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March 3, 2016

Job #B50911N1

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Subject: Response to Acoustical Iteration Letter for Honey Hill Ranch, County of San Diego, STP 15-013

This letter is in response to the County of San Diego's First Iteration Letter for the Honey Hill Ranch project. Comments are found in the letter dated February 19, 2016 and are located in the Planning and Development Services Project Planning and CEQA Comments section. These comments have been addressed in a revised version of the report, dated March 3, 2016, and this letter will reference the location of each comment response or requested changes in the revised report. Changes to the report are shown in ~~strikeout~~/underline format.

Italics are added to indicate County of San Diego staff comments.

21-2: Staff has reviewed the Acoustical Analysis Report dated October 7, 2015 prepared by Eilar Associates and submitted to the County on December 110, 2015. The report requires minor revisions as detailed in the following comments.

RESPONSE: (No response required).

21-3: Please replace all "Condominium" references with "Units". The project is a Site Plan and a Condominium is not proposed at this time. We would accept the revised title of the project as "Honey Hill Ranch units".

RESPONSE: The report has been updated, and all references to condominium(s) have been removed from the report.

21-4: Please include a short discussion regarding off-site direct and cumulative noise impacts. Summarize in a few sentences why the project would not result in any off-site direct and/or cumulative noise impacts associated with project related ADT on nearby roadways.

RESPONSE: According to the County of San Diego project issue checklist, as the proposed project proposes less than 200 trips per day, a traffic analysis was not required. The report has been revised to include a brief discussion of off-site direct and cumulative noise impacts related to additional project-related traffic on nearby roadways. Please refer to the newly created Section 2.3 of the report for additional information.

21-5: Based on the analysis, all proposed structures were modeled as single story as a worst-case scenario. Please describe whether the project will be graded and constructed in one single phase? Or will the development be constructed in multiple phases? This explanation is needed to ensure the noise assessment is consistent with the phasing of the project and proposed noise measures.

RESPONSE: According to Erin Crouthers, Project Manager, the project will be built in one phase, with all buildings completed prior to occupancy. Section 2.2.1.1 of the report has been revised to include this information.

21-6: Staff will be conditioning the Site Plan decisions to require an interior noise study to be required prior to issuance of building permits. This will be required to ensure the interior sound level requirements are met pursuant to the Noise Element.

RESPONSE: (No response required).

21-7: Staff will be conditioning the Site Plan decision to ensure the permanent equipment and temporary construction operations comply with the County Noise ordinance.

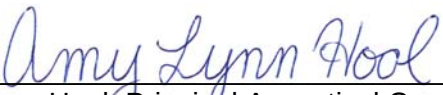
RESPONSE: (No response required).

21-8: Please update site plans (plot plans) to show the noise reducing measures associated with the 6-foot high sound barriers. The plot plans (Sheet 3) shall be updated to reflect the recommendations on Figure 7 pursuant to the Noise Study.

RESPONSE: (No response required).

Please call if you have any questions or require additional information.

EILAR ASSOCIATES, INC.



Amy Hool, Principal Acoustical Consultant



Jonathan Brothers, Senior Acoustical Consultant

ACOUSTICAL ANALYSIS REPORT

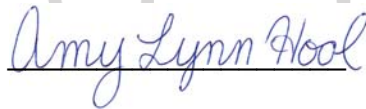
Honey Hill Ranch Condominiums / Units
Record ID: PDS2015-STP-15-013

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Job #B50911N1

Original Report: October 7, 2015
First Iteration: March 3, 2016

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EXECUTIVE SUMMARY

The proposed project, known as the Honey Hill Ranch ~~Condominiums~~ / Units, consists of the construction of 17 detached residential units on a 4.16-acre lot. The project site is located at 3087 Honey Hill Ranch Road in the Alpine Community Plan Area of the County of San Diego, California.

The primary noise source in the vicinity of the project site is automobile and truck traffic noise from Alpine Boulevard and Interstate 8 (I-8). For multifamily residential sites, noise levels at common outdoor use areas should not exceed 65 CNEL, according to the County of San Diego Noise Compatibility Guidelines. Calculations show that, as designed, noise levels at the outdoor use areas for this project are expected to exceed the 65 CNEL requirement at the backyards of Lots 1, 10, 11, 14, 15, and 16. Recommended sound attenuation barrier configurations have been provided to ensure that noise levels will meet the 65 CNEL requirement. Additionally, building facade noise impacts at all lots are expected to exceed 60 CNEL, and therefore, an interior noise analysis will be required for the project as part of the conditions of approval. This analysis can be conducted upon completion of construction documents and prior to the issuance of building permits.

Noise from proposed mechanical equipment to be located on site has also been evaluated to determine whether noise from these sources will exceed the standards of the County of San Diego Noise Ordinance. Mechanical noise sources to be located on site include air conditioning units at the proposed ~~condominiums~~ / residential units. It has been determined that noise levels from on-site equipment will meet nighttime noise regulations as currently designed. No mitigation is deemed necessary.

Temporary construction noise was calculated to determine the impact this activity will have on surrounding residential properties. Section 36.409 of the County of San Diego Noise Ordinance states that it is unlawful to operate construction equipment that exceeds an average sound level of 75 dB for an eight-hour period between 7 a.m. and 7 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received. Section 36.410 of the Noise Ordinance provides noise level limits for impulsive noise, such as blasting or the use of equipment such as a rock crusher, pile driver, hoe ram, or drill rig. Current proposed construction activities are expected to meet County of San Diego noise regulations for temporary construction noise during all phases of construction. General good practice measures should also be followed, including reasonable maintenance of equipment, conservative planning of simultaneous equipment operation, and using equipment with effective mufflers. Equipment operation must also be limited to the allowable hours of operation set by the County of San Diego. With these recommendations, it is expected that construction equipment noise levels will be at or below an average eight-hour equivalent noise level of 75 dBA, in compliance with County of San Diego regulations.

1.0 INTRODUCTION

This acoustical analysis report is submitted to satisfy the acoustical requirements of the County of San Diego for discretionary permit approval. Its purpose is to assess noise impacts from nearby roadway traffic and to identify project features or requirements necessary to achieve exterior noise levels of 65 CNEL or less at outdoor usable areas, in compliance with the County of San Diego noise regulations. Additionally, noise impacts from proposed mechanical equipment operation on site have been evaluated, as well as temporary construction noise.

All noise level or sound level values presented herein are expressed in terms of decibels, with A-weighting to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ} , for a specified duration. The Community Noise Equivalent Level (CNEL) is a calculated 24-hour weighted average, where sound levels during evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and sound levels during nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting. This is similar to the Day-Night sound level, L_{DN} , which is a 24-hour average with an added 10 dB weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on A-weighted decibels. These metrics are used to express noise levels for both measurement and municipal regulations, for land use guidelines, and for enforcement of noise ordinances. Further explanation can be provided upon request.

1.1 Project Description

The proposed project, known as the Honey Hill Ranch ~~Condominiums~~ / Units, consists of the construction of 17 detached residential units on a 4.16-acre lot. The site is currently developed with an existing single-family residence and accessory structures that will be removed. Please refer to project plans provided as Appendix A for more details.

The site is currently zoned C34 (General Commercial-Residential). Neighboring properties to the north and west are also zoned C34, while properties to the south are zoned RR (Rural Residential) and property to the east is zoned A70 (agricultural).

1.2 Environmental Settings & Existing Conditions

1.2.1 Project Location

The project site is located at 3087 Honey Hill Ranch Road in the Alpine Community Plan Area of the County of San Diego, California. The Assessor's Parcel Number (APN) for the property is 404-032-73. The project location is shown on the Vicinity Map, Figure 1, following this report. An Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map of this area are also provided as Figures 2 through 4.

1.2.2 Existing Traffic Volumes

The primary noise source in the vicinity of the project site is automobile and truck traffic noise from Alpine Boulevard and Interstate 8 (I-8), with minor contributions from other nearby roadways. No other noise source is considered significant.

Alpine Boulevard is a two-lane, two-way roadway, classified as a Community Collector (2.1D) in the County Mobility Element. The roadway runs east-west to the north of the project site. The posted

speed limit is 40 mph, although the minimum design speed specified by the County Mobility Element is 45 mph. Line-of-sight from the project site to this roadway is partially obstructed by an existing commercial building, located to the north of the project site. According to the SanDAG Series 12 Traffic Forecast for the year 2008, Alpine Boulevard, in the vicinity of the project site, currently carries a traffic volume of approximately 14,300 Average Daily Trips (ADT).

I-8 is a five-lane, two-way Freeway running east-west to the north of the project site, beyond Alpine Boulevard. The freeway is elevated above the project site. According to the Caltrans Traffic Census, as of the year 2014, I-8 carries approximately 32,500 ADT.

South Grade Road is a two-lane, two-way roadway, classified as a Light Collector (2.2C) in the County Mobility Element. The roadway runs north-south to the west of the project site. The posted speed limit is 30 mph, although the minimum design speed specified by the County Mobility Element is 45 mph. Line-of-sight from the project site to this roadway is partially obstructed by an existing commercial building to the west of the project site, as well as from surrounding topography. According to the SanDAG Series 12 Traffic Forecast for the year 2008, South Grade Road, in the vicinity of the project site, currently carries a traffic volume of approximately 3,700 Average Daily Trips (ADT).

Truck percentages for I-8 were provided by the Caltrans Traffic Census and were found to be 4.7% medium trucks and 7.3% heavy trucks. Truck percentages were not available for other roadways, but based on neighboring and surrounding land use, roadway classification, professional experience and on-site observations, a truck percentage mix of 3.0% medium and 1.5% heavy trucks was used.

Current and future traffic volumes for the roadway sections near the project site are shown below in Table 1. For further roadway details and ADT traffic volumes, please refer to Appendix B: Traffic Noise Model (TNM) Data and Results.

Table 1. Overall Traffic Information				
Roadway Name	Speed Limit (mph)¹		Current ADT (2008)	Future ADT (2050)
	Current	Future		
Alpine Boulevard	40	45	14,300	8,000
I-8 Eastbound	70	70	16,250	32,900
I-8 Westbound	70	70	16,250	35,500
South Grade Road	30	45	3,700	5,100

¹Future speed limits consider the minimum design speeds for the roadway classification, as specified within the County of San Diego Public Road Standards.

Without mitigation or proposed project structures, the project site is currently exposed to noise levels of 41 CNEL to 69 CNEL at ground level. The noise contours are irregularly shaped due to the surrounding topography. For a graphical representation of these contours, please refer to Figure 5: Site Plan Showing Current Traffic CNEL Contours and Noise Measurement Location, and for additional information, please refer to Appendix B: Traffic Noise Model (TNM) Data and Results.

1.2.3 Measured Noise Level

An on-site inspection and traffic noise measurement were made on the morning of Thursday, September 24, 2015. The weather conditions were as follows: clear skies, low humidity, temperatures in the mid 80's with winds at 3-5 mph. A noise measurement was made near the northern edge of the project site, approximately 180 feet from the Alpine Boulevard centerline and 30 feet from the Honey Hill Ranch Road centerline. The microphone position was approximately five feet above grade. Traffic volumes were recorded for automobiles, medium-size trucks, and large trucks on Honey Hill Ranch Road during the measurement period. After a continuous 15-minute sound level measurement, there was no change in the L_{EQ} and results were then recorded. The measured noise level and related weather conditions are found below in Table 2. More information can be found in Appendix B: Traffic Noise Model (TNM) Data and Results.

Table 2. On-Site Noise Measurement Conditions and Results	
Date	Thursday, September 24, 2015
Time	10:05 a.m. – 10:20 a.m.
Conditions	Clear skies, winds at 3-5 mph, temperature in the mid 80's, low humidity
Measured Noise Level	61.2 dBA L_{EQ}

1.3 Methodology and Equipment

1.3.1 Field Measurement

Typically, a “one-hour” equivalent sound level measurement (L_{EQ} , A-Weighted) is recorded for at least one noise-sensitive location on the site. During the on-site noise measurement, start and end times are recorded, vehicle counts are made for cars, medium trucks (double-tires/two axles), and heavy trucks (three or more axles) for the corresponding road segment(s). Supplemental sound measurements of one hour or less in duration are often made to further describe the noise environment of the site.

For measurements of less than one hour in duration, the measurement time is long enough for a representative traffic volume to occur and the noise level (L_{EQ}) to stabilize. The vehicle counts are then converted to one-hour equivalent volumes by using the appropriate multiplier.

Other field data gathered includes measuring or estimating distances, angles-of-view, slopes, elevations, roadway grades, and vehicle speeds. This data was checked against the available maps and records.

1.3.2 Roadway Noise Calculation

The Traffic Noise Model, Version 2.5 program released by the U.S. Department of Transportation was used to calculate the future daytime average hourly noise level (HNL) at various locations at the project site. The daytime average hourly traffic volume is calculated as 0.058 times the ADT, based on the studies made by Wyle Laboratories (see reference). The HNL is equivalent to the L_{EQ} , and both are converted to the CNEL by adding 2.0 decibels, as shown in the Wyle Study. Future CNEL is calculated for desired receptor locations using future road alignment, elevations,

lane configurations, projected traffic volumes, estimated truck mixes, and vehicle speeds. Noise attenuation methods may be analyzed, tested, and planned with TNM, as required.

In order to determine the estimated traffic volumes of roadways during the traffic noise measurement made on site for model calibration, the approximate percentage of the Average Daily Trips (ADT) value for the time period in which the measurement is made is incorporated into the traffic model. These percentages have been established in a study performed by Katz-Okitsu and Associates, Traffic Engineers (see reference). For purposes of calibrating the TNM, 5.3% of the ADT values for the current environment were used in calculations (for roadways that were not manually counted) to account for traffic between the hours of 10 a.m. and 11 a.m. in the vicinity of the project site. Further explanation can be supplied on request.

Noise levels were calculated for the site using the methodology described above for the location, conditions, and traffic volumes counted during the noise measurements. The calculated noise levels (L_{EQ}) were compared with the measured on-site noise level to determine if adjustments or corrections (calibration) should be applied to the traffic noise prediction model. Adjustments are intended to account for site-specific differences, such as reflection and absorption, which may be greater or lesser than accounted for in the model.

The measured noise level of 61.2 dBA L_{EQ} was compared to the calculated (modeled) noise level of 62.9 dBA L_{EQ} , for the same conditions and traffic flow. As there was only a 1.7 dBA difference between the measured and the calculated noise level, no adjustment was deemed necessary to model future noise levels for this location. Please refer to Table 3 for further evaluation.

Table 3. Calculated versus Measured Traffic Noise Data				
Location	Calculated	Measured	Difference	Correction
180 feet from Alpine Boulevard CL and 30 feet from the Honey Hill Ranch Rd CL	62.9 dBA L_{EQ}	61.2 dBA L_{EQ}	1.7 dB	None Applied

1.3.3 Cadna Noise Modeling

Modeling of the outdoor noise environment to determine air conditioning equipment noise impacts is accomplished using Cadna Version 4.5, which is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. Cadna (Computer Aided Noise Abatement) assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project information such as noise source data, barriers, structures, and topography to create a detailed model and uses the most up-to-date calculation standards to predict outdoor noise impacts.

Summary of Site Specific Features Included in Cadna Model

For a worst-case analysis, no topography was included in the model. Shielding from the proposed project structures was considered in the model.

Calculated Noise Levels for Model Comparison

In order to validate the results of the Cadna noise prediction model, the noise impacts from the air conditioning equipment were manually calculated as attenuation by distance, based on the approximate distance between each source and receiver. These values were compared to those predicted by Cadna. The Cadna model includes additional attenuation due to ground absorption as

well as more precise locations of each sound source, to which the differences in modeled and calculated noise levels are attributed. The shielding of the buildings was disregarded during this run of the model calculation for the purpose of verifying the Cadna model more closely with manual calculations. This data is summarized in Table 4, and Cadna data sheets are provided in Appendix D.

Table 4. Calculated Noise Levels for Model Comparison						
Noise Source	Receiver #	Receiver Location	Distance from Source (ft) ¹	Calculated Noise Level ² (dBA)	Cadna Model Noise Level ³ (dBA)	Difference (dB) ⁴
AC Units	R1	North PL – Commercial	45	43.3	41.7	1.6
	R2	East PL – Park	35	45.3	44.8	0.5
	R3	South PL – Residence	100	40.8	37.8	3.0
	R4	West PL - Commercial	95	41.0	38.1	2.9

¹Distances shown to nearest individual AC units.

²Calculated as attenuation by distance only (See Section 1.3.4).

³As predicted by Cadna model. This calculation does not include shielding from the proposed buildings.

⁴Differences between calculated and Cadna noise levels can be attributed to ground absorption and more precise source locations in the Cadna model.

1.3.4 Formulas and Calculations

Decibel Addition

To determine the combined logarithmic noise level of two known noise source levels, the values are converted to the base values, added together, and then converted back to the final logarithmic value, using the following formula:

$$L_C = 10 \log(10^{L_1/10} + 10^{L_2/10} + \dots 10^{L_N/10})$$

where L_C = the combined noise level (dB), and

L_N = the individual noise sources (dB).

This procedure is also valid when used successively for each added noise source beyond the first two. The reverse procedure can be used to estimate the contribution of one source when the contribution of another concurrent source is known and the combined noise level is known. These methods can be used for L_{EQ} or other metrics (such as L_{DN} or CNEL), as long as the same metric is used for all components.

Attenuation Due To Distance

Attenuation due to distance is calculated by the equation:

$$SPL_2 = SPL_1 - 20 \log\left(\frac{D_2}{D_1}\right)$$

where SPL_1 = Known sound pressure level at known distance,

SPL_2 = Calculated sound pressure level at distance,

D_1 = Distance from source to location of known sound pressure level, and

D_2 = Distance from source to location of calculated sound pressure level.

This is identical to the more commonly used reference of 6 dB reduction for every doubling of distance. This equation does not take into account reduction in noise due to atmospheric absorption.

Hourly L_{EQ} Summation

To determine the hourly average noise levels (L_{EQ}) when the noise is created for less than the full hour, convert the logarithm values to the base energy value, multiply by the percentage of the hour that the noise occurs, and then convert the sum back to a logarithmic value. This is done with the following formula:

$$L_{EQ} = 10 \log(P_H \times 10^{L_P/10})$$

where P_H = the percent or fraction of the hour noise is created, and

L_P = the partial hour noise level (dB).

Sound Power to Sound Pressure

To convert sound power levels to sound pressure levels, the following formula is used:

$$SPL = SWL - 20 \log(D) - 0.5$$

where: SPL = Calculated sound pressure level at distance, and

D = Distance from source to location of calculated sound pressure level.

1.3.5 Measurement Equipment

Some or all of the following equipment was used at the site to measure existing noise levels:

- Larson Davis Model LxT Type 1 Integrating Sound Level Meter, Serial # 4084
- Larson Davis Model CA250 Type 1 Calibrator, Serial # 1081

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterward, to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with a sound level meter that conforms to the American National Standards Institute specifications for sound level meters (ANSI S1.4). All instruments are maintained with National Bureau of Standards traceable calibration, per the manufacturers' standards.

2.0 NOISE SENSITIVE LAND USES AFFECTED BY AIRBORNE NOISE

2.1 Guidelines for the Determination of Significance

The County of San Diego Noise Element to the General Plan states that exterior noise levels at outdoor use areas of multifamily property should not exceed 65 CNEL at common outdoor use areas. In the event that noise levels exceed 65 CNEL, mitigation must be proposed to bring noise levels into compliance. In addition, the interior noise levels of the on-site residences must not exceed 45 CNEL, as per the County of San Diego Noise Element as well as the State of California Building Code. Pertinent sections of the County of San Diego Noise Element are provided as Appendix C.

2.2 Potential Noise Impacts

2.2.1 Potential Build-out Noise Conditions & Impacts

The future traffic volume was determined using the San Diego County General Plan Update 2050 Base Forecast for the Alpine area, provided by County Noise Specialist Emmet Aquino. According to Mr. Aquino, the adjusted forecasted volume should be used in the analysis. The adjusted traffic volume of Alpine Boulevard for the year 2050 is expected to be 8,000 ADT. The adjusted traffic volume of I-8 for the year 2050 is expected to be 32,900 ADT traveling eastbound and 35,500 ADT traveling westbound. The adjusted traffic volume of South Grade Road for the year 2050 is expected to be 5,100 ADT.

2.2.1.1 Exterior

The future exterior noise impacts at the project site are primarily the result of automobile and truck traffic traveling on Alpine Boulevard and I-8, with minor contribution from other nearby roadways. Without mitigation or proposed project structures, the project site will be exposed to noise levels of 42 CNEL to 71 CNEL at ground level in the future noise environment. The noise contours are irregularly shaped due to site topography. For a graphical representation of these contours, please refer to Figure 6: Site Plan Showing Future Traffic CNEL Contours and Noise Measurement Location, and for additional information, please refer to Appendix B: Traffic Noise Model (TNM) Data and Results.

As explained above, noise levels at outdoor use areas of multifamily properties must have noise levels of 65 CNEL or less. As some current traffic volumes exceed those shown for the future, the higher of the two values will be used for a worst-case analysis of traffic noise impacting the site. Receivers have been placed in the Traffic Noise Model at the backyards of proposed lots designated on the site plan. The model included proposed project structures, but assumed for a worst-case analysis that all structures would be single-story residences. According to Erin Crouthers, Project Manager, the project will be built in one phase, with all buildings completed prior to occupancy. Please refer to Table 5 for calculated unmitigated traffic noise levels at the outdoor use areas. For a graphical representation of the receiver locations, please refer to Figure 7.

