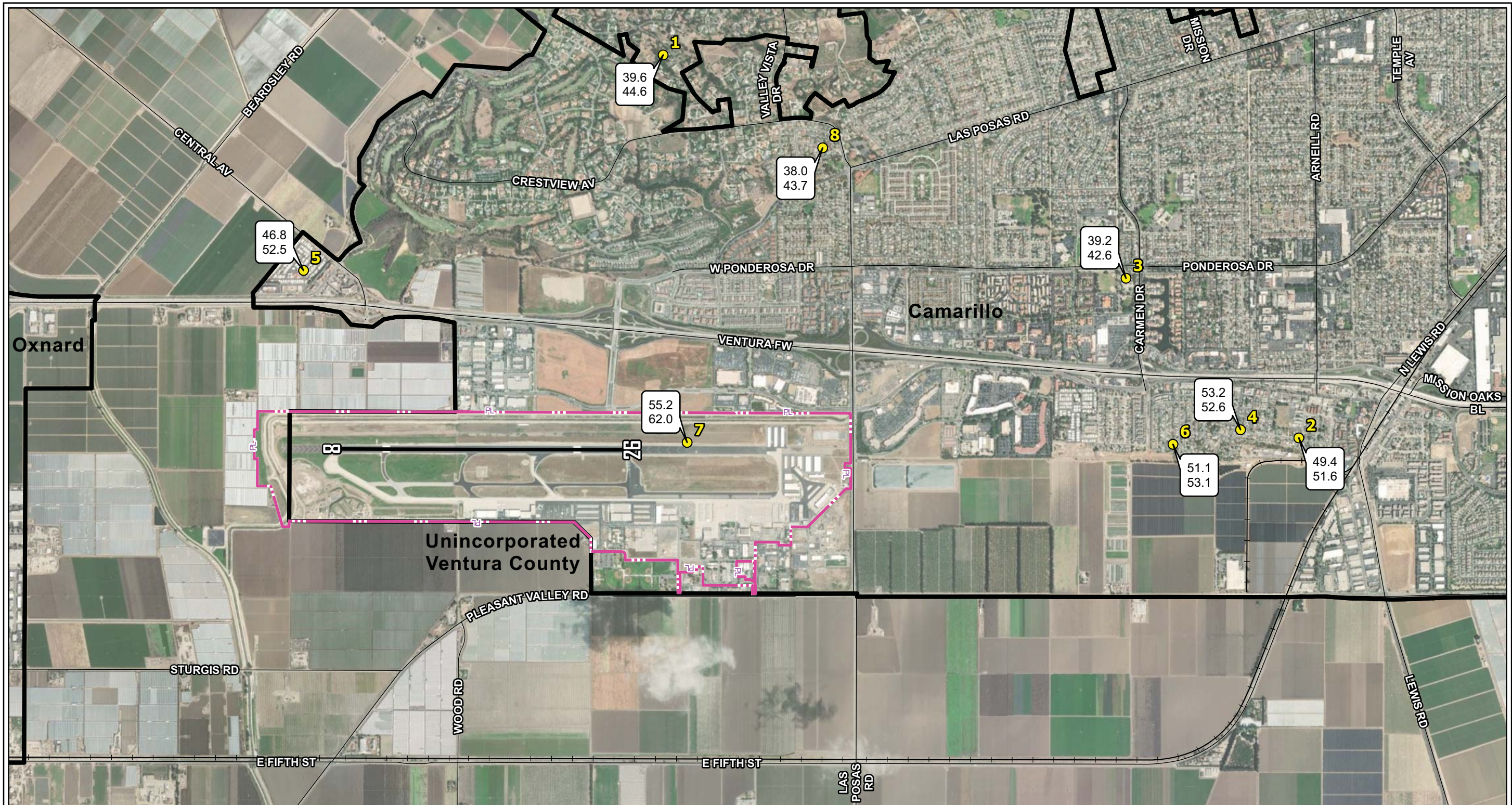
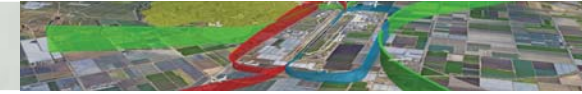
— Runway Centerline  
— Airport Property Line

— Jurisdictional Boundaries  
● Noise Monitoring Locations

39.2 Measured CNEL  
44.1 AEDT-Predicted

Source: ESRI Basemap Imagery, 2022



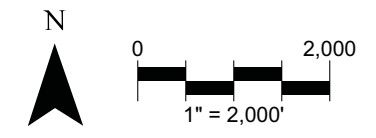


### Legend

- Roads
- +— Railroad
- Runway Centerline
- Airport Property Line
- Jurisdictional Boundaries
- Noise Monitoring Locations

39.2  
44.1 Measured CNEI  
AEDT-Predicted

Source: ESRI Basemap Imagery, 2022



Several of the days for which monitoring was conducted at Site 4 had daily operations (estimated from VNOMS data) that exceeded the modeled 359 daily operations. As a result, the noise associated with aircraft events monitored at this site exceeded the predicted value by 0.6 dB CNEL.

<b>TABLE F7   Noise Measurement vs. 70% AEDT-Predicted CNEL Values – Camarillo Airport</b>			
<b>Site/Day</b>	<b>Measured (CNEL[24t]<sup>1</sup>)</b>	<b>70% of AEDT-Predicted – 2022<sup>2</sup></b>	<b>Difference<sup>3</sup></b>
<b>Site 1 – Residence on Avocado Place, Spanish Hills neighborhood, Camarillo</b>	39.6	44.6	5.0
<b>Site 2 – Residence near Grandview and Elm Drive, Old Town, Camarillo</b>	49.4	51.6	2.2
<b>Site 3 – Roof of City Hall building, 601 Carmen Drive, Camarillo</b>	39.2	42.6	3.4
<b>Site 4 – Water tower near Grandview and Cedar Drive, Old Town, Camarillo</b>	53.2	52.6	-0.6 <sup>4</sup>
<b>Site 5 – Residence near Central Ave and West Ponderosa Drive, Camarillo</b>	46.8	52.5	5.7
<b>Site 6 – Residence near Geneive Circle and Kenneth Street, Old Town, Camarillo</b>	51.1	53.1	2.0
<b>Site 7 – Camarillo Airport, Runway 26 east end</b>	55.2	62.0	6.8
<b>Site 8 – Residence near Nancy Bush Park, Spanish Hills neighborhood, Camarillo</b>	38.0	43.7	5.7

<sup>1</sup> May include events from airports other than Camarillo Airport.  
<sup>2</sup> 70% 2022 noise exposure contours are based on 70% of the average daily operations, or 359 daily operations.  
<sup>3</sup> A positive number in the difference column represents a modeled value that is greater than the measured value, while a negative number in the column indicates a modeled value that is less than the measured value.  
<sup>4</sup> Several of the days for which monitoring was conducted at this site had daily operations (estimated from VNOMS data) that exceeded the modeled 84 daily operations. As a result, the noise associated with aircraft events monitored at this site exceeded the predicted value by 0.6 dB CNEL.

Source: Coffman Associates analysis

## SUMMARY

Successful results of the noise measurement program include the following:

- Noise monitoring was conducted in areas of concern in May, June, July, and August with cooperation from residents.
- Valid data gathered included aircraft events, which were verified through listening to digital recordings. The associated noise levels were used to calculate CNEL values for comparison to the AEDT outputs.
- The CNEL values from the aircraft event data correlate with the modeled values at all locations.
- All off-airport noise measurements were below the 60 CNEL contour threshold, as predicted by the AEDT model.

The noise measurement program results were beneficial as a tool for comparison to the AEDT model and the results indicate that the model inputs are accurate for the purposes of this study.