Table 5. Worst-Case Traffic Noise Levels at Private Outdoor Use Areas		
Receiver	Location	Exterior Traffic Noise Level (CNEL)
OUA1	Backyard, Lot 1	66.0
OUA2	Backyard, Lot 2	64.2
OUA3	Backyard, Lot 3	64.8
OUA4	Backyard, Lot 4	63.9
OUA5	Backyard, Lot 5	62.9
OUA6	Backyard, Lot 6	64.3
OUA7	Backyard, Lot 7	60.5
OUA8	Backyard, Lot 8	61.6
OUA9	Backyard, Lot 9	57.7
OUA10	Backyard, Lot 10	67.7
OUA11	Backyard, Lot 11	66.1
OUA12	Backyard, Lot 12	65.2
OUA13	Backyard, Lot 13	64.0
OUA14	Backyard, Lot 14	69.1
OUA15	Backyard, Lot 15	67.1
OUA16	Backyard, Lot 16	65.5
OUA17	Backyard, Lot 17	60.1

Noise levels are shown to exceed 65 CNEL at calculated receiver locations for the backyards of Lots 1, 10, 11, 14, 15, and 16. All other outdoor use areas are anticipated to receive sufficient noise attenuation due to the topography, distance, and the current configuration of the lots. Please refer to Section 2.2.2.1 for mitigation details.

2.2.1.2 Interior

The State of California and the County of San Diego require buildings to be designed in order to attenuate, control, and maintain interior noise levels to below 45 CNEL in habitable residential space. Current exterior building construction is generally expected to achieve at least 15 decibels of exterior-to-interior noise attenuation, with windows opened. Therefore, proposed building structures exposed to exterior noise levels greater than 60 CNEL could be subject to interior noise levels exceeding the 45 CNEL noise limit for residential habitable space.

Noise levels were calculated for building facades using worst-case traffic data. Noise levels at building facades were calculated to range from approximately 38.1 CNEL at the south facade of Lot 13 on the first floor, to 70.6 CNEL at the north facade of Lot 14 on the second floor. The results are shown in Table 6, and receiver locations are shown in Figure 8.

Table 6. Worst-Case Traffic Noise Levels at Building Facades

Lot	Receiver	Location	Exterior Traffic Noise Level (CNEL)		Lot	Receiver	Location	Exterior Traffic Noise Level (CNEL)	
			1st Floor	2nd Floor				1st Floor	2nd Floor
1	1-1	North	67.9	70.1	10	10-1	North	70.4	70.5
	1-2	East	67.3	68.3		10-2	East	65.5	65.6
	1-3	South	44.7	51.6		10-3	South	42.7	47.3
	1-4	West	65.3	67.8		10-4	West	66.8	66.9
2	2-1	North	47.6	55.4	11	11-1	North	62.4	62.6
	2-2	East	64.1	65.3		11-2	East	65.8	65.9
	2-3	South	42.9	49.6		11-3	South	41.3	46.2
	2-4	West	63.9	65.4		11-4	West	65.5	65.7
3	3-1	North	47.5	66.2	12	12-1	North	43.4	47.6
	3-2	East	62.3	65.8		12-2	East	61.8	63.4
	3-3	South	42.2	48.8		12-3	South	39.3	44.7
	3-4	West	64.1	65.6		12-4	West	65.0	65.2
4	4-1	North	45.1	53.3	13	13-1	North	40.7	44.9
	4-2	East	60.9	64.4		13-2	East	55.9	60.9
	4-3	South	40.4	47.0		13-3	South	38.1	44.2
	4-4	West	63.4	64.3		13-4	West	63.8	64.6
5	5-1	North	44.0	52.9	14	14-1	North	70.5	70.6
	5-2	East	59.3	62.9		14-2	East	68.0	68.2
	5-3	South	42.1	47.4		14-3	South	42.3	47.4
	5-4	West	62.5	63.5		14-4	West	64.2	64.4
6	6-1	North	67.3	70.4	15	15-1	North	62.3	62.5
	6-2	East	63.8	68.1		15-2	East	66.7	66.8
	6-3	South	44.7	51.2		15-3	South	39.9	46.2
	6-4	West	65.3	67.8		15-4	West	65.2	65.4
7	7-1	North	57.9	57.1	16	16-1	North	63.3	63.3
	7-2	East	59.8	64.5		16-2	East	65.0	65.6
	7-3	South	42.4	48.4		16-3	South	38.1	44.5
	7-4	West	63.9	66.3		16-4	West	41.2	46.5
8	8-1	North	61.3	66.7	17	17-1	North	41.7	45.6
	8-2	East	57.1	61.5		17-2	East	59.9	65.1
	8-3	South	38.7	46.3		17-3	South	38.1	44.7
	8-4	West	61.3	65.6		17-4	West	53.7	59.8
9	9-1	North	41.2	49.3					
	9-2	East	55.9	59.7					
	9-3	South	38.2	45.2					
	9-4	West	59.5	62.3					

2.2.2 Design Considerations & Mitigation Measures

2.2.2.1 Exterior

As shown above, worst-case noise levels are shown to exceed 65 CNEL at the backyards of Lots 1, 10, 11, 14, 15, and 16. In order to mitigate noise levels at these locations, all of the following mitigation measures would be required:

1. A minimum six-foot high sound attenuation barrier must be installed along a portion of the north side of Lot 1, with a short return along the west side of Lot 1. The wall should be placed at the top of the slope in this location to provide adequate shielding for the affected outdoor use areas.
2. A minimum six-foot high sound attenuation barrier must be installed along a portion of the north side of Lot 10, and along the majority of the west side of Lot 10. The wall should be placed at the top of the slope in this location to provide adequate shielding for the affected outdoor use areas.
3. A minimum six-foot high sound attenuation barrier must be installed along a portion of the north side of Lot 14, with a return along the majority of the east side of Lot 14. The wall should be placed at the top of the slope in this location to provide adequate shielding for the affected outdoor use areas.

Receiver locations and sound attenuation barrier locations are shown in Figure 7. Noise levels have been calculated at the aforementioned receivers with these mitigation measures in place. Please refer to Table 7 for calculated traffic noise levels at the outdoor use areas, with the proposed mitigation in place.

Table 7. Worst-Case Traffic Noise Levels at Private Outdoor Use Areas – With Mitigation		
Receiver	Location	Exterior Traffic Noise Level (CNEL)
OUA1	Backyard, Lot 1	62.3
OUA2	Backyard, Lot 2	64.3
OUA3	Backyard, Lot 3	64.8
OUA4	Backyard, Lot 4	63.9
OUA5	Backyard, Lot 5	62.9
OUA6	Backyard, Lot 6	64.3
OUA7	Backyard, Lot 7	60.5
OUA8	Backyard, Lot 8	61.6
OUA9	Backyard, Lot 9	57.7
OUA10	Backyard, Lot 10	59.0
OUA11	Backyard, Lot 11	64.9
OUA12	Backyard, Lot 12	64.7

Table 7. Worst-Case Traffic Noise Levels at Private Outdoor Use Areas – With Mitigation		
Receiver	Location	Exterior Traffic Noise Level (CNEL)
OUA13	Backyard, Lot 13	63.9
OUA14	Backyard, Lot 14	60.8
OUA15	Backyard, Lot 15	64.5
OUA16	Backyard, Lot 16	65.0
OUA17	Backyard, Lot 17	59.6

In order to be effective, the sound attenuation barrier should be six feet high, relative to the grade of the lot on which it is placed. The wall should be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove and must be at least 7/8-inch thick or have a surface density of at least 3½ pounds per square foot. Where architectural or aesthetic factors allow, glass or clear plastic may be used on the upper portion, if it is desirable to preserve a view. Sheet metal of 18-gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any gate(s) proposed to be constructed in a sound wall must be designed with overlapping closures. The gate(s) may be of ¾-inch thick or greater wood, solid-sheet metal of at least 18-gauge metal, or an exterior-grade solid-core steel door with prefabricated door jambs.

It should be noted that the barrier walls shown in the attached figure have been modeled to show the feasibility of achieving compliance with County noise regulations. At the time of building permit application, alternate mitigation measures may be proposed, including the use of architectural features (the residential structure) as mitigation or the combination of the residential structure and a free-standing sound wall provided the lot can still provide the required noise-protected area.

2.2.2.2 Interior

As detailed above, all units are expected to be exposed to noise levels exceeding 60 CNEL in the worst-case noise environment, and therefore, will require an interior noise analysis to determine mitigation measures necessary to achieve interior noise levels of 45 CNEL. An analysis can be prepared for these ~~condominiums~~ / units at the time of building permit application.

2.3 Off-Site Direct and Cumulative Impacts

Per the County of San Diego project issue checklist, as the project proposes less than 200 trips per day, a traffic analysis was not required. Due to high existing traffic volumes on surrounding roadways, and the minimal increase in traffic from the proposed project, the project is not anticipated to cause any direct or cumulative noise impacts and no mitigation is deemed necessary to attenuate project-generated traffic noise.

3.0 PROJECT-GENERATED AIRBORNE NOISE

3.1 Guidelines for Determination of Significance

The County of San Diego Noise Ordinance states that noise levels from stationary sources shall not exceed 50 dBA between the hours of 7 a.m. and 10 p.m. and 45 dBA between the hours of 10 p.m. and 7 a.m. at residentially zoned properties or properties zoned RR or A70. Commercial noise limits are 60 dBA between the hours of 7 a.m. and 10 p.m. and 55 dBA between the hours of 10 p.m. and 7 a.m. At a boundary between two zones, the arithmetic average of the two limits would apply. For this reason, at the boundary of property zoned residential and property zoned commercial, the nighttime noise limit of 50 dBA would apply.

Section 36.409 of the County of San Diego Noise Ordinance states it is unlawful to operate construction equipment that exceeds an average sound level of 75 dBA for an eight-hour period, between 7 a.m. and 7 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received. In addition, according to Section 36.408 of the ordinance, construction activities must be limited to the hours of 7 a.m. to 7 p.m., Monday through Saturday (except legal holidays). No construction activity is permitted on Sunday. Section 36.410 provides noise limits for impulsive noise, which is defined as a high peak noise level of short duration (one second or less). Impulsive activity includes blasting and the use of equipment such as a rock crusher, hoe ram, pile driver, or drill rig. Impulsive noise limits are provided for both residential and agricultural properties.

Pertinent sections of the County of San Diego Noise Ordinance are provided as Appendix C.

3.2 Potential Operational Noise Impacts

3.2.1 Potential Build-Out Noise Conditions

Anticipated operational noise impacts from the proposed project include HVAC units at the proposed ~~condominiums~~ / units. Proposed HVAC units that will be used on site are currently unknown, and for this reason, were assumed to be three to five-ton units manufactured by Carrier. Sound power levels have been provided by the manufacturer in octave band values. Values are shown in Table 8. Manufacturer data sheets have been provided as Appendix D.

Table 8. Sound Power Levels of Carrier 24ACB3 Performance Units								
Source	Sound Power at Octave Band Frequency (dBA)							Total (dBA)
	125	250	500	1K	2K	4K	8K	
24ACB336 (3-ton)	57.0	65.0	67.5	69.5	67.5	65.0	60.0	75
24ACB360 (5-ton)	54.0	59.0	65.5	67.5	63.5	60.0	55.5	74

As the three-ton unit was slightly louder than the five-ton unit, the louder noise levels were used in the calculations. Noise levels have been calculated using Cadna at surrounding noise-sensitive receivers, assuming proposed units have been placed at the rear of the residences. Results are shown in Table 9. More information is provided in Appendix E: Cadna Analysis Data and Results, and a graphical representation of source/receiver locations and equipment noise contours is provided as Figure 9.

Table 9. Calculated Mechanical Equipment Noise Levels at Surrounding Receivers			
Receiver	Location	Noise Limit (dBA)	Equipment Noise Level (dBA)
R-1	North PL – Commercial	50	40.8
R-2	East PL – Park	45	44.5
R-3	South PL – Residence	45	36.8
R-4	West PL - Commercial	50	37.1

3.2.2 Design Considerations & Mitigation Measures

As shown above, noise levels from stationary equipment sources on site are expected to meet the nighttime noise limits at all surrounding property lines. No mitigation is required for attenuating these noise impacts.

3.3 Potential General Construction Noise Impacts

3.3.1 Potential Temporary Construction Noise Impacts without Mitigation

According to the County of San Diego Noise Ordinance, temporary construction noise must be adequately controlled at occupied properties. The occupied properties surrounding the site include residential receivers to the south. All other surrounding properties are either commercial uses or are currently vacant.

An anticipated construction schedule was formulated using information provided by Tyler Wakefield of New West Investment Group and typical data for similar projects. According to grading plans, there will be approximately 3,100 cubic yards of export from the site, and therefore, this consideration was taken into account when making typical equipment assumptions. The anticipated construction schedule is shown in Table 10.

Table 10. Anticipated Construction Schedule	
Scope of Work	Anticipated Large Equipment
Grading & Utilities	Dozer, Excavator, Dump Truck
Foundations & Pads	Concrete Mixer Truck, Concrete Pump
Paving	Paver, Roller
Building Construction	Forklift, Compressor

Please refer to Table 11 for typical noise levels of construction equipment expected to be used on site, as described above.

Table 11. Typical Construction Equipment Noise Levels ¹		
Noise Source	Duty Cycle (%)	Calculated Noise Level (L _{MAX}) at 50 feet (dBA)
Dump Truck	40%	75.3
Dozer	40%	77.3
Excavator	40%	75.3
Concrete Mixer Truck	40%	76.3
Concrete Pump	20%	74.3
Paver	50%	79.3
Roller	20%	69.3
Forklift	40%	74.3
Compressor	40%	61.3

¹Source: UK Department for Environment, Food, and Rural Affairs (DEFRA) Construction Noise Database.

Receivers to the south were calculated for the all phases of construction detailed above. In order to evaluate anticipated noise levels in these worst-case locations, the site was divided into four quadrants. During the various phases of construction, it was assumed that all pieces of equipment would be operating simultaneously (considering duty cycle) near the center of each area, approximately 85 feet away from the property to the south on the east side of the property (R-1) and 105 feet away from the property to the south on the west side of the property (R-2). This method should account for the varying distance from source to receiver as equipment moves around the site.

Noise levels of construction at each of the locations described above are shown in Table 12. Detailed calculations can be found in Appendix F: Construction Equipment Noise Calculations. A graphical representation of the source and receiver locations is shown in Figure 10.

Table 12. Temporary Construction Noise Levels at Neighboring Properties			
Phase	Equipment Used	Receiver Location	8-Hour Average Noise Level (dBA)
Grading & Utilities	Dozer, Excavator, Dump Truck	R-1 South (East)	72.3
		R-2 South (West)	70.4
Foundations & Pads	Concrete Mixer Truck, Concrete Pump	R-1 South (East)	68.9
		R-2 South (West)	67.1
Paving	Paver, Roller	R-1 South (East)	71.9
		R-2 South (West)	70.0
Framing	Forklift, Compressor	R-1 South (East)	65.9
		R-2 South (West)	64.1

3.3.2 Design Considerations and Temporary Mitigation Measures

As shown above, noise levels from temporary construction are expected to be in compliance with the County of San Diego eight-hour average equivalent noise limit of 75 dBA for on-site activity.

For any project in which construction activity will take place near occupied residential properties, the following “good practice” recommendations should be adhered to whenever possible:

1. Turn off equipment when not in use.
2. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured, to prevent rattling and banging.
3. Use equipment with effective mufflers.
4. Minimize the use of backup alarms.
5. Equipment staging areas should be placed at locations away from noise-sensitive (occupied) receivers.

These general recommendations, in addition to limiting construction equipment operation to the allowable hours detailed in the County of San Diego Noise Ordinance, will assist in maintaining the comfort of neighboring sensitive receivers during the construction of this site.

3.4 Potential Impulsive Noise Impacts

There is no anticipated need for impulsive construction activity on site, and therefore, this noise source has not been included in this analysis.

4.0 CONCLUSION

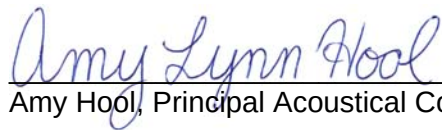
For multifamily residential sites, noise levels at common outdoor use areas should not exceed 65 CNEL, according to the County of San Diego Noise Compatibility Guidelines. Calculations show that, as designed, noise levels at the outdoor use areas for this project are expected to exceed the 65 CNEL requirement at the backyards of Lots 1, 10, 11, 14, 15, and 16. Recommended sound attenuation barrier configurations have been provided to ensure that noise levels will meet the 65 CNEL requirement. Additionally, building facade noise impacts are expected to exceed 60 CNEL at all lots, and therefore, an interior noise analysis will be required for the project as part of the conditions of approval. This analysis can be conducted upon completion of construction documents and prior to the issuance of building permits.

Noise from proposed mechanical equipment to be located on site has also been evaluated to determine whether noise from these sources will exceed the standards of the County of San Diego Noise Ordinance. Mechanical noise sources to be located on site include air conditioning units at the proposed ~~condominiums~~ / units. It has been determined that noise levels from on-site equipment will meet nighttime noise regulations as currently designed. No mitigation is deemed necessary.

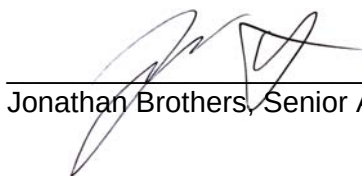
It is determined that typical construction activities will not exceed the County of San Diego temporary construction noise limit of 75 dBA at adjacent property lines during the construction activity. General good practice measures should be followed to ensure that noise levels remain below the County of San Diego construction noise limits, including reasonable maintenance of equipment, conservative planning of simultaneous equipment operation, and using equipment with effective mufflers. Equipment operation must also be limited to the allowable hours of operation set by the County of San Diego.

5.0 CERTIFICATION

The findings and recommendations of this acoustical analysis report are based on the information available and are a true and factual analysis of the potential acoustical issues associated with the proposed Honey Hill Ranch ~~Condominiums~~ / Units, located at 3087 Honey Hill Ranch Road in the Alpine Community Plan Area, County of San Diego, California. This report was prepared by Jonathan Brothers, Jeff Russert, and Amy Hool.



Amy Hool, Principal Acoustical Consultant

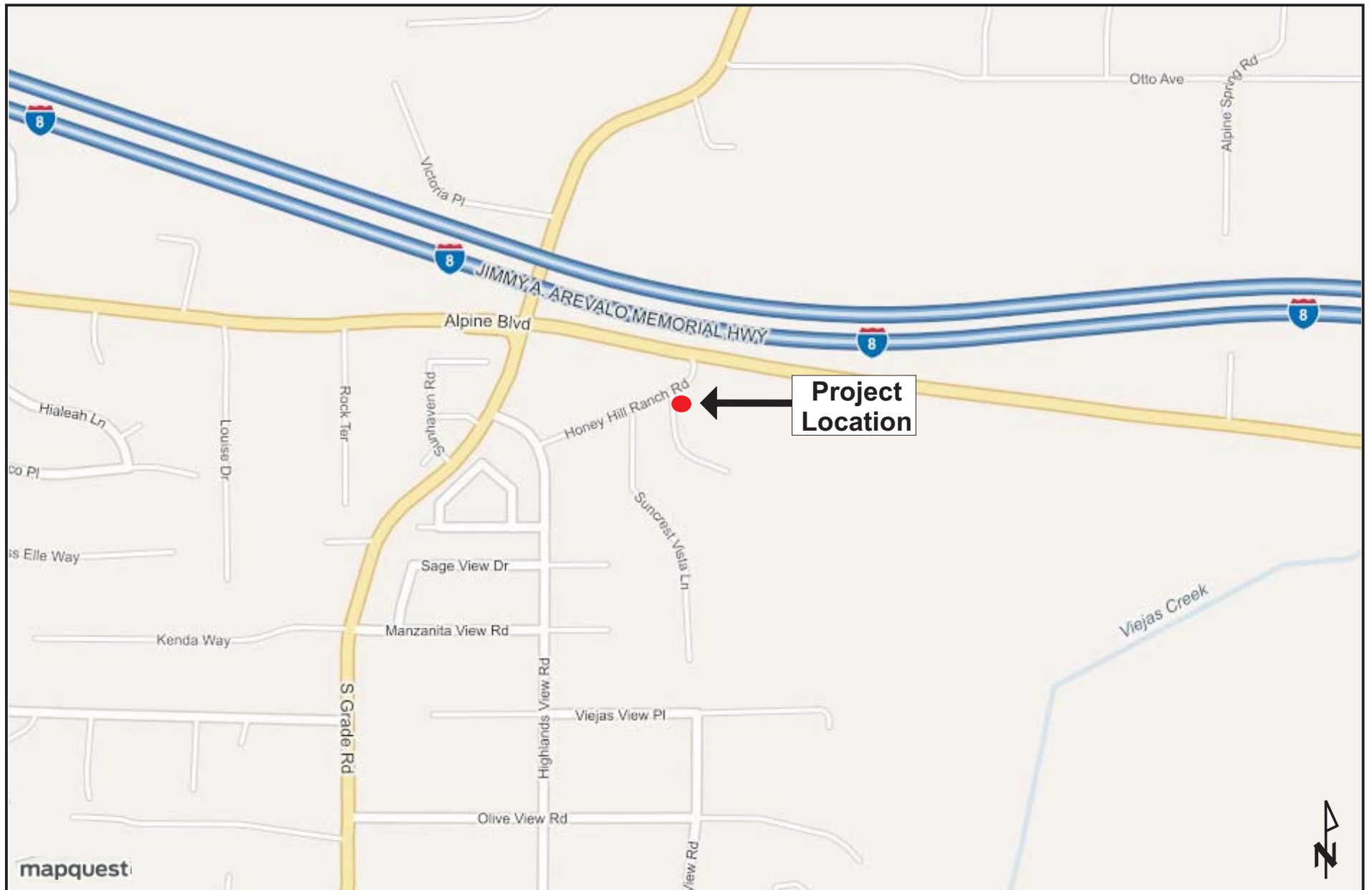


Jonathan Brothers, Senior Acoustical Consultant

6.0 REFERENCES

1. California Building Code, Based on the International Building Code, Chapter 12, Section 1207 - *Sound Transmission Control*.
2. Federal Highway Administration, Traffic Noise Model Version 2.5.
3. County of San Diego Noise Element to the General Plan.
4. County of San Diego Noise Ordinance.
5. Harris, Cyril M., Handbook of Acoustical Measurements and Noise Control, 3rd Edition, Acoustical Society of America, 1998.
6. Irvine, Leland K., Richards, Roy L., Acoustics and Noise Control Handbook for Architects and Builders, Kreiger Publishing Company, 1998.
7. NBS Building Sciences Series 77, Acoustical and Thermal Performance on Exterior Residential Walls, U.S. Department of Commerce/National Bureau of Standards, November 1976.
8. Western Electro-Acoustic Laboratory, Inc., 1711 Sixteenth Street, Santa Monica, California 90404, 213-80-9268, Sound Transmission Loss Vs. Glazing Type, Window Size and Air Filtration, January 1985. The research described in this report was prepared for the California Association of Window Manufacturers, 823 North Harbor Boulevard, Suite E, Fullerton, California 92632, 714-525-7088.
9. United States Department of Transportation Federal Highway Administration, Highway Construction Noise Handbook, Section 9.0 "Construction Equipment Noise Levels and Ranges," August 2006.
10. Wyle Laboratories, Development of Ground Transportation Systems Noise Contours for the San Diego Region, December, 1973
11. Traffic Distribution Study, by Katz-Okitsu and Associates Traffic Engineers, 1986.
12. UK Department for Environment, Food, and Rural Affairs (DEFRA) Construction Noise Database.

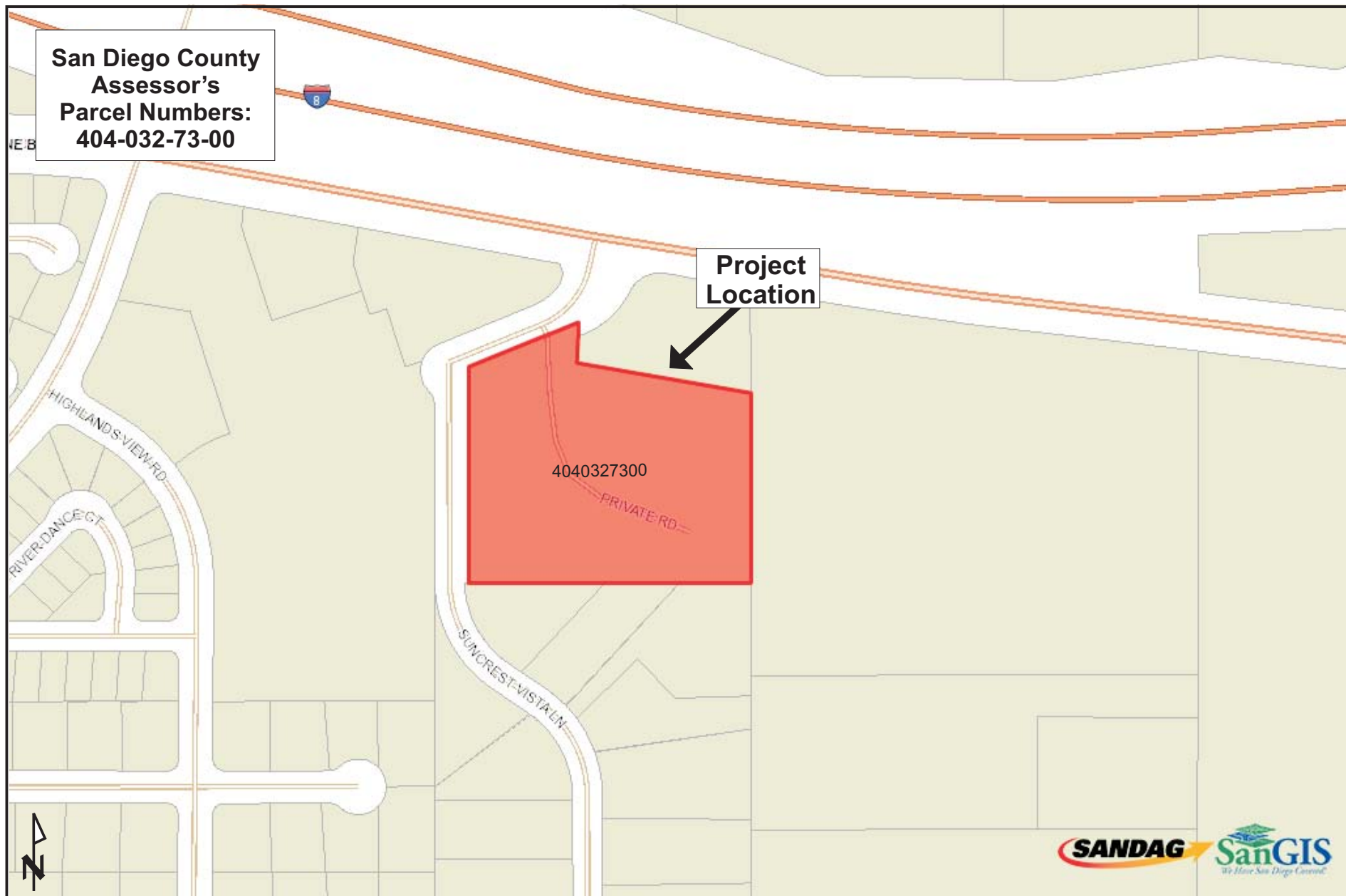
FIGURES



Eilar Associates, Inc.
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Vicinity Map
Job # B50911N1

Figure 1



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Assessor's Parcel Map
Job # B50911N1

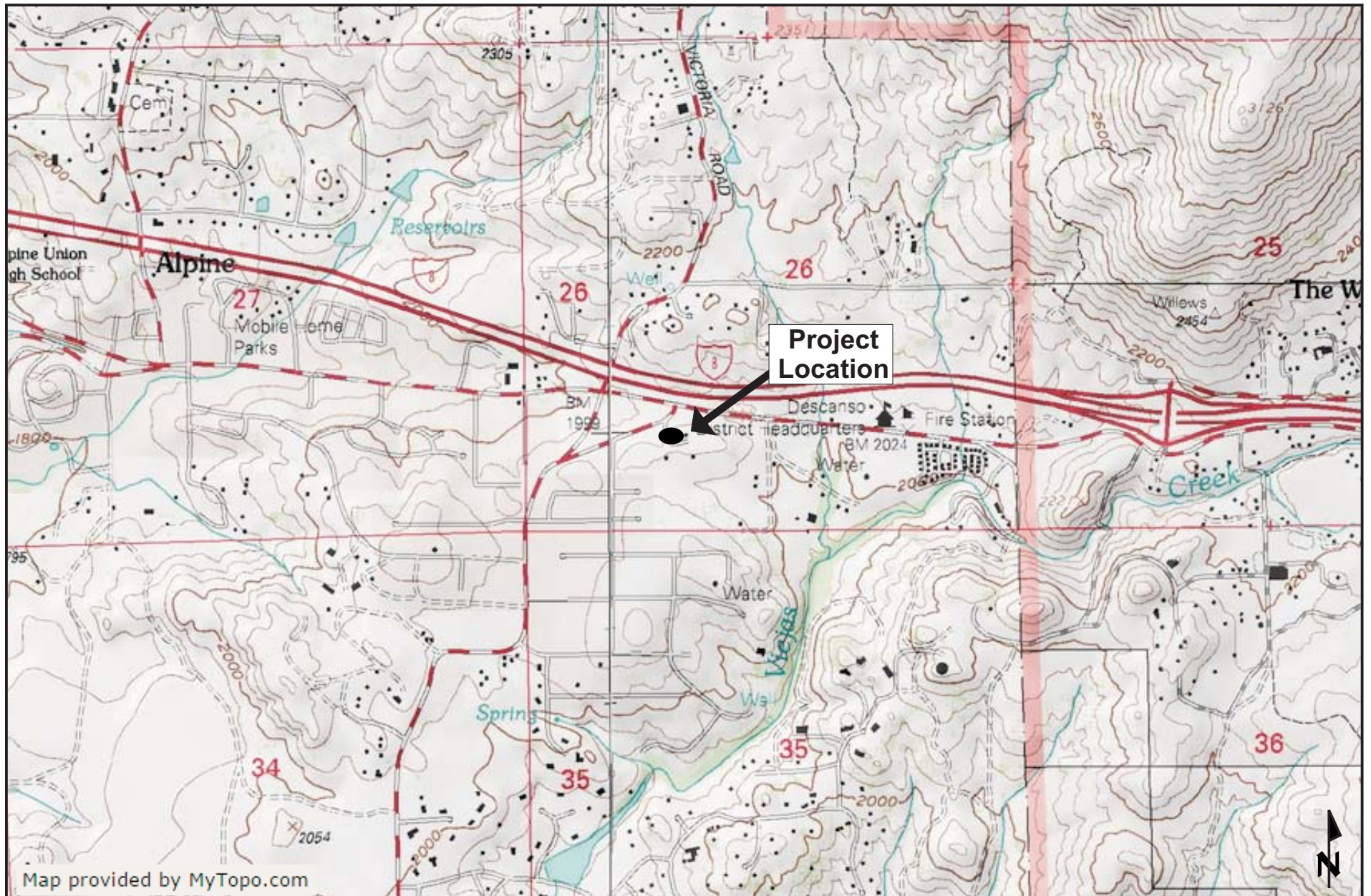
Figure 2



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Satellite Aerial Photograph
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Figure 3



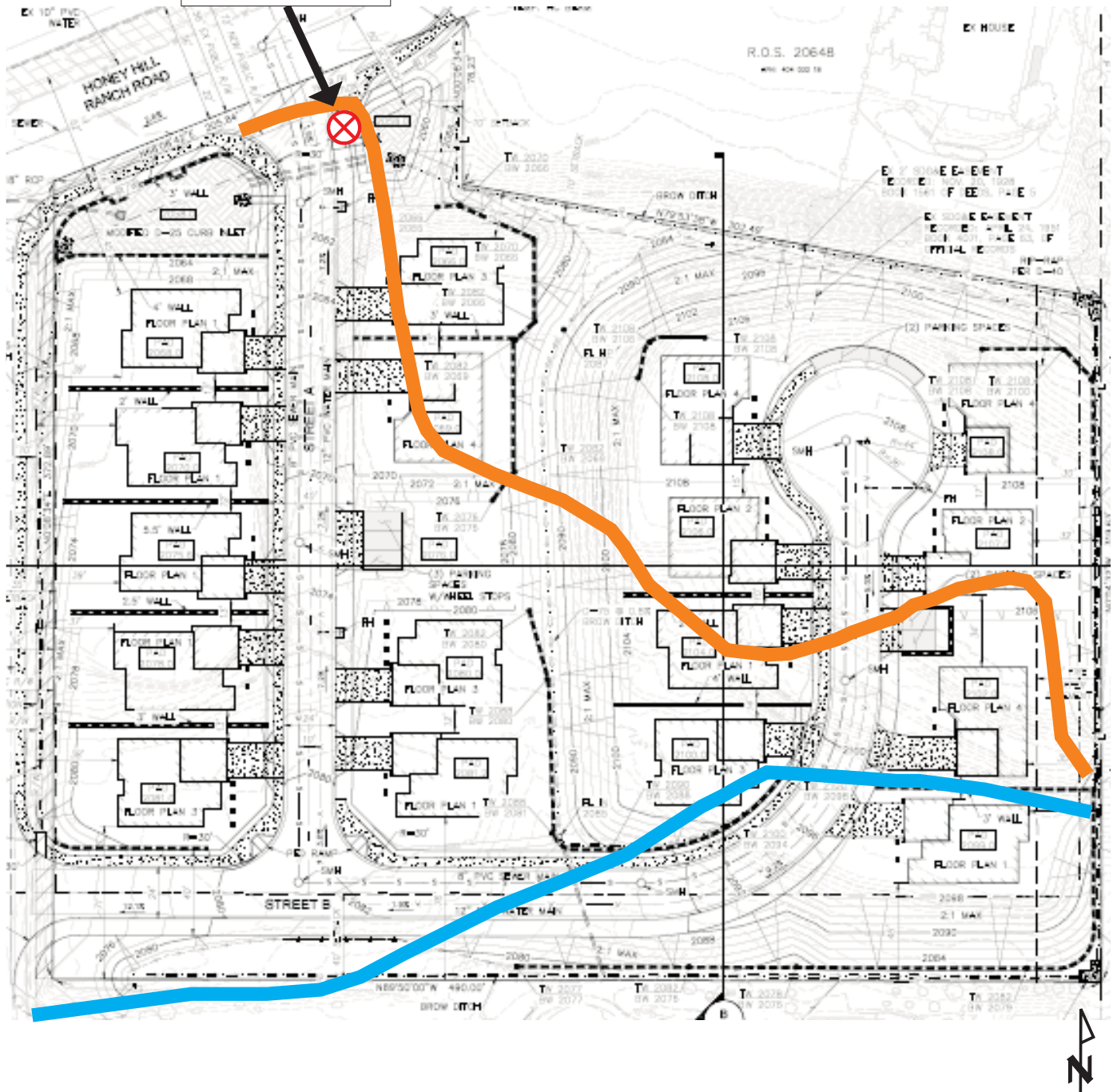
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Topographic Map
 Job # B50911N1

Figure 4

60 CNEL Contour
65 CNEL Contour

Noise Measurement Location



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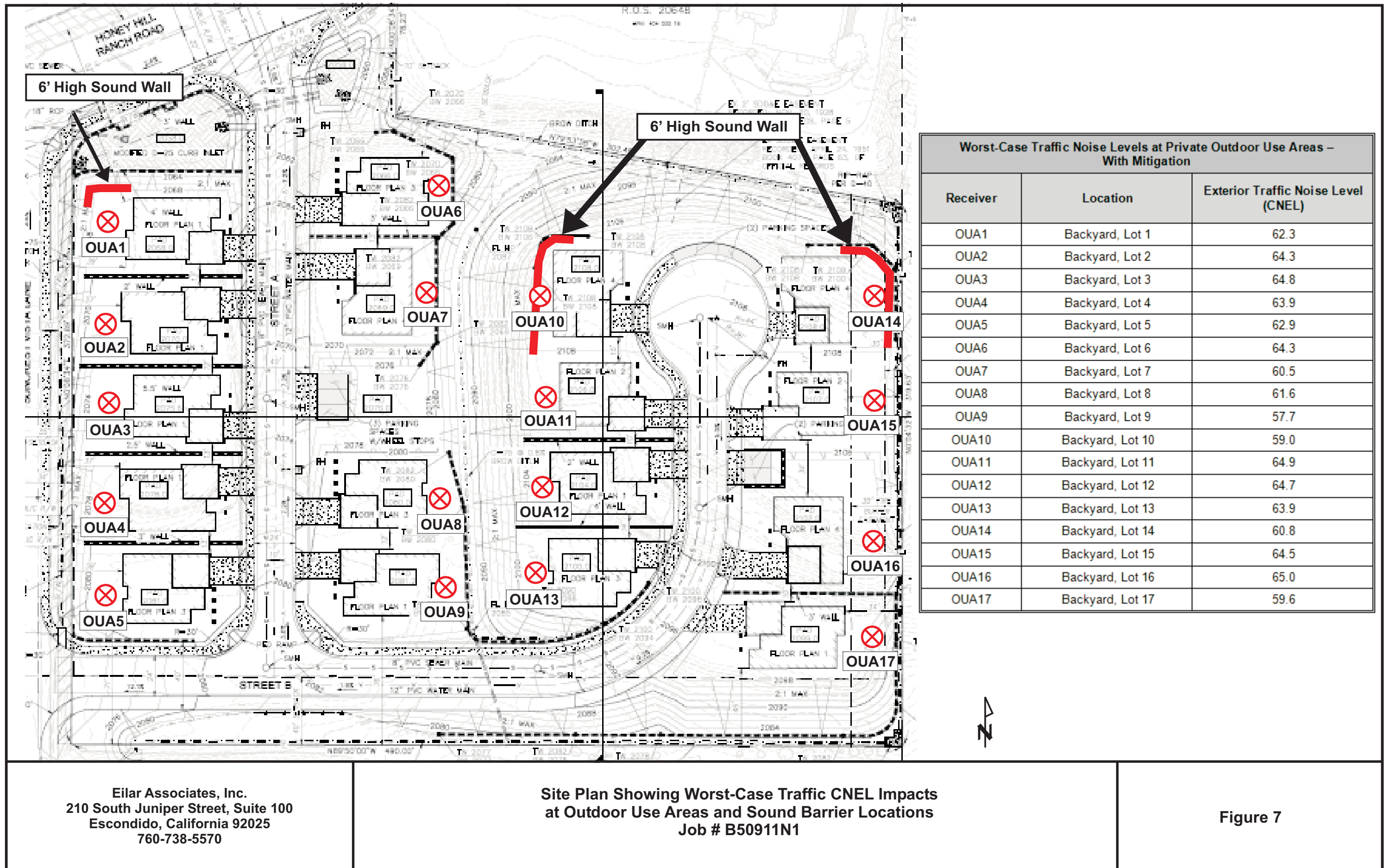
Site Plan Showing Current
Traffic CNEL Contours and
Noise Measurement Location
Job # B50911N1

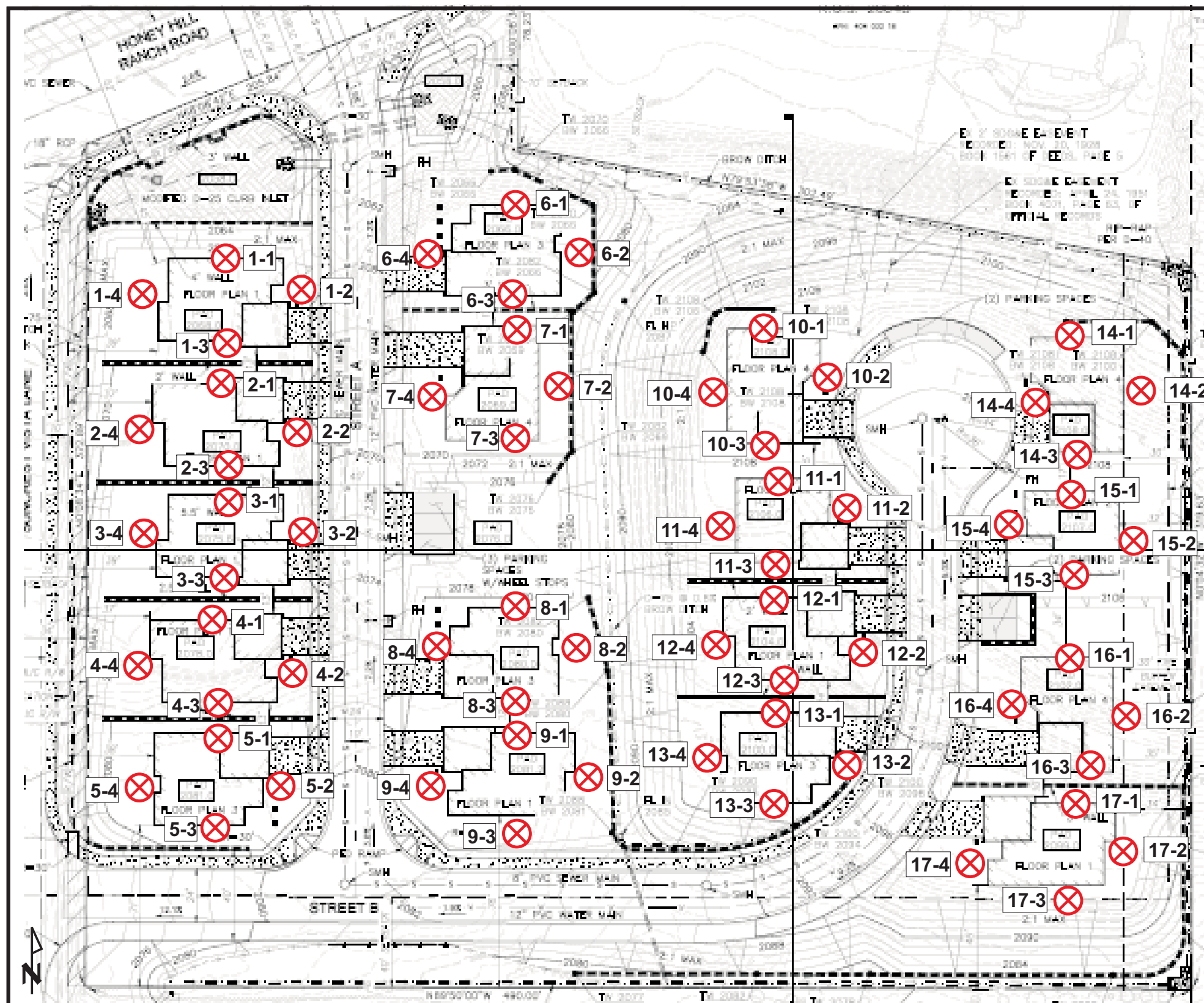
Figure 5



Site Plan Showing Future Traffic CNEL Contours and Noise Measurement Location Job # B50911N1

Figure 6



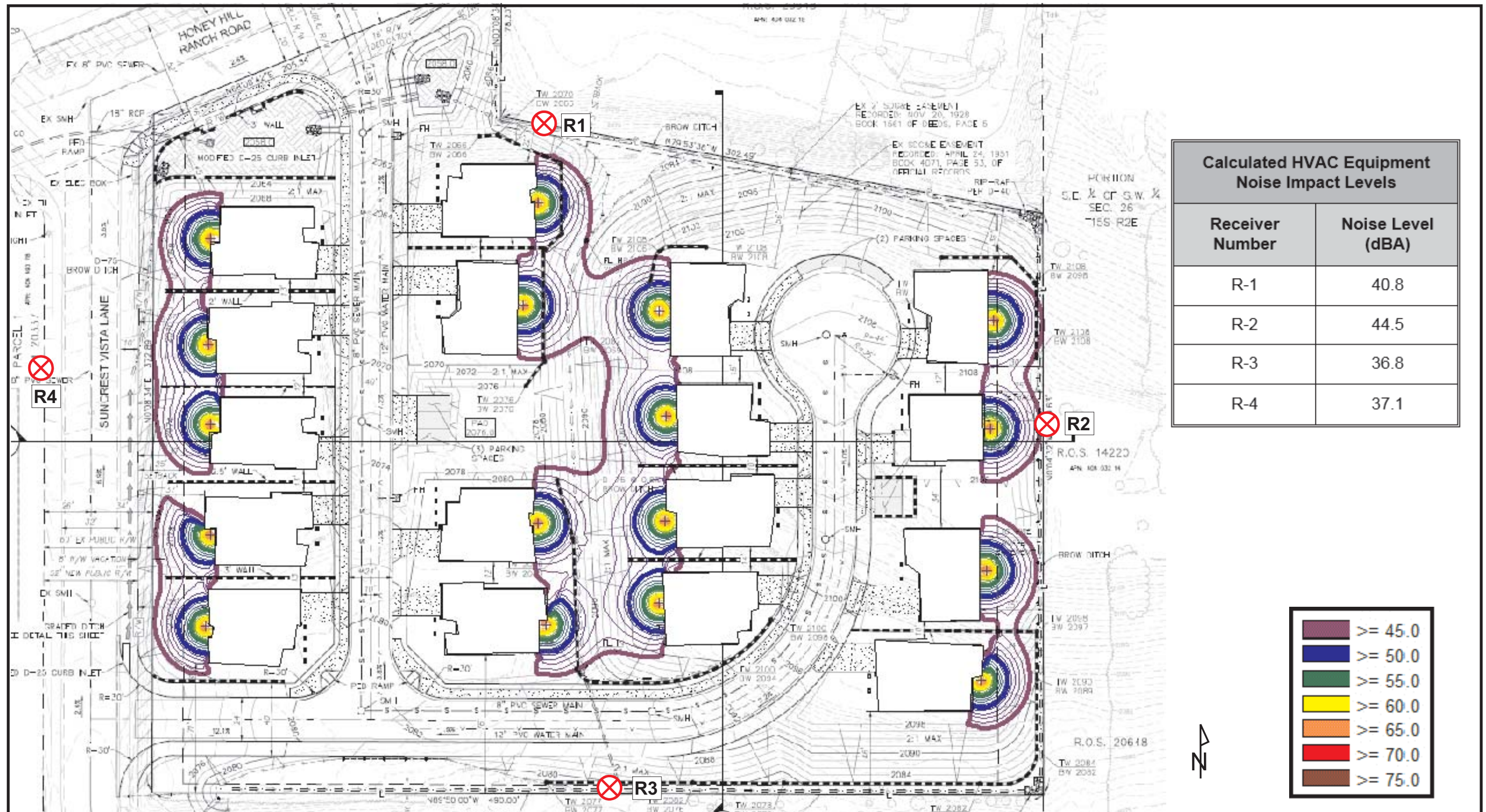


Worst-Case Traffic Noise Levels at Building Facades							
Lot	R #	Exterior Traffic Noise Level (CNEL)		Lot	R #	Exterior Traffic Noise Level (CNEL)	
		1st Floor	2nd Floor			1st Floor	2nd Floor
1	1-1	67.9	70.1	10	10-1	70.4	70.5
	1-2	67.3	68.3		10-2	65.5	65.6
	1-3	44.7	51.6		10-3	42.7	47.3
	1-4	65.3	67.8		10-4	66.8	66.9
2	2-1	47.6	55.4	11	11-1	62.4	62.6
	2-2	64.1	65.3		11-2	65.8	65.9
	2-3	42.9	49.6		11-3	41.3	46.2
	2-4	63.9	65.4		11-4	65.5	65.7
3	3-1	47.5	66.2	12	12-1	43.4	47.6
	3-2	62.3	65.8		12-2	61.8	63.4
	3-3	42.2	48.8		12-3	39.3	44.7
	3-4	64.1	65.6		12-4	65.0	65.2
4	4-1	45.1	53.3	13	13-1	40.7	44.9
	4-2	60.9	64.4		13-2	55.9	60.9
	4-3	40.4	47.0		13-3	38.1	44.2
	4-4	63.4	64.3		13-4	63.8	64.6
5	5-1	44.0	52.9	14	14-1	70.5	70.6
	5-2	59.3	62.9		14-2	68.0	68.2
	5-3	42.1	47.4		14-3	42.3	47.4
	5-4	62.5	63.5		14-4	64.2	64.4
6	6-1	67.3	70.4	15	15-1	62.3	62.5
	6-2	63.8	68.1		15-2	66.7	66.8
	6-3	44.7	51.2		15-3	39.9	46.2
	6-4	65.3	67.8		15-4	65.2	65.4
7	7-1	57.9	57.1	16	16-1	63.3	63.3
	7-2	59.8	64.5		16-2	65.0	65.6
	7-3	42.4	48.4		16-3	38.1	44.5
	7-4	63.9	66.3		16-4	41.2	46.5
8	8-1	61.3	66.7	17	17-1	41.7	45.6
	8-2	57.1	61.5		17-2	59.9	65.1
	8-3	38.7	46.3		17-3	38.1	44.7
	8-4	61.3	65.6		17-4	53.7	59.8
9	9-1	41.2	49.3				
	9-2	55.9	59.7				
	9-3	38.2	45.2				
	9-4	59.5	62.3				

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Site Plan Showing Worst-Case Traffic
CNEL Impacts at Building Facades
Job # B50911N1

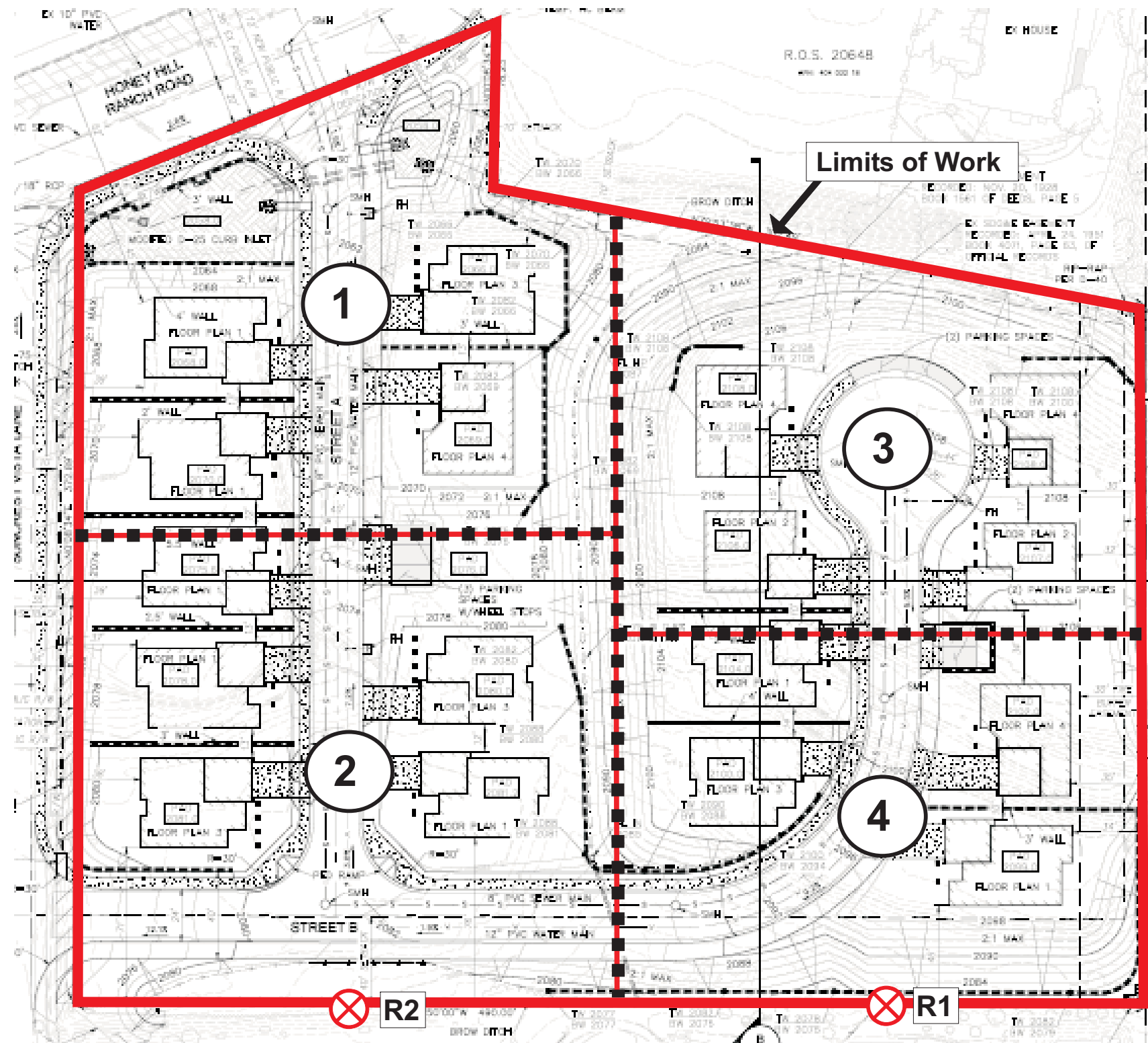
Figure 8



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Site Plan Showing Air Conditioning Unit
Noise Contours and Receiver Locations
Job # B50911N1

Figure 9



Temporary Construction Noise Levels at Neighboring Properties			
Phase	Equipment Used	Receiver Location	8-Hour Average Noise Level (dBA)
Grading & Utilities	Dozer, Excavator, Dump Truck	R-1 South (East)	72.3
		R-2 South (West)	70.4
Foundations & Pads	Concrete Mixer Truck, Concrete Pump	R-1 South (East)	68.9
		R-2 South (West)	67.1
Paving	Paver, Roller	R-1 South (East)	71.9
		R-2 South (West)	70.0
Framing	Forklift, Compressor	R-1 South (East)	65.9
		R-2 South (West)	64.1

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Site Plan Showing Construction Equipment
Noise Sources and Receiver Locations
Job # B50911N1

Figure 10

APPENDIX A

Project Plans

GENERAL NOTES:

- COUNTY ASSESSORS PARCEL No. 404-032-7300
- TAX RATE AREA: 51012
- GROSS AREA = 4.17 ACRES, NET AREA = 3.22 ± ACRES
- NUMBER OF UNITS = 17
- MINIMUM LOT SIZE: 0.5 AC
- EXISTING AND PROPOSED ZONING:

USE REGULATIONS	EXISTING
ANNUAL REGS	0.4
DESIGN	0.5
LOT SIZE	0.5 AC
BLDG. TYPE	I
MAX. FFL AREA	---
FLR AREA RATIO	---
HEIGHT	---
LOT COVERAGE	---
SETBACK	---
OPEN SPACE	---
SPECIAL AREA REGS	B

- GENERAL PLAN LAND USE CATEGORY: VILLAGE
- GENERAL PLAN LAND USE DESIGNATION: GENERAL COMMERCIAL
- COMMUNITY PLAN: ALPINE
- NO SPECIAL ASSESSMENT ACT PROCEEDINGS ARE PROPOSED
- PARK FEES IN LIEU OF PARK LAND DEDICATION IS PROPOSED
- STREET LIGHTS TO BE INSTALLED IN ACCORDANCE WITH COUNTY STANDARDS.
- TOPOGRAPHY OBTAINED FROM SAN-LO AERIAL SURVEYS DATED: 12-21-04 AND FIELD SURVEY BY REC CONSULTANTS ON 10-21-15
- SEWER SERVICE: SAN DIEGO COUNTY SANITATION DISTRICT
- WATER SERVICE: PADRE DAM MUNICIPAL WATER DISTRICT
- FIRE PROTECTION SERVICE: ALPINE FIRE PROTECTION DISTRICT
- SCHOOLS: GENERAL ELEMENTARY ALPINE UNION SCHOOL DISTRICT AND GROSSMONT UNION HIGH SCHOOL DISTRICT
- STREET LIGHTING: PRIVATE SERVICE
- ALL STREETS TO BE PRIVATE.

LEGAL DESCRIPTION

BEING A SUBDIVISION OF PORTIONS OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 15 SOUTH, RANGE 2 EAST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

FOR COMPLETE METES AND BOUNDS LEGAL DESCRIPTION OF THE BOUNDARY OF THIS SUBDIVISION, SEE CERTIFIED TITLE COMPANY DESCRIPTION AND REPORT ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR.

SUBDIVISION GUARANTEE BY FIRST AMERICAN TITLE INSURANCE COMPANY, ORDER NO. NCS-734393-SO, DATED MAY 31, 2015.

EASEMENTS NOTES

- EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES TO SAN DIEGO CONSOLIDATED GAS & ELECTRIC COMPANY, A CORPORATION, RECORDED NOVEMBER 20, 1928 AS BOOK 1561 OF DEEDS, PAGE 5, OFFICIAL RECORDS.
- EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES TO SAN DIEGO GAS & ELECTRIC COMPANY, A CORPORATION, RECORDED APRIL 24, 1951, BOOK 4071, PAGE 63, OFFICIAL RECORDS.
- PROPOSED PRIVATE ROAD AND UTILITY EASEMENT, GRANTED PER SEPARATE DOCUMENT.
- PROPOSED NOISE PROTECTION EASEMENT, GRANTED PER SEPARATE DOCUMENT.
- PROPOSED PORTION OF HONEY HILL RANCH ROAD DEDICATED PER SEPARATE DOCUMENT.
- PROPOSED STREET VACATION, GRANTED PER SEPARATE DOCUMENT.

SOLAR ACCESS STATEMENT:

ALL UNITS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQ. FT. OF SOLAR ACCESS FOR EACH FUTURE DWELLING UNIT ALLOWED BY THIS SUBDIVISION.

STREET LIGHT STATEMENT:

THE SUBDIVIDER INTENDS TO COMPLY WITH THE STREET LIGHT REQUIREMENTS AS SPECIFIED IN THE COUNTY STANDARDS. THIS SUBDIVISION IS PROPOSING ONLY PRIVATE STREETS.

NOISE RESTRICTION EASEMENT:

A NOISE RESTRICTION EASEMENT SHALL BE PLACED ON THE ENTIRE AREA OF THE PROJECT SITE AND WILL BE GRANTED TO THE COUNTY OF SAN DIEGO PER SEPARATE DOCUMENT.

GRADING QUANTITIES:

CUT	21,000 CY
FILL	21,000 CY
EXPORT	NONE CY



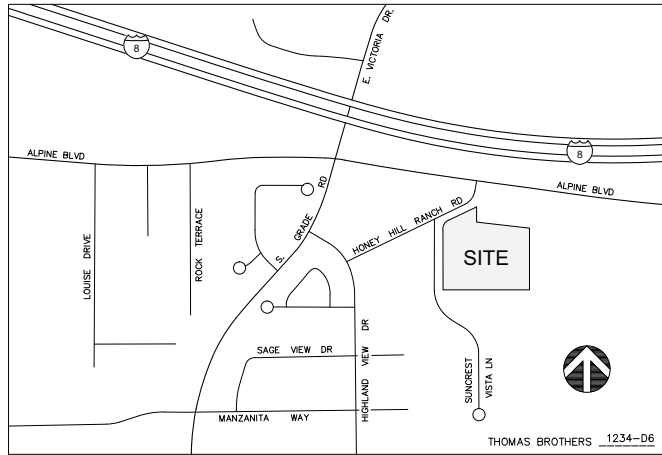
Civil Engineering • Environmental
Land Surveying

2442 Second Avenue
San Diego, CA 92101
(619)232-9200 (619)232-9210 Fax

PLOT PLAN

"HONEY HILL RANCH ROAD"

Alpine, County of San Diego, California



VICINITY MAP

NOT TO SCALE

BUILDING PLAN DATA:

PLAN No.	QUANTITY	AREA (SqFt)
1	7	1,586
2	2	1,860
3	4	1,528
4	4	2,485

FLOOR AREA RATIO (FAR):

TOTAL SITE	178,635 SqFt
PROPOSED SFD UNITS (w/ GARAGES)	32,651 SqFt
FAR = 0.18 (18%)	MAX ALLOWED 0.70 (70%)

LEGEND

PROPOSED:

SYMBOL	DESCRIPTION
---	RIGHT-OF-WAY
---	BOUNDARY
---	EASEMENTS
~~~~~	RELINQUISH ACCESS TO HONEY HILL RANCH RD AND SUNCREST VISTA LANE
---	PROPOSED D-75 BROW DITCH
---	PROPOSED RETAINING WALL
---	PROPOSED BUILDING
---	PROPOSED STORM DRAIN INLET
---	PROPOSED STORM DRAIN CLEANOUT
---	PROPOSED MODIFIED D-25 CURB INLET
---	PROPOSED 8" PVC SEWER MAIN
---	PROPOSED 12" PVC WATER MAIN
---	PROPOSED STORM DRAIN
---	PROPOSED 16" PCC DRIVEWAY
---	PROPOSED 6" CURB AND GUTTER

#### EXISTING:

SYMBOL	DESCRIPTION
---	EXIST FH
---	EXIST CONTOUR
---	EX POWER POLE
---	EX STREET LIGHT
---	EX PVC SEWER MAIN (SIZE AS SHOWN)
---	EX PVC WATER MAIN (SIZE AS SHOWN)
---	EX STORM DRAIN (SIZE AS SHOWN)

SEE TYPICAL PAD DRAINAGE DETAIL - SHEET 5

### SITE ADDRESS:

3087 HONEY HILL RANCH  
ROAD ALPINE, CA 91901

### APPLICANT/OWNER:

GREGG ROBERT HAMANN AND DEBRA LEE HAMANN, AS CO-TRUSTEES UNDER THE GREGG HAMANN FAMILY TRUST DATED APRIL 25, 1996, AS AMENDED, AS TO AN UNDIVIDED ONE-HALF INTEREST, AND MATTHEW PHILLIP JONES AND PHOEBE HAMANN JONES, HUSBAND AND WIFE AS JOINT TENANTS, AS TO AN UNDIVIDED ONE-HALF INTEREST, AS TENANTS IN COMMON

1000 PIONEER WAY  
EL CAJON, CA 92020  
TEL: (619) 440-7424

GREGG ROBERT HAMANN DATE

DEBRA LEE HAMANN DATE

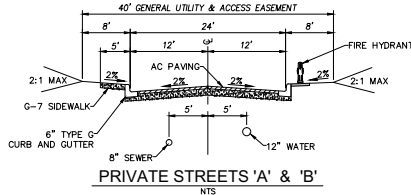
MATTHEW PHILLIP JONES DATE

PHOEBE HAMANN JONES DATE

### ENGINEER OF WORK:

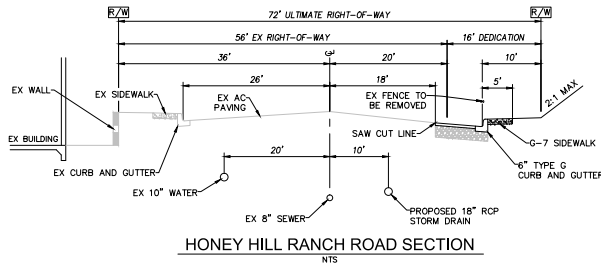
REC CONSULTANTS, INC.  
2442 SECOND AVENUE  
SAN DIEGO, CA 92101  
PH. (619) 232-9200

BRUCE A. ROBERTSON R.C.E. 48529 DATE  
EXPIRES ON 6/30/16



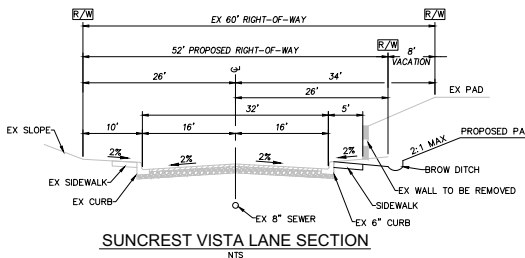
### PRIVATE STREETS 'A' & 'B'

NTS



### HONEY HILL RANCH ROAD SECTION

NTS



### SUNCREST VISTA LANE SECTION

NTS

NO.	REVISIONS	DESCRIPTION	DATE	APP'D

Civil Engineering • Environmental  
Land Surveying  
2442 Second Avenue  
San Diego, CA 92101  
(619)232-9200 (619)232-9210 Fax



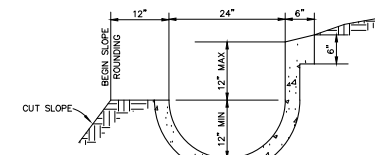
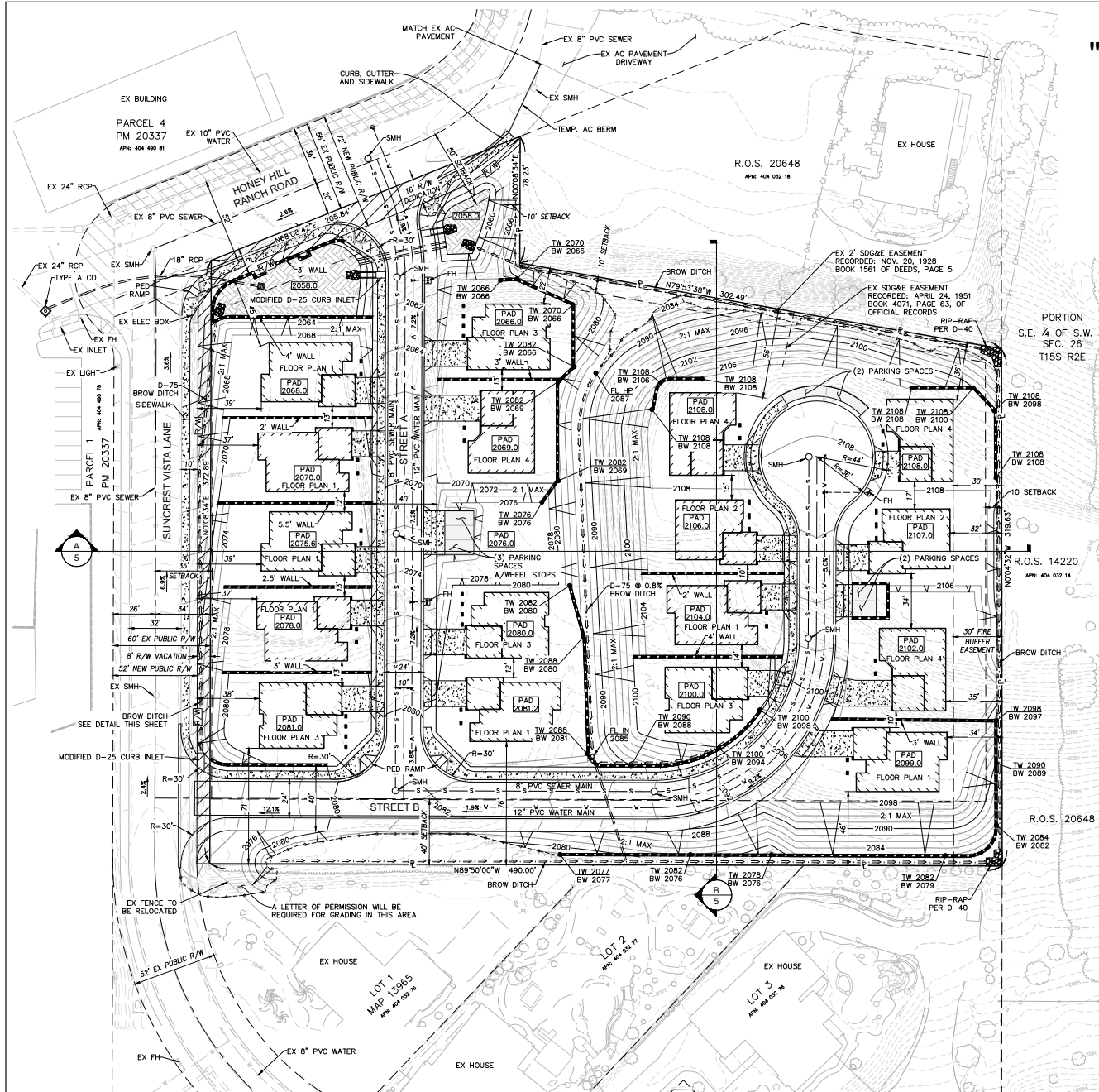
DATE: 4-11-2015  
SCALE: N/A  
DRAWN: JAW  
CHECKED: JAW  
BY: BAW

SHEET TITLE: PLOT PLAN - TITLE SHEET  
PROJECT: HONEY HILL RANCH  
3087 HONEY HILL RANCH ROAD  
ALPINE, CA 91901

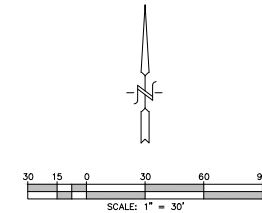
SHEET 1  
OF 5 SHEETS

# PLOT PLAN - PROPOSED CONDITIONS PLAN "HONEY HILL RANCH ROAD"

Alpine, County of San Diego, California



TYPICAL BROW DITCH SECTION



SETBACKS:	
SETBACK DESIGNATOR	10'
FRONT YARD SETBACK	50'
SIDE YARD (INTERIOR)	10'
SIDE YARD (EXTERIOR)	35'
REAR YARD	40'

## ENGINEER OF WORK

REC CONSULTANTS, INC.  
2442 SECOND AVENUE  
SAN DIEGO, CA 92101  
PH. (619) 232-9200



BRUCE A. ROBERTSON  
EXPIRES ON 6/30/16

R.C.E. 48529

DATE

NO.	REVISIONS	DESCRIPTION	DATE	APP'D

Civil Engineering • Environmental  
Land Surveying  
2442 Second Avenue  
San Diego, CA 92101  
(619) 232-9200 (619) 232-9210 Fax



DATE: 6-16-14  
SCALE: 1" = 30'  
DRAWN: JAW  
CHECKED: EAB

SHEET TITLE PLOT PLAN - PROPOSED CONDITIONS  
PROJECT HONEY HILL RANCH  
3087 HONEY HILL RANCH ROAD  
ALPINE, CA 91901

SHEET  
OF 5 SHEETS  
3

## **APPENDIX B**

### **Traffic Noise Model (TNM) Data and Results**

## INPUT: ROADWAYS

## B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.											
JB											
INPUT: ROADWAYS											
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch										
RUN:	Calibration										
Roadway		Points									
Name	Width	Name	No.	Coordinates	(pavement)		Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
I-8 EB	36.0	point1	1	-1,329.5	479.0	2,045.00				Average	
		point2	2	-1,103.2	403.5	2,053.00				Average	
		point3	3	-856.0	317.6	2,059.00				Average	
		point4	4	-686.0	263.2	2,063.00				Average	
		point5	5	-514.2	214.5	2,071.00				Average	
		point6	6	-317.5	166.8	2,076.00				Average	
		point7	7	-100.8	122.9	2,078.00				Average	
		point8	8	-5.9	108.0	2,079.00				Average	
		point9	9	120.6	89.2	2,079.00				Average	
		point10	10	279.1	71.5	2,079.00				Average	
		point11	11	479.1	56.9	2,077.00				Average	
		point12	12	758.9	47.6	2,074.00				Average	
		point13	13	927.1	50.4	2,072.00				Average	
		point14	14	1,127.3	63.7	2,070.00				Average	
		point15	15	1,332.3	82.8	2,068.00					
I-8 WB	24.0	point16	16	1,332.3	207.0	2,072.00				Average	
		point17	17	1,191.5	194.8	2,078.00				Average	
		point18	18	963.8	181.0	2,079.00				Average	
		point19	19	822.4	179.4	2,081.00				Average	
		point20	20	513.8	187.7	2,086.00				Average	
		point21	21	87.6	229.0	2,087.00				Average	
		point22	22	-359.2	314.2	2,081.00				Average	
		point23	23	-681.1	405.0	2,070.00				Average	
		point24	24	-929.6	489.4	2,063.00				Average	
		point25	25	-1,170.4	567.2	2,055.00				Average	

**INPUT: ROADWAYS**
**B50911N1 - Honey Hill Ranch**

		point26	26	-1,331.7	621.9	2,051.00					
Alpine Blvd EB	12.0	point27	27	-1,315.0	128.7	2,001.00				Average	
		point28	28	-1,106.1	130.1	2,013.00				Average	
		point29	29	-897.1	117.7	2,027.00				Average	
		point30	30	-725.3	93.0	2,038.00				Average	
		point31	31	-264.4	11.9	2,059.00				Average	
		point32	32	34.0	-35.0	2,061.00				Average	
		point33	33	331.7	-82.3	2,054.00				Average	
		point34	34	493.2	-107.8	2,050.00				Average	
		point35	35	688.9	-134.9	2,043.00				Average	
		point36	36	845.6	-149.2	2,039.00				Average	
		point37	37	1,182.8	-191.6	2,030.00				Average	
		point38	38	1,329.8	-208.7	2,025.00					
Alpine Blvd WB	12.0	point39	39	1,328.2	-195.8	2,025.00				Average	
		point40	40	1,156.4	-175.9	2,030.00				Average	
		point41	41	1,014.4	-158.8	2,035.00				Average	
		point42	42	879.0	-141.7	2,040.00				Average	
		point43	43	701.0	-122.0	2,043.00				Average	
		point44	44	379.3	-75.2	2,054.00				Average	
		point45	45	76.8	-24.4	2,062.00				Average	
		point46	46	-216.5	28.8	2,060.00				Average	
		point47	47	-425.7	63.0	2,054.00				Average	
		point48	48	-584.8	90.8	2,047.00				Average	
		point49	49	-789.5	132.0	2,034.00				Average	
		point50	50	-879.0	143.2	2,029.00				Average	
		point51	51	-1,001.7	156.5	2,021.00				Average	
		point52	52	-1,173.0	160.1	2,011.00				Average	
		point53	53	-1,330.9	152.3	2,001.00					
Honey Hill Ranch/ Suncrest Vista SB	12.0	point54	54	-90.2	-44.0	2,061.00				Average	
		point55	55	-101.3	-95.4	2,062.00				Average	
		point56	56	-126.7	-126.9	2,062.00				Average	
		point57	57	-164.2	-147.9	2,062.00				Average	
		point58	58	-254.8	-184.3	2,062.00				Average	
		point59	59	-303.5	-207.0	2,060.00				Average	
		point60	60	-325.6	-219.7	2,059.00				Average	
		point61	61	-325.0	-291.0	2,064.00				Average	
		point62	62	-325.8	-410.2	2,065.00				Average	
		point63	63	-328.5	-560.7	2,078.00				Average	
		point64	64	-327.2	-608.4	2,079.00				Average	

**INPUT: ROADWAYS**
**B50911N1 - Honey Hill Ranch**

		point65	65	-324.5	-644.9	2,079.00				Average	
		point66	66	-313.9	-680.0	2,078.00				Average	
		point67	67	-299.6	-714.2	2,077.00				Average	
		point68	68	-269.2	-753.4	2,075.00				Average	
		point69	69	-215.8	-798.0	2,074.00				Average	
		point70	70	-146.8	-841.7	2,073.00					
Suncrest Vista NB/ Honey Hill Ranch	24.0	point71	71	-131.8	-837.0	2,073.00				Average	
		point72	72	-193.2	-799.0	2,074.00				Average	
		point73	73	-247.7	-758.3	2,074.00				Average	
		point74	74	-273.8	-729.9	2,076.00				Average	
		point75	75	-289.5	-711.1	2,077.00				Average	
		point76	76	-300.6	-690.0	2,077.00				Average	
		point77	77	-313.7	-652.4	2,078.00				Average	
		point78	78	-318.7	-612.5	2,079.00				Average	
		point79	79	-317.8	-551.2	2,079.00				Average	
		point80	80	-317.3	-436.1	2,069.00				Average	
		point81	81	-312.8	-368.2	2,064.00				Average	
		point82	82	-310.2	-243.2	2,061.00				Average	
		point83	83	-305.5	-230.8	2,061.00				Average	
		point84	84	-168.2	-170.1	2,063.00				Average	
		point85	85	-112.5	-139.6	2,063.00				Average	
		point86	86	-84.6	-97.0	2,062.00				Average	
		point87	87	-65.3	-48.9	2,061.00					
South Grade Road	24.0	point88	88	-861.6	73.3	2,031.00				Average	
		point89	89	-925.2	-123.3	2,039.00				Average	
		point90	90	-961.3	-198.3	2,044.00				Average	
		point91	91	-1,052.8	-327.2	2,052.00				Average	
		point92	92	-1,222.4	-526.3	2,067.00				Average	
		point93	93	-1,330.4	-643.5	2,071.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.													
JB													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch												
RUN:	Calibration												
Roadway	Points												
Name	Name	No.	Segment										
			Autos		MTrucks		HTrucks		Buses		Motorcycles		
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
I-8 EB	point1	1	758	70	40	55	63	55	0	0	0	0	
	point2	2	758	70	40	55	63	55	0	0	0	0	
	point3	3	758	70	40	55	63	55	0	0	0	0	
	point4	4	758	70	40	55	63	55	0	0	0	0	
	point5	5	758	70	40	55	63	55	0	0	0	0	
	point6	6	758	70	40	55	63	55	0	0	0	0	
	point7	7	758	70	40	55	63	55	0	0	0	0	
	point8	8	758	70	40	55	63	55	0	0	0	0	
	point9	9	758	70	40	55	63	55	0	0	0	0	
	point10	10	758	70	40	55	63	55	0	0	0	0	
	point11	11	758	70	40	55	63	55	0	0	0	0	
	point12	12	758	70	40	55	63	55	0	0	0	0	
	point13	13	758	70	40	55	63	55	0	0	0	0	
	point14	14	758	70	40	55	63	55	0	0	0	0	
	point15	15											
I-8 WB	point16	16	758	70	40	55	63	55	0	0	0	0	
	point17	17	758	70	40	55	63	55	0	0	0	0	
	point18	18	758	70	40	55	63	55	0	0	0	0	
	point19	19	758	70	40	55	63	55	0	0	0	0	
	point20	20	758	70	40	55	63	55	0	0	0	0	
	point21	21	758	70	40	55	63	55	0	0	0	0	
	point22	22	758	70	40	55	63	55	0	0	0	0	
	point23	23	758	70	40	55	63	55	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point24	24	758	70	40	55	63	55	0	0	0	0
	point25	25	758	70	40	55	63	55	0	0	0	0
	point26	26										
Alpine Blvd EB	point27	27	362	40	11	40	6	40	0	0	0	0
	point28	28	362	40	11	40	6	40	0	0	0	0
	point29	29	362	40	11	40	6	40	0	0	0	0
	point30	30	362	40	11	40	6	40	0	0	0	0
	point31	31	362	40	11	40	6	40	0	0	0	0
	point32	32	362	40	11	40	6	40	0	0	0	0
	point33	33	362	40	11	40	6	40	0	0	0	0
	point34	34	362	40	11	40	6	40	0	0	0	0
	point35	35	362	40	11	40	6	40	0	0	0	0
	point36	36	362	40	11	40	6	40	0	0	0	0
	point37	37	362	40	11	40	6	40	0	0	0	0
	point38	38										
Alpine Blvd WB	point39	39	362	40	11	40	6	40	0	0	0	0
	point40	40	362	40	11	40	6	40	0	0	0	0
	point41	41	362	40	11	40	6	40	0	0	0	0
	point42	42	362	40	11	40	6	40	0	0	0	0
	point43	43	362	40	11	40	6	40	0	0	0	0
	point44	44	362	40	11	40	6	40	0	0	0	0
	point45	45	362	40	11	40	6	40	0	0	0	0
	point46	46	362	40	11	40	6	40	0	0	0	0
	point47	47	362	40	11	40	6	40	0	0	0	0
	point48	48	362	40	11	40	6	40	0	0	0	0
	point49	49	362	40	11	40	6	40	0	0	0	0
	point50	50	362	40	11	40	6	40	0	0	0	0
	point51	51	362	40	11	40	6	40	0	0	0	0
	point52	52	362	40	11	40	6	40	0	0	0	0
	point53	53										
Honey Hill Ranch/ Suncrest Vista SB	point54	54	16	25	0	0	4	25	0	0	0	0
	point55	55	16	25	0	0	4	25	0	0	0	0
	point56	56	16	25	0	0	4	25	0	0	0	0
	point57	57	16	25	0	0	4	25	0	0	0	0
	point58	58	16	25	0	0	4	25	0	0	0	0
	point59	59	16	25	0	0	4	25	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point60	60	16	25	0	0	4	25	0	0	0	0
	point61	61	16	25	0	0	4	25	0	0	0	0
	point62	62	16	25	0	0	4	25	0	0	0	0
	point63	63	16	25	0	0	4	25	0	0	0	0
	point64	64	16	25	0	0	4	25	0	0	0	0
	point65	65	16	25	0	0	4	25	0	0	0	0
	point66	66	16	25	0	0	4	25	0	0	0	0
	point67	67	16	25	0	0	4	25	0	0	0	0
	point68	68	16	25	0	0	4	25	0	0	0	0
	point69	69	16	25	0	0	4	25	0	0	0	0
	point70	70										
Suncrest Vista NB/ Honey Hill Ranch	point71	71	16	25	0	0	0	0	0	0	0	0
	point72	72	16	25	0	0	0	0	0	0	0	0
	point73	73	16	25	0	0	0	0	0	0	0	0
	point74	74	16	25	0	0	0	0	0	0	0	0
	point75	75	16	25	0	0	0	0	0	0	0	0
	point76	76	16	25	0	0	0	0	0	0	0	0
	point77	77	16	25	0	0	0	0	0	0	0	0
	point78	78	16	25	0	0	0	0	0	0	0	0
	point79	79	16	25	0	0	0	0	0	0	0	0
	point80	80	16	25	0	0	0	0	0	0	0	0
	point81	81	16	25	0	0	0	0	0	0	0	0
	point82	82	16	25	0	0	0	0	0	0	0	0
	point83	83	16	25	0	0	0	0	0	0	0	0
	point84	84	16	25	0	0	0	0	0	0	0	0
	point85	85	16	25	0	0	0	0	0	0	0	0
	point86	86	16	25	0	0	0	0	0	0	0	0
	point87	87										
South Grade Road	point88	88	187	30	6	30	3	30	0	0	0	0
	point89	89	187	30	6	30	3	30	0	0	0	0
	point90	90	187	30	6	30	3	30	0	0	0	0
	point91	91	187	30	6	30	3	30	0	0	0	0
	point92	92	187	30	6	30	3	30	0	0	0	0
	point93	93										

**INPUT: RECEIVERS**

**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.												
JB												
INPUT: RECEIVERS												
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch											
RUN:	Calibration											
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z	above	Existing	Impact Criteria		NR	in	
						Ground	L _{Aeq} 1h	L _{Aeq} 1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
Calibration	1	1	-149.4	-185.0	2,062.00	5.00	0.00	66	10.0	8.0	Y	

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.									7 October 2015								
JB									TNM 2.5								
INPUT: BARRIERS																	
PROJECT/CONTRACT:									B50911N1 - Honey Hill Ranch								
RUN:									Calibration								
Barrier									Points								
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment		
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg Ht	Perturbs	On
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn
				Area	Vol.			Length							ment		Struct?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft		Reflec-
																	tions?
Commercial Building	W	0.00	99.99	0.00				0.00	point1	1	-411.3	-139.6	2,054.00	20.00	0.00	0	0
									point2	2	-270.4	-79.3	2,054.00	20.00	0.00	0	0
									point3	3	-238.6	-147.0	2,054.00	20.00	0.00	0	0
									point4	4	-384.6	-204.5	2,054.00	20.00	0.00	0	0
									point5	5	-411.3	-139.6	2,054.00	20.00			
Commercial Building 2	W	0.00	99.99	0.00				0.00	point6	6	135.7	-126.1	2,064.00	15.00	0.00	0	0
									point7	7	180.3	-133.7	2,064.00	15.00	0.00	0	0
									point8	8	167.6	-209.2	2,064.00	15.00	0.00	0	0
									point9	9	118.7	-199.2	2,064.00	15.00	0.00	0	0
									point10	10	120.8	-186.1	2,064.00	15.00	0.00	0	0
									point11	11	130.4	-188.1	2,064.00	15.00	0.00	0	0
									point12	12	136.3	-153.7	2,064.00	15.00	0.00	0	0
									point13	13	130.4	-152.2	2,064.00	15.00	0.00	0	0
									point14	14	135.7	-126.1	2,064.00	15.00			

## INPUT: TERRAIN LINES

B50911N1 - Hc

Eilar Associates, Inc.			7 October 2015	
JB			TNM 2.5	
INPUT: TERRAIN LINES				
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch			
RUN:	Calibration			
Terrain Line	Points			
Name	No.	Coordinates (ground)		
		X	Y	Z
		ft	ft	ft
Terrain Line1	1	-442.2	-52.3	2,054.00
	2	-452.7	-18.1	2,054.00
	3	-422.3	8.4	2,054.00
	4	-135.1	-41.9	2,060.00
	5	-114.1	-74.4	2,061.00
	6	-120.1	-95.4	2,061.00
	7	-154.4	-124.7	2,061.00
	8	-398.0	-227.5	2,058.00
Terrain Line2	9	-432.8	-52.3	2,054.00
	10	-414.1	-43.5	2,054.00
	11	-419.6	-28.0	2,054.00
	12	-394.2	-23.6	2,054.00
	13	-375.9	-22.0	2,054.00
	14	-268.2	-36.3	2,054.00
	15	-147.2	-59.5	2,054.00
	16	-143.3	-81.1	2,054.00
	17	-146.1	-97.1	2,054.00
	18	-188.1	-129.7	2,054.00
	19	-271.0	-165.1	2,054.00
	20	-392.0	-214.2	2,054.00
2080	21	404.3	-567.1	2,080.00
	22	363.2	-573.6	2,080.00
	23	275.6	-588.5	2,080.00
	24	234.0	-594.6	2,080.00
	25	213.5	-594.8	2,080.00
	26	208.1	-602.3	2,080.00
	27	193.5	-608.8	2,080.00
	28	76.7	-610.5	2,080.00
	29	-11.3	-607.5	2,080.00
	30	-64.4	-601.7	2,080.00
	31	-107.9	-598.2	2,080.00
	32	-159.2	-619.0	2,080.00
	33	-223.4	-621.0	2,080.00
	34	-247.6	-621.2	2,080.00
	35	-253.9	-616.7	2,080.00
	36	-255.0	-609.0	2,080.00
	37	-251.5	-603.8	2,080.00

**INPUT: TERRAIN LINES**
**B50911N1 - Hc**

	38	-232.8	-597.3	2,080.00
	39	-209.7	-592.1	2,080.00
	40	-208.6	-583.4	2,080.00
	41	-202.1	-584.5	2,080.00
	42	-206.2	-573.1	2,080.00
	43	-204.1	-561.4	2,080.00
	44	-211.8	-551.9	2,080.00
	45	-247.5	-550.3	2,080.00
	46	-272.2	-537.8	2,080.00
	47	-274.4	-533.2	2,080.00
	48	-270.9	-494.9	2,080.00
	49	-185.4	-493.8	2,080.00
	50	-183.3	-510.9	2,080.00
	51	-175.0	-513.5	2,080.00
	52	-174.7	-520.7	2,080.00
	53	-161.7	-516.2	2,080.00
	54	-151.0	-519.7	2,080.00
	55	-149.4	-513.8	2,080.00
	56	-141.4	-510.1	2,080.00
	57	-132.9	-440.3	2,080.00
	58	-66.6	-440.5	2,080.00
	59	-67.6	-417.3	2,080.00
	60	-69.8	-378.1	2,080.00
	61	-66.1	-374.5	2,080.00
	62	-66.5	-313.9	2,080.00
	63	-56.3	-305.0	2,080.00
	64	-57.2	-297.9	2,080.00
	65	-40.3	-271.3	2,080.00
	66	-38.4	-262.9	2,080.00
	67	-16.6	-262.8	2,080.00
	68	20.1	-253.5	2,080.00
	69	116.7	-265.0	2,080.00
	70	190.6	-270.4	2,080.00
	71	208.0	-260.8	2,080.00
	72	236.3	-273.1	2,080.00
	73	256.8	-289.4	2,080.00
	74	281.6	-292.1	2,080.00
	75	334.1	-295.7	2,080.00
	76	335.0	-296.0	2,080.00
	77	380.0	-305.0	2,080.00
2090	78	311.9	-538.0	2,090.00
	79	276.2	-545.0	2,090.00
	80	243.3	-546.9	2,090.00
	81	206.6	-545.8	2,090.00
	82	202.6	-552.6	2,090.00
	83	195.5	-576.5	2,090.00
	84	189.6	-585.9	2,090.00
	85	176.1	-590.5	2,090.00

**INPUT: TERRAIN LINES**
**B50911N1 - Hc**

	86	88.8	-590.7	2,090.00
	87	79.7	-590.0	2,090.00
	88	60.0	-580.2	2,090.00
	89	39.7	-587.1	2,090.00
	90	15.0	-590.8	2,090.00
	91	19.5	-580.7	2,090.00
	92	5.9	-550.6	2,090.00
	93	-24.7	-549.2	2,090.00
	94	-34.9	-540.2	2,090.00
	95	-38.3	-527.1	2,090.00
	96	-42.3	-450.1	2,090.00
	97	-45.8	-391.3	2,090.00
	98	-47.7	-352.0	2,090.00
	99	-47.4	-330.0	2,090.00
	100	-39.1	-309.5	2,090.00
	101	-22.1	-293.5	2,090.00
	102	5.4	-278.8	2,090.00
	103	43.9	-270.2	2,090.00
	104	63.5	-267.5	2,090.00
	105	104.1	-269.0	2,090.00
	106	146.0	-276.3	2,090.00
	107	203.5	-289.0	2,090.00
	108	208.5	-302.4	2,090.00
	109	263.7	-329.6	2,090.00
	110	318.8	-342.0	2,090.00
	111	362.1	-370.1	2,090.00
	112	384.2	-419.4	2,090.00
2100	113	307.3	-506.9	2,100.00
	114	276.6	-511.0	2,100.00
	115	230.5	-515.3	2,100.00
	116	205.0	-512.5	2,100.00
	117	196.8	-523.6	2,100.00
	118	101.7	-523.2	2,100.00
	119	104.9	-515.5	2,100.00
	120	69.5	-492.6	2,100.00
	121	56.7	-518.4	2,100.00
	122	43.1	-532.8	2,100.00
	123	32.4	-541.1	2,100.00
	124	-2.5	-536.5	2,100.00
	125	-18.5	-530.1	2,100.00
	126	-21.9	-468.9	2,100.00
	127	-26.0	-387.3	2,100.00
	128	-28.2	-339.9	2,100.00
	129	-22.5	-321.4	2,100.00
	130	-6.8	-306.7	2,100.00
	131	11.7	-298.1	2,100.00
	132	59.1	-288.5	2,100.00
	133	84.0	-286.9	2,100.00

**INPUT: TERRAIN LINES**
**B50911N1 - Hc**

	134	115.7	-291.0	2,100.00
	135	161.7	-305.1	2,100.00
	136	185.0	-313.4	2,100.00
	137	191.1	-318.2	2,100.00
	138	205.2	-332.9	2,100.00
	139	205.5	-346.0	2,100.00
	140	259.8	-376.7	2,100.00
	141	288.3	-384.1	2,100.00
	142	312.9	-401.6	2,100.00
	143	344.3	-432.7	2,100.00
	144	343.3	-464.3	2,100.00
2070-1	145	383.1	-635.4	2,070.00
	146	306.0	-646.1	2,070.00
	147	274.2	-649.6	2,070.00
	148	227.3	-650.7	2,070.00
	149	156.8	-661.5	2,070.00
	150	152.9	-670.7	2,070.00
	151	147.9	-699.1	2,070.00
	152	121.1	-742.4	2,070.00
	153	69.8	-823.8	2,070.00
	154	24.9	-863.9	2,070.00
2070-2	155	-292.2	-482.9	2,070.00
	156	-277.5	-386.2	2,070.00
	157	-270.1	-336.0	2,070.00
	158	-187.1	-335.6	2,070.00
	159	-182.0	-372.1	2,070.00
	160	-175.3	-372.4	2,070.00
	161	-174.8	-380.6	2,070.00
	162	-161.3	-375.2	2,070.00
	163	-142.2	-371.9	2,070.00
	164	-141.3	-376.7	2,070.00
	165	-71.5	-376.3	2,070.00
	166	-69.6	-372.0	2,070.00
	167	-71.9	-311.6	2,070.00
	168	-63.2	-302.9	2,070.00
	169	-61.2	-268.4	2,070.00
	170	-93.3	-251.0	2,070.00
	171	-100.0	-244.4	2,070.00
	172	-93.1	-222.4	2,070.00
	173	-76.5	-229.8	2,070.00
	174	-23.8	-235.9	2,070.00
	175	54.8	-241.5	2,070.00
	176	156.0	-256.7	2,070.00
	177	184.6	-255.8	2,070.00
	178	202.7	-213.8	2,070.00
	179	239.0	-204.2	2,070.00
	180	281.0	-234.8	2,070.00
	181	382.8	-238.6	2,070.00

**INPUT: TERRAIN LINES**
**B50911N1 - Hc**

	182	477.2	-318.5	2,070.00
	183	573.0	-459.0	2,070.00
	184	571.0	-585.0	2,070.00
2060-1	185	349.3	-711.1	2,060.00
	186	276.1	-725.9	2,060.00
	187	218.6	-739.7	2,060.00
	188	180.7	-733.1	2,060.00
	189	147.5	-740.4	2,060.00
	190	115.0	-794.1	2,060.00
	191	99.1	-828.6	2,060.00
	192	63.9	-892.4	2,060.00
2060-2	193	-280.2	-276.1	2,060.00
	194	-271.3	-273.7	2,060.00
	195	-187.2	-273.5	2,060.00
	196	-185.4	-245.0	2,060.00
	197	-191.6	-231.5	2,060.00
	198	-201.2	-226.8	2,060.00
	199	-226.5	-234.8	2,060.00
	200	-269.1	-251.7	2,060.00
	201	-278.0	-259.9	2,060.00
	202	-280.2	-268.4	2,060.00
	203	-280.2	-273.7	2,060.00
	204	-280.2	-276.0	2,060.00
2060-3	205	-137.4	-236.1	2,060.00
	206	-141.6	-221.2	2,060.00
	207	-141.6	-208.5	2,060.00
	208	-132.8	-200.4	2,060.00
	209	-111.7	-190.5	2,060.00
	210	-104.4	-195.1	2,060.00
	211	-109.0	-217.3	2,060.00
	212	-117.0	-239.2	2,060.00
	213	-137.4	-239.6	2,060.00
2080-2	214	426.8	-568.2	2,080.00
	215	519.4	-551.1	2,080.00
	216	519.4	-484.2	2,080.00
	217	457.3	-423.1	2,080.00
	218	427.7	-343.9	2,080.00
	219	387.6	-307.6	2,080.00
2060-4	221	295.2	-119.4	2,060.00
	222	518.5	-215.1	2,060.00
	223	666.8	-384.0	2,060.00
	224	678.1	-598.0	2,060.00
	225	569.2	-671.2	2,060.00
	226	360.8	-708.8	2,060.00
Terrain Line14	227	-1,325.3	592.3	2,052.00
	228	-813.9	424.0	2,063.00
	229	-507.1	333.3	2,077.00
	230	-329.1	279.5	2,081.00

**INPUT: TERRAIN LINES****B50911N1 - Hc**

	231	78.6	199.7	2,085.00
	232	588.8	159.8	2,084.00
	233	1,096.2	159.8	2,075.00
	234	1,324.3	176.9	2,072.00
Terrain Line15	235	-1,326.8	516.1	2,045.00
	236	-1,007.5	402.1	2,057.00
	237	-625.6	282.4	2,069.00
	238	-363.3	205.4	2,075.00
	239	175.5	117.0	2,079.00
	240	531.8	91.4	2,077.00
	241	888.1	88.5	2,074.00
	242	1,312.9	114.2	2,070.00
Terrain Line16	243	-1,329.7	436.3	2,041.00
	244	-753.8	248.1	2,055.00
	245	-391.8	145.5	2,071.00
	246	-92.5	82.8	2,076.00
	247	226.8	42.9	2,076.00
	248	514.7	22.9	2,074.00
	249	922.4	17.2	2,071.00
	250	1,330.0	42.9	2,062.00
Terrain Line17	251	-1,330.9	188.3	2,004.00
	252	-876.4	185.4	2,030.00
	253	-768.1	179.7	2,035.00
	254	-500.1	111.3	2,051.00
	255	38.7	11.5	2,066.00
	256	323.7	-42.6	2,059.00
	257	640.1	-88.2	2,045.00
	258	982.2	-133.8	2,040.00
	259	1,298.6	-165.2	2,027.00

RESULTS: SOUND LEVELS						B50911N1 - Honey Hill Ranch							
Eilar Associates, Inc.						7 October 2015							
JB						TNM 2.5							
						Calculated with TNM 2.5							
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		B50911N1 - Honey Hill Ranch											
RUN:		Calibration											
BARRIER DESIGN:		INPUT HEIGHTS				Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.							
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal dB	
Calibration	1	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: TRAFFIC FOR LAeq1h Volumes

B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.													
JB													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch												
RUN:	Current Contours												
Roadway	Points												
Name	Name	No.	Segment										
			Autos		MTrucks		HTrucks		Buses		Motorcycles		
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
I-8 EB	point1	1	829	70	44	55	69	55	0	0	0	0	
	point2	2	829	70	44	55	69	55	0	0	0	0	
	point3	3	829	70	44	55	69	55	0	0	0	0	
	point4	4	829	70	44	55	69	55	0	0	0	0	
	point5	5	829	70	44	55	69	55	0	0	0	0	
	point6	6	829	70	44	55	69	55	0	0	0	0	
	point7	7	829	70	44	55	69	55	0	0	0	0	
	point8	8	829	70	44	55	69	55	0	0	0	0	
	point9	9	829	70	44	55	69	55	0	0	0	0	
	point10	10	829	70	44	55	69	55	0	0	0	0	
	point11	11	829	70	44	55	69	55	0	0	0	0	
	point12	12	829	70	44	55	69	55	0	0	0	0	
	point13	13	829	70	44	55	69	55	0	0	0	0	
	point14	14	829	70	44	55	69	55	0	0	0	0	
	point15	15											
I-8 WB	point16	16	829	70	44	55	69	55	0	0	0	0	
	point17	17	829	70	44	55	69	55	0	0	0	0	
	point18	18	829	70	44	55	69	55	0	0	0	0	
	point19	19	829	70	44	55	69	55	0	0	0	0	
	point20	20	829	70	44	55	69	55	0	0	0	0	
	point21	21	829	70	44	55	69	55	0	0	0	0	
	point22	22	829	70	44	55	69	55	0	0	0	0	
	point23	23	829	70	44	55	69	55	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point24	24	829	70	44	55	69	55	0	0	0	0
	point25	25	829	70	44	55	69	55	0	0	0	0
	point26	26										
Alpine Blvd EB	point27	27	396	40	12	40	6	40	0	0	0	0
	point28	28	396	40	12	40	6	40	0	0	0	0
	point29	29	396	40	12	40	6	40	0	0	0	0
	point30	30	396	40	12	40	6	40	0	0	0	0
	point31	31	396	40	12	40	6	40	0	0	0	0
	point32	32	396	40	12	40	6	40	0	0	0	0
	point33	33	396	40	12	40	6	40	0	0	0	0
	point34	34	396	40	12	40	6	40	0	0	0	0
	point35	35	396	40	12	40	6	40	0	0	0	0
	point36	36	396	40	12	40	6	40	0	0	0	0
	point37	37	396	40	12	40	6	40	0	0	0	0
	point38	38										
Alpine Blvd WB	point39	39	396	40	12	40	6	40	0	0	0	0
	point40	40	396	40	12	40	6	40	0	0	0	0
	point41	41	396	40	12	40	6	40	0	0	0	0
	point42	42	396	40	12	40	6	40	0	0	0	0
	point43	43	396	40	12	40	6	40	0	0	0	0
	point44	44	396	40	12	40	6	40	0	0	0	0
	point45	45	396	40	12	40	6	40	0	0	0	0
	point46	46	396	40	12	40	6	40	0	0	0	0
	point47	47	396	40	12	40	6	40	0	0	0	0
	point48	48	396	40	12	40	6	40	0	0	0	0
	point49	49	396	40	12	40	6	40	0	0	0	0
	point50	50	396	40	12	40	6	40	0	0	0	0
	point51	51	396	40	12	40	6	40	0	0	0	0
	point52	52	396	40	12	40	6	40	0	0	0	0
	point53	53										
Honey Hill Ranch/ Suncrest Vista SB	point54	54	16	25	0	0	4	25	0	0	0	0
	point55	55	16	25	0	0	4	25	0	0	0	0
	point56	56	16	25	0	0	4	25	0	0	0	0
	point57	57	16	25	0	0	4	25	0	0	0	0
	point58	58	16	25	0	0	4	25	0	0	0	0
	point59	59	16	25	0	0	4	25	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point60	60	16	25	0	0	4	25	0	0	0	0
	point61	61	16	25	0	0	4	25	0	0	0	0
	point62	62	16	25	0	0	4	25	0	0	0	0
	point63	63	16	25	0	0	4	25	0	0	0	0
	point64	64	16	25	0	0	4	25	0	0	0	0
	point65	65	16	25	0	0	4	25	0	0	0	0
	point66	66	16	25	0	0	4	25	0	0	0	0
	point67	67	16	25	0	0	4	25	0	0	0	0
	point68	68	16	25	0	0	4	25	0	0	0	0
	point69	69	16	25	0	0	4	25	0	0	0	0
	point70	70										
Suncrest Vista NB/ Honey Hill Ranch	point71	71	16	25	0	0	0	0	0	0	0	0
	point72	72	16	25	0	0	0	0	0	0	0	0
	point73	73	16	25	0	0	0	0	0	0	0	0
	point74	74	16	25	0	0	0	0	0	0	0	0
	point75	75	16	25	0	0	0	0	0	0	0	0
	point76	76	16	25	0	0	0	0	0	0	0	0
	point77	77	16	25	0	0	0	0	0	0	0	0
	point78	78	16	25	0	0	0	0	0	0	0	0
	point79	79	16	25	0	0	0	0	0	0	0	0
	point80	80	16	25	0	0	0	0	0	0	0	0
	point81	81	16	25	0	0	0	0	0	0	0	0
	point82	82	16	25	0	0	0	0	0	0	0	0
	point83	83	16	25	0	0	0	0	0	0	0	0
	point84	84	16	25	0	0	0	0	0	0	0	0
	point85	85	16	25	0	0	0	0	0	0	0	0
	point86	86	16	25	0	0	0	0	0	0	0	0
	point87	87										
South Grade Road	point88	88	205	30	6	30	3	30	0	0	0	0
	point89	89	205	30	6	30	3	30	0	0	0	0
	point90	90	205	30	6	30	3	30	0	0	0	0
	point91	91	205	30	6	30	3	30	0	0	0	0
	point92	92	205	30	6	30	3	30	0	0	0	0
	point93	93										

**INPUT: RECEIVERS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.											
JB											
<b>INPUT: RECEIVERS</b>											
<b>PROJECT/CONTRACT:</b>	<b>B50911N1 - Honey Hill Ranch</b>										
<b>RUN:</b>	<b>Current Contours</b>										
<b>Receiver</b>											
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>
						<b>Ground</b>	<b>L_{Aeq}1h</b>	<b>L_{Aeq}1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>	
R1	1	1	-240.0	-224.0	2,060.00	5.00	0.00	66	10.0	8.0	Y
R2	3	1	-190.0	-204.0	2,061.00	5.00	0.00	66	10.0	8.0	Y
R3	4	1	-140.0	-184.0	2,061.00	5.00	0.00	66	10.0	8.0	Y
R4	5	1	-90.0	-164.0	2,062.00	5.00	0.00	66	10.0	8.0	Y
R5	6	1	-290.0	-250.0	2,060.00	5.00	0.00	66	10.0	8.0	Y
R6	7	1	-240.0	-250.0	2,058.00	5.00	0.00	66	10.0	8.0	Y
R7	8	1	-190.0	-250.0	2,058.00	5.00	0.00	66	10.0	8.0	Y
R8	9	1	-140.0	-250.0	2,062.00	5.00	0.00	66	10.0	8.0	Y
R9	10	1	-90.0	-250.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R10	11	1	-40.0	-250.0	2,076.00	5.00	0.00	66	10.0	8.0	Y
R11	12	1	10.0	-250.0	2,076.00	5.00	0.00	66	10.0	8.0	Y
R12	13	1	60.0	-250.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
R13	14	1	110.0	-250.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R14	15	1	160.0	-250.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R15	16	1	210.0	-250.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
R16	17	1	-290.0	-300.0	2,060.00	5.00	0.00	66	10.0	8.0	Y
R17	18	1	-240.0	-300.0	2,068.00	5.00	0.00	66	10.0	8.0	Y
R18	19	1	-190.0	-300.0	2,068.00	5.00	0.00	66	10.0	8.0	Y
R19	20	1	-140.0	-300.0	2,066.00	5.00	0.00	66	10.0	8.0	Y
R20	21	1	-90.0	-300.0	2,066.00	5.00	0.00	66	10.0	8.0	Y
R21	22	1	-40.0	-300.0	2,087.00	5.00	0.00	66	10.0	8.0	Y
R22	23	1	10.0	-300.0	2,100.00	5.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

R23	24	1	60.0	-300.0	2,106.00	5.00	0.00	66	10.0	8.0	Y
R24	25	1	110.0	-300.0	2,104.00	5.00	0.00	66	10.0	8.0	Y
R25	26	1	160.0	-300.0	2,098.00	5.00	0.00	66	10.0	8.0	Y
R26	27	1	210.0	-300.0	2,090.00	5.00	0.00	66	10.0	8.0	Y
R27	28	1	-290.0	-350.0	2,064.00	5.00	0.00	66	10.0	8.0	Y
R28	29	1	-240.0	-350.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R29	30	1	-190.0	-350.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R30	31	1	-140.0	-350.0	2,069.00	5.00	0.00	66	10.0	8.0	Y
R31	32	1	-90.0	-350.0	2,069.00	5.00	0.00	66	10.0	8.0	Y
R32	33	1	-40.0	-350.0	2,094.00	5.00	0.00	66	10.0	8.0	Y
R33	34	1	10.0	-350.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R34	35	1	60.0	-350.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R35	36	1	110.0	-350.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R36	37	1	160.0	-350.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R37	38	1	210.0	-350.0	2,100.00	5.00	0.00	66	10.0	8.0	Y
R38	39	1	-290.0	-400.0	2,066.00	5.00	0.00	66	10.0	8.0	Y
R39	40	1	-240.0	-400.0	2,075.60	5.00	0.00	66	10.0	8.0	Y
R40	41	1	-190.0	-400.0	2,075.60	5.00	0.00	66	10.0	8.0	Y
R41	42	1	-140.0	-400.0	2,072.00	5.00	0.00	66	10.0	8.0	Y
R42	43	1	-90.0	-400.0	2,076.00	5.00	0.00	66	10.0	8.0	Y
R43	44	1	-40.0	-400.0	2,093.00	5.00	0.00	66	10.0	8.0	Y
R44	45	1	10.0	-400.0	2,106.00	5.00	0.00	66	10.0	8.0	Y
R45	46	1	60.0	-400.0	2,106.00	5.00	0.00	66	10.0	8.0	Y
R46	47	1	110.0	-400.0	2,106.00	5.00	0.00	66	10.0	8.0	Y
R47	48	1	160.0	-400.0	2,107.00	5.00	0.00	66	10.0	8.0	Y
R48	49	1	210.0	-400.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R49	50	1	-290.0	-450.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
R50	51	1	-240.0	-450.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
R51	52	1	-190.0	-450.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
R52	53	1	-140.0	-450.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
R53	54	1	-90.0	-450.0	2,082.00	5.00	0.00	66	10.0	8.0	Y
R54	55	1	-40.0	-450.0	2,092.00	5.00	0.00	66	10.0	8.0	Y
R55	56	1	10.0	-450.0	2,104.00	5.00	0.00	66	10.0	8.0	Y
R56	57	1	60.0	-450.0	2,104.00	5.00	0.00	66	10.0	8.0	Y
R57	58	1	110.0	-450.0	2,102.00	5.00	0.00	66	10.0	8.0	Y
R58	59	1	160.0	-450.0	2,102.00	5.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

R59	60	1	210.0	-450.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R60	61	1	-290.0	-500.0	2,072.00	5.00	0.00	66	10.0	8.0	Y
R61	62	1	-240.0	-500.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
R62	63	1	-190.0	-500.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
R63	64	1	-140.0	-500.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R64	65	1	-90.0	-500.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
R65	66	1	-40.0	-500.0	2,090.00	5.00	0.00	66	10.0	8.0	Y
R66	67	1	10.0	-500.0	2,100.00	5.00	0.00	66	10.0	8.0	Y
R67	68	1	60.0	-500.0	2,100.00	5.00	0.00	66	10.0	8.0	Y
R68	69	1	110.0	-500.0	2,102.00	5.00	0.00	66	10.0	8.0	Y
R69	70	1	160.0	-500.0	2,102.00	5.00	0.00	66	10.0	8.0	Y
R70	71	1	210.0	-500.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
R71	72	1	-290.0	-550.0	2,074.00	5.00	0.00	66	10.0	8.0	Y
R72	73	1	-240.0	-550.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R73	74	1	-190.0	-550.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R74	75	1	-140.0	-550.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R75	76	1	-90.0	-550.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R76	77	1	-40.0	-550.0	2,088.00	5.00	0.00	66	10.0	8.0	Y
R77	78	1	10.0	-550.0	2,096.00	5.00	0.00	66	10.0	8.0	Y
R78	79	1	60.0	-550.0	2,094.00	5.00	0.00	66	10.0	8.0	Y
R79	80	1	110.0	-550.0	2,098.00	5.00	0.00	66	10.0	8.0	Y
R80	81	1	160.0	-550.0	2,099.00	5.00	0.00	66	10.0	8.0	Y
R81	82	1	210.0	-550.0	2,090.00	5.00	0.00	66	10.0	8.0	Y
R82	83	1	-290.0	-600.0	2,074.00	5.00	0.00	66	10.0	8.0	Y
R83	84	1	-240.0	-600.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R84	85	1	-190.0	-600.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
R85	86	1	-140.0	-600.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
R86	87	1	-90.0	-600.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R87	88	1	-40.0	-600.0	2,082.00	5.00	0.00	66	10.0	8.0	Y
R88	89	1	10.0	-600.0	2,085.00	5.00	0.00	66	10.0	8.0	Y
R89	90	1	60.0	-600.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
R90	91	1	110.0	-600.0	2,085.00	5.00	0.00	66	10.0	8.0	Y
R91	92	1	160.0	-600.0	2,085.00	5.00	0.00	66	10.0	8.0	Y
R92	93	1	210.0	-600.0	2,080.00	5.00	0.00	66	10.0	8.0	Y

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.												
JB												
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT: B50911N1 - Honey Hill Ranch												
RUN: Current Contours												
BARRIER DESIGN: INPUT HEIGHTS												
ATMOSPHERICS: 68 deg F, 50% RH												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	With Barrier				
								Type Impact	Calculated LAeq1h	Noise Reduction		
										Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
R1	1	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
R2	3	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
R3	4	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
R4	5	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
R5	6	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
R6	7	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
R7	8	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
R8	9	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
R9	10	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
R10	11	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
R11	12	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
R12	13	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
R13	14	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
R14	15	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
R15	16	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
R16	17	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
R17	18	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
R18	19	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0
R19	20	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
R20	21	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
R21	22	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
R22	23	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
R23	24	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
R24	25	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0

## RESULTS: SOUND LEVELS

## B50911N1 - Honey Hill Ranch

R25	26	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
R26	27	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
R27	28	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
R28	29	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
R29	30	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
R30	31	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
R31	32	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
R32	33	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
R33	34	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
R34	35	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
R35	36	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
R36	37	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
R37	38	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
R38	39	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
R39	40	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
R40	41	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
R41	42	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
R42	43	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
R43	44	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
R44	45	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R45	46	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R46	47	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R47	48	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
R48	49	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
R49	50	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
R50	51	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
R51	52	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
R52	53	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
R53	54	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
R54	55	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
R55	56	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
R56	57	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
R57	58	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
R58	59	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
R59	60	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
R60	61	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
R61	62	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
R62	63	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0
R63	64	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
R64	65	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
R65	66	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

R66	67	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
R67	68	1	0.0	59.6	66	59.6	10	----	59.6	0.0	8	-8.0
R68	69	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
R69	70	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
R70	71	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
R71	72	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
R72	73	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
R73	74	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
R74	75	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
R75	76	1	0.0	58.3	66	58.3	10	----	58.3	0.0	8	-8.0
R76	77	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
R77	78	1	0.0	54.8	66	54.8	10	----	54.8	0.0	8	-8.0
R78	79	1	0.0	47.4	66	47.4	10	----	47.4	0.0	8	-8.0
R79	80	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
R80	81	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0
R81	82	1	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
R82	83	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
R83	84	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
R84	85	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0
R85	86	1	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0
R86	87	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0
R87	88	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
R88	89	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
R89	90	1	0.0	38.6	66	38.6	10	----	38.6	0.0	8	-8.0
R90	91	1	0.0	40.7	66	40.7	10	----	40.7	0.0	8	-8.0
R91	92	1	0.0	41.8	66	41.8	10	----	41.8	0.0	8	-8.0
R92	93	1	0.0	42.9	66	42.9	10	----	42.9	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		92	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.													
JB													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch												
RUN:	Future Contours												
Roadway	Points												
Name	Name	No.	Segment										
			Autos		MTrucks		HTrucks		Buses		Motorcycles		
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
I-8 EB	point1	1	1679	70	90	55	139	55	0	0	0	0	
	point2	2	1679	70	90	55	139	55	0	0	0	0	
	point3	3	1679	70	90	55	139	55	0	0	0	0	
	point4	4	1679	70	90	55	139	55	0	0	0	0	
	point5	5	1679	70	90	55	139	55	0	0	0	0	
	point6	6	1679	70	90	55	139	55	0	0	0	0	
	point7	7	1679	70	90	55	139	55	0	0	0	0	
	point8	8	1679	70	90	55	139	55	0	0	0	0	
	point9	9	1679	70	90	55	139	55	0	0	0	0	
	point10	10	1679	70	90	55	139	55	0	0	0	0	
	point11	11	1679	70	90	55	139	55	0	0	0	0	
	point12	12	1679	70	90	55	139	55	0	0	0	0	
	point13	13	1679	70	90	55	139	55	0	0	0	0	
	point14	14	1679	70	90	55	139	55	0	0	0	0	
	point15	15											
I-8 WB	point16	16	1812	70	97	55	150	55	0	0	0	0	
	point17	17	1812	70	97	55	150	55	0	0	0	0	
	point18	18	1812	70	97	55	150	55	0	0	0	0	
	point19	19	1812	70	97	55	150	55	0	0	0	0	
	point20	20	1812	70	97	55	150	55	0	0	0	0	
	point21	21	1812	70	97	55	150	55	0	0	0	0	
	point22	22	1812	70	97	55	150	55	0	0	0	0	
	point23	23	1812	70	97	55	150	55	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point24	24	1812	70	97	55	150	55	0	0	0	0
	point25	25	1812	70	97	55	150	55	0	0	0	0
	point26	26										
Alpine Blvd EB	point27	27	222	45	7	45	3	45	0	0	0	0
	point28	28	222	45	7	45	3	45	0	0	0	0
	point29	29	222	45	7	45	3	45	0	0	0	0
	point30	30	222	45	7	45	3	45	0	0	0	0
	point31	31	222	45	7	45	3	45	0	0	0	0
	point32	32	222	45	7	45	3	45	0	0	0	0
	point33	33	222	45	7	45	3	45	0	0	0	0
	point34	34	222	45	7	45	3	45	0	0	0	0
	point35	35	222	45	7	45	3	45	0	0	0	0
	point36	36	222	45	7	45	3	45	0	0	0	0
	point37	37	222	45	7	45	3	45	0	0	0	0
	point38	38										
Alpine Blvd WB	point39	39	222	45	7	45	3	45	0	0	0	0
	point40	40	222	45	7	45	3	45	0	0	0	0
	point41	41	222	45	7	45	3	45	0	0	0	0
	point42	42	222	45	7	45	3	45	0	0	0	0
	point43	43	222	45	7	45	3	45	0	0	0	0
	point44	44	222	45	7	45	3	45	0	0	0	0
	point45	45	222	45	7	45	3	45	0	0	0	0
	point46	46	222	45	7	45	3	45	0	0	0	0
	point47	47	222	45	7	45	3	45	0	0	0	0
	point48	48	222	45	7	45	3	45	0	0	0	0
	point49	49	222	45	7	45	3	45	0	0	0	0
	point50	50	222	45	7	45	3	45	0	0	0	0
	point51	51	222	45	7	45	3	45	0	0	0	0
	point52	52	222	45	7	45	3	45	0	0	0	0
	point53	53										
Honey Hill Ranch/ Suncrest Vista SB	point54	54	16	25	0	0	4	25	0	0	0	0
	point55	55	16	25	0	0	4	25	0	0	0	0
	point56	56	16	25	0	0	4	25	0	0	0	0
	point57	57	16	25	0	0	4	25	0	0	0	0
	point58	58	16	25	0	0	4	25	0	0	0	0
	point59	59	16	25	0	0	4	25	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point60	60	16	25	0	0	4	25	0	0	0	0
	point61	61	16	25	0	0	4	25	0	0	0	0
	point62	62	16	25	0	0	4	25	0	0	0	0
	point63	63	16	25	0	0	4	25	0	0	0	0
	point64	64	16	25	0	0	4	25	0	0	0	0
	point65	65	16	25	0	0	4	25	0	0	0	0
	point66	66	16	25	0	0	4	25	0	0	0	0
	point67	67	16	25	0	0	4	25	0	0	0	0
	point68	68	16	25	0	0	4	25	0	0	0	0
	point69	69	16	25	0	0	4	25	0	0	0	0
	point70	70										
Suncrest Vista NB/ Honey Hill Ranch	point71	71	16	25	0	0	0	0	0	0	0	0
	point72	72	16	25	0	0	0	0	0	0	0	0
	point73	73	16	25	0	0	0	0	0	0	0	0
	point74	74	16	25	0	0	0	0	0	0	0	0
	point75	75	16	25	0	0	0	0	0	0	0	0
	point76	76	16	25	0	0	0	0	0	0	0	0
	point77	77	16	25	0	0	0	0	0	0	0	0
	point78	78	16	25	0	0	0	0	0	0	0	0
	point79	79	16	25	0	0	0	0	0	0	0	0
	point80	80	16	25	0	0	0	0	0	0	0	0
	point81	81	16	25	0	0	0	0	0	0	0	0
	point82	82	16	25	0	0	0	0	0	0	0	0
	point83	83	16	25	0	0	0	0	0	0	0	0
	point84	84	16	25	0	0	0	0	0	0	0	0
	point85	85	16	25	0	0	0	0	0	0	0	0
	point86	86	16	25	0	0	0	0	0	0	0	0
	point87	87										
South Grade Road	point88	88	282	45	9	45	4	45	0	0	0	0
	point89	89	282	45	9	45	4	45	0	0	0	0
	point90	90	282	45	9	45	4	45	0	0	0	0
	point91	91	282	45	9	45	4	45	0	0	0	0
	point92	92	282	45	9	45	4	45	0	0	0	0
	point93	93										

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.												
JB												
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT: B50911N1 - Honey Hill Ranch												
RUN: Future Contours												
BARRIER DESIGN: INPUT HEIGHTS												
ATMOSPHERICS: 68 deg F, 50% RH												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	With Barrier				
								Type Impact	Calculated LAeq1h	Noise Reduction		
										Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
R1	1	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
R2	3	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
R3	4	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
R4	5	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
R5	6	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
R6	7	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
R7	8	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0
R8	9	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
R9	10	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
R10	11	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
R11	12	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0
R12	13	1	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0
R13	14	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R14	15	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
R15	16	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
R16	17	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
R17	18	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
R18	19	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
R19	20	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
R20	21	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
R21	22	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
R22	23	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
R23	24	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
R24	25	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0

## RESULTS: SOUND LEVELS

## B50911N1 - Honey Hill Ranch

R25	26	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
R26	27	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
R27	28	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
R28	29	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
R29	30	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
R30	31	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
R31	32	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R32	33	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
R33	34	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
R34	35	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
R35	36	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
R36	37	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
R37	38	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
R38	39	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
R39	40	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
R40	41	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
R41	42	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R42	43	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
R43	44	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R44	45	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
R45	46	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
R46	47	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
R47	48	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
R48	49	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
R49	50	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
R50	51	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
R51	52	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
R52	53	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R53	54	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
R54	55	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
R55	56	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
R56	57	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
R57	58	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
R58	59	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
R59	60	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
R60	61	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
R61	62	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
R62	63	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
R63	64	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
R64	65	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
R65	66	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

R66	67	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
R67	68	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
R68	69	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
R69	70	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
R70	71	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
R71	72	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
R72	73	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
R73	74	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
R74	75	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
R75	76	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
R76	77	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
R77	78	1	0.0	58.0	66	58.0	10	----	58.0	0.0	8	-8.0
R78	79	1	0.0	50.3	66	50.3	10	----	50.3	0.0	8	-8.0
R79	80	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
R80	81	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
R81	82	1	0.0	45.8	66	45.8	10	----	45.8	0.0	8	-8.0
R82	83	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
R83	84	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
R84	85	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
R85	86	1	0.0	61.2	66	61.2	10	----	61.2	0.0	8	-8.0
R86	87	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
R87	88	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
R88	89	1	0.0	55.3	66	55.3	10	----	55.3	0.0	8	-8.0
R89	90	1	0.0	39.7	66	39.7	10	----	39.7	0.0	8	-8.0
R90	91	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0
R91	92	1	0.0	44.2	66	44.2	10	----	44.2	0.0	8	-8.0
R92	93	1	0.0	45.6	66	45.6	10	----	45.6	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		92	0.0	0.0	0.0							
All Impacted		29	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

INPUT: TRAFFIC FOR LAeq1h Volumes

B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.													
JB													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch												
RUN:	Worst-Case OUA												
Roadway	Points												
Name	Name	No.	Segment										
			Autos		MTrucks		HTrucks		Buses		Motorcycles		
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
I-8 EB	point1	1	1679	70	90	55	139	55	0	0	0	0	
	point2	2	1679	70	90	55	139	55	0	0	0	0	
	point3	3	1679	70	90	55	139	55	0	0	0	0	
	point4	4	1679	70	90	55	139	55	0	0	0	0	
	point5	5	1679	70	90	55	139	55	0	0	0	0	
	point6	6	1679	70	90	55	139	55	0	0	0	0	
	point7	7	1679	70	90	55	139	55	0	0	0	0	
	point8	8	1679	70	90	55	139	55	0	0	0	0	
	point9	9	1679	70	90	55	139	55	0	0	0	0	
	point10	10	1679	70	90	55	139	55	0	0	0	0	
	point11	11	1679	70	90	55	139	55	0	0	0	0	
	point12	12	1679	70	90	55	139	55	0	0	0	0	
	point13	13	1679	70	90	55	139	55	0	0	0	0	
	point14	14	1679	70	90	55	139	55	0	0	0	0	
	point15	15											
I-8 WB	point16	16	1812	70	97	55	150	55	0	0	0	0	
	point17	17	1812	70	97	55	150	55	0	0	0	0	
	point18	18	1812	70	97	55	150	55	0	0	0	0	
	point19	19	1812	70	97	55	150	55	0	0	0	0	
	point20	20	1812	70	97	55	150	55	0	0	0	0	
	point21	21	1812	70	97	55	150	55	0	0	0	0	
	point22	22	1812	70	97	55	150	55	0	0	0	0	
	point23	23	1812	70	97	55	150	55	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point24	24	1812	70	97	55	150	55	0	0	0	0
	point25	25	1812	70	97	55	150	55	0	0	0	0
	point26	26										
Alpine Blvd EB	point27	27	396	40	12	40	6	40	0	0	0	0
	point28	28	396	40	12	40	6	40	0	0	0	0
	point29	29	396	40	12	40	6	40	0	0	0	0
	point30	30	396	40	12	40	6	40	0	0	0	0
	point31	31	396	40	12	40	6	40	0	0	0	0
	point32	32	396	40	12	40	6	40	0	0	0	0
	point33	33	396	40	12	40	6	40	0	0	0	0
	point34	34	396	40	12	40	6	40	0	0	0	0
	point35	35	396	40	12	40	6	40	0	0	0	0
	point36	36	396	40	12	40	6	40	0	0	0	0
	point37	37	396	40	12	40	6	40	0	0	0	0
	point38	38										
Alpine Blvd WB	point39	39	396	40	12	40	6	40	0	0	0	0
	point40	40	396	40	12	40	6	40	0	0	0	0
	point41	41	396	40	12	40	6	40	0	0	0	0
	point42	42	396	40	12	40	6	40	0	0	0	0
	point43	43	396	40	12	40	6	40	0	0	0	0
	point44	44	396	40	12	40	6	40	0	0	0	0
	point45	45	396	40	12	40	6	40	0	0	0	0
	point46	46	396	40	12	40	6	40	0	0	0	0
	point47	47	396	40	12	40	6	40	0	0	0	0
	point48	48	396	40	12	40	6	40	0	0	0	0
	point49	49	396	40	12	40	6	40	0	0	0	0
	point50	50	396	40	12	40	6	40	0	0	0	0
	point51	51	396	40	12	40	6	40	0	0	0	0
	point52	52	396	40	12	40	6	40	0	0	0	0
	point53	53										
Honey Hill Ranch/ Suncrest Vista SB	point54	54	16	25	0	0	4	25	0	0	0	0
	point55	55	16	25	0	0	4	25	0	0	0	0
	point56	56	16	25	0	0	4	25	0	0	0	0
	point57	57	16	25	0	0	4	25	0	0	0	0
	point58	58	16	25	0	0	4	25	0	0	0	0
	point59	59	16	25	0	0	4	25	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**
**B50911N1 - Honey Hill Ranch**

	point60	60	16	25	0	0	0	0	0	0	0	0
	point61	61	16	25	0	0	0	0	0	0	0	0
	point62	62	16	25	0	0	0	0	0	0	0	0
	point63	63	16	25	0	0	0	0	0	0	0	0
	point64	64	16	25	0	0	0	0	0	0	0	0
	point65	65	16	25	0	0	0	0	0	0	0	0
	point66	66	16	25	0	0	0	0	0	0	0	0
	point67	67	16	25	0	0	0	0	0	0	0	0
	point68	68	16	25	0	0	0	0	0	0	0	0
	point69	69	16	25	0	0	0	0	0	0	0	0
	point70	70										
Suncrest Vista NB/ Honey Hill Ranch	point71	71	16	25	0	0	0	0	0	0	0	0
	point72	72	16	25	0	0	0	0	0	0	0	0
	point73	73	16	25	0	0	0	0	0	0	0	0
	point74	74	16	25	0	0	0	0	0	0	0	0
	point75	75	16	25	0	0	0	0	0	0	0	0
	point76	76	16	25	0	0	0	0	0	0	0	0
	point77	77	16	25	0	0	0	0	0	0	0	0
	point78	78	16	25	0	0	0	0	0	0	0	0
	point79	79	16	25	0	0	0	0	0	0	0	0
	point80	80	16	25	0	0	0	0	0	0	0	0
	point81	81	16	25	0	0	0	0	0	0	0	0
	point82	82	16	25	0	0	0	0	0	0	0	0
	point83	83	16	25	0	0	0	0	0	0	0	0
	point84	84	16	25	0	0	0	0	0	0	0	0
	point85	85	16	25	0	0	0	0	0	0	0	0
	point86	86	16	25	0	0	0	0	0	0	0	0
	point87	87										
South Grade Road	point88	88	282	45	9	45	4	45	0	0	0	0
	point89	89	282	45	9	45	4	45	0	0	0	0
	point90	90	282	45	9	45	4	45	0	0	0	0
	point91	91	282	45	9	45	4	45	0	0	0	0
	point92	92	282	45	9	45	4	45	0	0	0	0
	point93	93										

**INPUT: RECEIVERS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.											
JB											
<b>INPUT: RECEIVERS</b>											
<b>PROJECT/CONTRACT:</b>	<b>B50911N1 - Honey Hill Ranch</b>										
<b>RUN:</b>	<b>Worst-Case OUA</b>										
<b>Receiver</b>											
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>
						<b>Ground</b>	<b>L_{Aeq}1h</b>	<b>L_{Aeq}1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>
			<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>ft</b>	<b>dBA</b>	<b>dBA</b>	<b>dB</b>	<b>dB</b>	
OUA1	1	1	-257.0	-305.0	2,068.00	5.00	0.00	66	10.0	8.0	Y
OUA2	3	1	-258.0	-361.0	2,070.00	5.00	0.00	66	10.0	8.0	Y
OUA3	4	1	-259.0	-414.0	2,075.60	5.00	0.00	66	10.0	8.0	Y
OUA4	5	1	-260.0	-470.0	2,078.00	5.00	0.00	66	10.0	8.0	Y
OUA5	6	1	-261.0	-520.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
OUA6	7	1	-66.0	-287.0	2,066.00	5.00	0.00	66	10.0	8.0	Y
OUA7	8	1	-75.0	-340.0	2,069.00	5.00	0.00	66	10.0	8.0	Y
OUA8	9	1	-64.0	-465.0	2,080.00	5.00	0.00	66	10.0	8.0	Y
OUA9	10	1	-60.0	-520.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
OUA10	11	1	-5.0	-342.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
OUA11	12	1	-5.0	-398.0	2,106.00	5.00	0.00	66	10.0	8.0	Y
OUA12	13	1	-6.0	-458.0	2,104.00	5.00	0.00	66	10.0	8.0	Y
OUA13	14	1	-8.0	-508.0	2,100.00	5.00	0.00	66	10.0	8.0	Y
OUA14	15	1	187.0	-344.0	2,108.00	5.00	0.00	66	10.0	8.0	Y
OUA15	16	1	186.0	-408.0	2,107.00	5.00	0.00	66	10.0	8.0	Y
OUA16	17	1	186.0	-490.0	2,102.00	5.00	0.00	66	10.0	8.0	Y
OUA17	18	1	182.0	-544.0	2,099.00	5.00	0.00	66	10.0	8.0	Y

## INPUT: BARRIERS

## B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.																				
JB																				
INPUT: BARRIERS																				
PROJECT/CONTRACT:																				
RUN:																				
Barrier																				
Name	Type	Height		If Wall	If Berm			Add'tnl	Points											
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per	Name	No.	Coordinates (bottom)		Height	Segment						
				Unit	Unit	Width		Unit			X	Y	Z	at	Seg Ht	Perturbs	On	Important		
				Area	Vol.			Length						Point	Incre-	#Up	#Dn	Struct?	Reflec-	
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				tions?	
Commercial Building	W	0.00	99.99	0.00				0.00	point1	1	-411.3	-139.6	2,054.00	20.00	0.00	0	0			
									point2	2	-270.4	-79.3	2,054.00	20.00	0.00	0	0			
									point3	3	-238.6	-147.0	2,054.00	20.00	0.00	0	0			
									point4	4	-384.6	-204.5	2,054.00	20.00	0.00	0	0			
									point5	5	-411.3	-139.6	2,054.00	20.00	0.00	0	0			
Lot 1	W	0.00	99.99	0.00				0.00	point20	20	-194.9	-289.6	2,068.00	12.00	0.00	0	0			
									point21	21	-245.5	-289.9	2,068.00	12.00	0.00	0	0			
									point22	22	-245.6	-309.5	2,068.00	12.00	0.00	0	0			
									point23	23	-251.0	-309.8	2,068.00	12.00	0.00	0	0			
									point24	24	-250.6	-326.4	2,068.00	12.00	0.00	0	0			
									point25	25	-215.4	-326.8	2,068.00	12.00	0.00	0	0			
									point26	26	-215.7	-328.9	2,068.00	12.00	0.00	0	0			
									point27	27	-192.6	-329.2	2,068.00	12.00	0.00	0	0			
									point28	28	-192.3	-309.9	2,068.00	12.00	0.00	0	0			
									point29	29	-200.8	-309.6	2,068.00	12.00	0.00	0	0			
									point30	30	-200.9	-301.6	2,068.00	12.00	0.00	0	0			
									point31	31	-195.1	-301.5	2,068.00	12.00	0.00	0	0			
									point32	32	-194.9	-289.6	2,068.00	12.00	0.00	0	0			
Lot 2	W	0.00	99.99	0.00				0.00	point33	33	-194.8	-342.7	2,070.00	12.00	0.00	0	0			
									point34	34	-217.4	-342.9	2,070.00	12.00	0.00	0	0			
									point35	35	-218.0	-345.3	2,070.00	12.00	0.00	0	0			
									point36	36	-252.8	-345.6	2,070.00	12.00	0.00	0	0			
									point37	37	-252.6	-362.5	2,070.00	12.00	0.00	0	0			
									point38	38	-247.4	-363.2	2,070.00	12.00	0.00	0	0			
									point39	39	-247.6	-382.5	2,070.00	12.00	0.00	0	0			
									point40	40	-196.5	-382.1	2,070.00	12.00	0.00	0	0			
									point41	41	-196.3	-371.4	2,070.00	12.00	0.00	0	0			
									point42	42	-202.8	-371.4	2,070.00	12.00	0.00	0	0			
									point43	43	-202.8	-362.8	2,070.00	12.00	0.00	0	0			
									point44	44	-194.3	-362.5	2,070.00	12.00	0.00	0	0			
									point45	45	-194.8	-342.7	2,070.00	12.00	0.00	0	0			
Lot 3	W	0.00	99.99	0.00				0.00	point46	46	-194.7	-394.9	2,075.60	12.00	0.00	0	0			
									point47	47	-245.0	-394.9	2,075.60	12.00	0.00	0	0			
									point48	48	-245.4	-413.5	2,075.60	12.00	0.00	0	0			
									point49	49	-251.1	-413.5	2,075.60	12.00	0.00	0	0			

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point50	50	-250.3	-431.1	2,075.60	12.00	0.00	0	0		
									point51	51	-215.4	-430.2	2,075.60	12.00	0.00	0	0		
									point52	52	-215.6	-434.5	2,075.60	12.00	0.00	0	0		
									point53	53	-192.1	-434.1	2,075.60	12.00	0.00	0	0		
									point54	54	-192.6	-414.3	2,075.60	12.00	0.00	0	0		
									point55	55	-200.4	-414.5	2,075.60	12.00	0.00	0	0		
									point56	56	-200.9	-406.5	2,075.60	12.00	0.00	0	0		
									point57	57	-194.7	-406.5	2,075.60	12.00	0.00	0	0		
									point58	58	-194.7	-394.9	2,075.60	12.00					
Lot 4	W	0.00	99.99	0.00				0.00	point59	59	-194.6	-446.8	2,078.00	12.00	0.00	0	0		
									point60	60	-218.2	-446.4	2,078.00	12.00	0.00	0	0		
									point61	61	-218.6	-449.9	2,078.00	12.00	0.00	0	0		
									point62	62	-253.2	-449.8	2,078.00	12.00	0.00	0	0		
									point63	63	-253.8	-467.3	2,078.00	12.00	0.00	0	0		
									point64	64	-248.2	-467.7	2,078.00	12.00	0.00	0	0		
									point65	65	-248.1	-486.9	2,078.00	12.00	0.00	0	0		
									point66	66	-197.5	-486.3	2,078.00	12.00	0.00	0	0		
									point67	67	-198.0	-475.1	2,078.00	12.00	0.00	0	0		
									point68	68	-203.4	-475.2	2,078.00	12.00	0.00	0	0		
									point69	69	-203.7	-467.3	2,078.00	12.00	0.00	0	0		
									point70	70	-195.5	-467.3	2,078.00	12.00	0.00	0	0		
									point71	71	-194.6	-446.8	2,078.00	12.00					
Lot 5	W	0.00	99.99	0.00				0.00	point84	84	-200.8	-500.7	2,081.00	12.00	0.00	0	0		
									point85	85	-252.3	-500.8	2,081.00	12.00	0.00	0	0		
									point86	86	-251.7	-519.6	2,081.00	12.00	0.00	0	0		
									point87	87	-249.4	-520.1	2,081.00	12.00	0.00	0	0		
									point88	88	-249.5	-526.9	2,081.00	12.00	0.00	0	0		
									point89	89	-252.1	-527.3	2,081.00	12.00	0.00	0	0		
									point90	90	-251.7	-541.1	2,081.00	12.00	0.00	0	0		
									point91	91	-211.4	-540.9	2,081.00	12.00	0.00	0	0		
									point92	92	-211.9	-533.0	2,081.00	12.00	0.00	0	0		
									point93	93	-203.6	-533.0	2,081.00	12.00	0.00	0	0		
									point94	94	-204.2	-520.6	2,081.00	12.00	0.00	0	0		
									point95	95	-200.5	-520.7	2,081.00	12.00	0.00	0	0		
									point96	96	-200.8	-500.7	2,081.00	12.00					
Lot 6	W	0.00	99.99	0.00				0.00	point97	97	-71.9	-265.9	2,066.00	12.00	0.00	0	0		
									point98	98	-112.4	-265.6	2,066.00	12.00	0.00	0	0		
									point99	99	-112.1	-274.1	2,066.00	12.00	0.00	0	0		
									point100	100	-120.1	-274.7	2,066.00	12.00	0.00	0	0		
									point101	101	-120.6	-306.1	2,066.00	12.00	0.00	0	0		
									point102	102	-72.4	-306.7	2,066.00	12.00	0.00	0	0		
									point103	103	-71.9	-265.9	2,066.00	12.00					
Lot 7	W	0.00	99.99	0.00				0.00	point104	104	-82.0	-319.2	2,069.00	12.00	0.00	0	0		
									point105	105	-113.4	-320.5	2,069.00	12.00	0.00	0	0		
									point106	106	-114.2	-346.4	2,069.00	12.00	0.00	0	0		
									point107	107	-122.2	-350.3	2,069.00	12.00	0.00	0	0		
									point108	108	-121.4	-371.1	2,069.00	12.00	0.00	0	0		
									point109	109	-81.5	-371.4	2,069.00	12.00	0.00	0	0		
									point110	110	-82.0	-319.2	2,069.00	12.00					

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

Lot 8	W	0.00	99.99	0.00				0.00	point111	111	-73.0	-457.9	2,080.00	12.00	0.00	0	0		
									point112	112	-72.7	-444.1	2,080.00	12.00	0.00	0	0		
									point113	113	-113.1	-444.2	2,080.00	12.00	0.00	0	0		
									point114	114	-113.2	-452.8	2,080.00	12.00	0.00	0	0		
									point115	115	-120.6	-452.4	2,080.00	12.00	0.00	0	0		
									point116	116	-121.4	-465.1	2,080.00	12.00	0.00	0	0		
									point117	117	-123.9	-465.1	2,080.00	12.00	0.00	0	0		
									point118	118	-123.9	-485.4	2,080.00	12.00	0.00	0	0		
									point119	119	-73.0	-485.6	2,080.00	12.00	0.00	0	0		
									point120	120	-73.8	-465.4	2,080.00	12.00	0.00	0	0		
									point121	121	-76.7	-465.1	2,080.00	12.00	0.00	0	0		
									point122	122	-75.9	-458.5	2,080.00	12.00	0.00	0	0		
									point123	123	-73.0	-457.9	2,080.00	12.00					
Lot 9	W	0.00	99.99	0.00				0.00	point124	124	-100.7	-496.9	2,081.20	12.00	0.00	0	0		
									point125	125	-123.8	-497.3	2,081.20	12.00	0.00	0	0		
									point126	126	-122.9	-517.1	2,081.20	12.00	0.00	0	0		
									point127	127	-116.0	-517.1	2,081.20	12.00	0.00	0	0		
									point128	128	-115.8	-525.5	2,081.20	12.00	0.00	0	0		
									point129	129	-122.0	-524.6	2,081.20	12.00	0.00	0	0		
									point130	130	-122.3	-535.7	2,081.20	12.00	0.00	0	0		
									point131	131	-70.5	-536.4	2,081.20	12.00	0.00	0	0		
									point132	132	-70.7	-516.6	2,081.20	12.00	0.00	0	0		
									point133	133	-65.6	-517.1	2,081.20	12.00	0.00	0	0		
									point134	134	-66.1	-500.2	2,081.20	12.00	0.00	0	0		
									point135	135	-100.9	-499.8	2,081.20	12.00	0.00	0	0		
									point136	136	-100.7	-496.9	2,081.20	12.00					
Lot 10	W	0.00	99.99	0.00				0.00	point137	137	42.5	-321.1	2,108.00	12.00	0.00	0	0		
									point138	138	1.9	-320.8	2,108.00	12.00	0.00	0	0		
									point139	139	1.8	-372.1	2,108.00	12.00	0.00	0	0		
									point140	140	35.1	-372.3	2,108.00	12.00	0.00	0	0		
									point141	141	35.1	-345.2	2,108.00	12.00	0.00	0	0		
									point142	142	39.5	-341.0	2,108.00	12.00	0.00	0	0		
									point143	143	42.8	-341.2	2,108.00	12.00	0.00	0	0		
									point144	144	42.5	-321.1	2,108.00	12.00					
Lot 11	W	0.00	99.99	0.00				0.00	point145	145	47.6	-399.2	2,106.00	12.00	0.00	0	0		
									point146	146	47.9	-387.3	2,106.00	12.00	0.00	0	0		
									point147	147	5.2	-387.1	2,106.00	12.00	0.00	0	0		
									point148	148	5.3	-424.7	2,106.00	12.00	0.00	0	0		
									point149	149	32.5	-424.1	2,106.00	12.00	0.00	0	0		
									point150	150	32.5	-426.8	2,106.00	12.00	0.00	0	0		
									point151	151	55.0	-427.1	2,106.00	12.00	0.00	0	0		
									point152	152	55.8	-406.8	2,106.00	12.00	0.00	0	0		
									point153	153	45.9	-407.1	2,106.00	12.00	0.00	0	0		
									point154	154	45.8	-399.0	2,106.00	12.00	0.00	0	0		
									point155	155	47.6	-399.2	2,106.00	12.00					
Lot 12	W	0.00	99.99	0.00				0.00	point156	156	35.4	-440.2	2,104.00	12.00	0.00	0	0		
									point157	157	-0.4	-440.2	2,104.00	12.00	0.00	0	0		
									point158	158	-0.4	-456.8	2,104.00	12.00	0.00	0	0		
									point159	159	4.7	-456.8	2,104.00	12.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point160	160	4.9	-475.7	2,104.00	12.00	0.00	0	0		
									point161	161	56.9	-476.4	2,104.00	12.00	0.00	0	0		
									point162	162	56.2	-465.3	2,104.00	12.00	0.00	0	0		
									point163	163	49.6	-465.7	2,104.00	12.00	0.00	0	0		
									point164	164	50.2	-456.8	2,104.00	12.00	0.00	0	0		
									point165	165	57.8	-456.6	2,104.00	12.00	0.00	0	0		
									point166	166	58.7	-437.3	2,104.00	12.00	0.00	0	0		
									point167	167	35.4	-437.3	2,104.00	12.00	0.00	0	0		
									point168	168	35.4	-440.2	2,104.00	12.00					
Lot 13	W	0.00	99.99	0.00				0.00	point169	169	50.0	-490.1	2,100.00	12.00	0.00	0	0		
									point170	170	-1.1	-490.4	2,100.00	12.00	0.00	0	0		
									point171	171	-0.6	-510.1	2,100.00	12.00	0.00	0	0		
									point172	172	1.8	-509.7	2,100.00	12.00	0.00	0	0		
									point173	173	2.3	-517.7	2,100.00	12.00	0.00	0	0		
									point174	174	-2.4	-517.2	2,100.00	12.00	0.00	0	0		
									point175	175	-1.5	-531.4	2,100.00	12.00	0.00	0	0		
									point176	176	38.9	-530.6	2,100.00	12.00	0.00	0	0		
									point177	177	39.1	-523.5	2,100.00	12.00	0.00	0	0		
									point178	178	47.1	-523.5	2,100.00	12.00	0.00	0	0		
									point179	179	46.7	-510.6	2,100.00	12.00	0.00	0	0		
									point180	180	50.2	-510.4	2,100.00	12.00	0.00	0	0		
									point181	181	50.0	-490.1	2,100.00	12.00					
Lot 14	W	0.00	99.99	0.00				0.00	point182	182	177.0	-325.0	2,108.00	12.00	0.00	0	0		
									point183	183	136.8	-324.8	2,108.00	12.00	0.00	0	0		
									point184	184	136.0	-345.0	2,108.00	12.00	0.00	0	0		
									point185	185	140.2	-345.6	2,108.00	12.00	0.00	0	0		
									point186	186	143.4	-349.3	2,108.00	12.00	0.00	0	0		
									point187	187	143.7	-376.2	2,108.00	12.00	0.00	0	0		
									point188	188	177.0	-375.7	2,108.00	12.00	0.00	0	0		
									point189	189	177.0	-325.0	2,108.00	12.00					
Lot 15	W	0.00	99.99	0.00				0.00	point190	190	174.6	-393.0	2,107.00	12.00	0.00	0	0		
									point191	191	134.1	-392.7	2,107.00	12.00	0.00	0	0		
									point192	192	134.6	-412.7	2,107.00	12.00	0.00	0	0		
									point193	193	125.1	-413.5	2,107.00	12.00	0.00	0	0		
									point194	194	125.6	-433.5	2,107.00	12.00	0.00	0	0		
									point195	195	148.0	-434.3	2,107.00	12.00	0.00	0	0		
									point196	196	147.4	-430.0	2,107.00	12.00	0.00	0	0		
									point197	197	175.1	-430.3	2,107.00	12.00	0.00	0	0		
									point198	198	174.6	-393.0	2,107.00	12.00					
Lot 16	W	0.00	99.99	0.00				0.00	point199	199	171.9	-466.3	2,102.00	12.00	0.00	0	0		
									point200	200	131.2	-466.3	2,102.00	12.00	0.00	0	0		
									point201	201	131.0	-486.9	2,102.00	12.00	0.00	0	0		
									point202	202	135.0	-486.9	2,102.00	12.00	0.00	0	0		
									point203	203	139.3	-491.2	2,102.00	12.00	0.00	0	0		
									point204	204	139.6	-517.4	2,102.00	12.00	0.00	0	0		
									point205	205	172.0	-517.4	2,102.00	12.00	0.00	0	0		
									point206	206	171.9	-466.3	2,102.00	12.00					
Lot 17	W	0.00	99.99	0.00				0.00	point207	207	138.0	-527.8	2,099.00	12.00	0.00	0	0		
									point208	208	114.4	-528.0	2,099.00	12.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point209	209	114.2	-547.1	2,099.00	12.00	0.00	0	0		
									point210	210	123.5	-548.2	2,099.00	12.00	0.00	0	0		
									point211	211	124.0	-556.0	2,099.00	12.00	0.00	0	0		
									point212	212	117.3	-556.4	2,099.00	12.00	0.00	0	0		
									point213	213	116.7	-566.9	2,099.00	12.00	0.00	0	0		
									point214	214	167.9	-567.8	2,099.00	12.00	0.00	0	0		
									point215	215	169.1	-547.8	2,099.00	12.00	0.00	0	0		
									point216	216	173.7	-548.0	2,099.00	12.00	0.00	0	0		
									point217	217	173.3	-530.2	2,099.00	12.00	0.00	0	0		
									point218	218	138.6	-530.9	2,099.00	12.00	0.00	0	0		
									point219	219	138.0	-527.8	2,099.00	12.00					
Commercial Building 2	W	0.00	99.99	0.00				0.00	point220	220	135.7	-126.1	2,064.00	15.00	0.00	0	0		
									point221	221	180.3	-133.7	2,064.00	15.00	0.00	0	0		
									point222	222	167.6	-209.2	2,064.00	15.00	0.00	2	0		
									point223	223	118.7	-199.2	2,064.00	15.00	0.00	0	0		
									point224	224	120.8	-186.1	2,064.00	15.00	0.00	0	0		
									point225	225	130.4	-188.1	2,064.00	15.00	0.00	0	0		
									point226	226	136.3	-153.7	2,064.00	15.00	0.00	0	0		
									point227	227	130.4	-152.2	2,064.00	15.00	0.00	0	0		
									point228	228	135.7	-126.1	2,064.00	15.00					

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.												
JB												
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT: B50911N1 - Honey Hill Ranch												
RUN: Worst-Case OUA												
BARRIER DESIGN: INPUT HEIGHTS												
ATMOSPHERICS: 68 deg F, 50% RH												
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Crit'n	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
				Calculated		Calculated	Sub'l Inc					
			dB	dB	dB	dB	dB		dB	dB	dB	dB
OUA1	1	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
OUA2	3	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
OUA3	4	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
OUA4	5	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
OUA5	6	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
OUA6	7	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
OUA7	8	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
OUA8	9	1	0.0	59.6	66	59.6	10	----	59.6	0.0	8	-8.0
OUA9	10	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0
OUA10	11	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
OUA11	12	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
OUA12	13	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
OUA13	14	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
OUA14	15	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
OUA15	16	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
OUA16	17	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
OUA17	18	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0
Dwelling Units												
		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		17	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**INPUT: RECEIVERS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.											
JB											
INPUT: RECEIVERS											
PROJECT/CONTRACT:	B50911N1 - Honey Hill Ranch										
RUN:	Worst-Case OUA										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	L _{Aeq} 1h	L _{Aeq} 1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1-1-1	95	1	-221.0	-285.0	2,068.00	5.00	0.00	66	10.0	8.0	Y
1-2-1	96	1	-186.8	-308.5	2,068.00	5.00	0.00	66	10.0	8.0	Y
1-3-1	97	1	-222.4	-332.0	2,068.00	5.00	0.00	66	10.0	8.0	Y
1-4-1	98	1	-255.9	-308.5	2,068.00	5.00	0.00	66	10.0	8.0	Y
2-1-1	99	1	-223.8	-339.2	2,070.00	5.00	0.00	66	10.0	8.0	Y
2-2-1	100	1	-190.3	-361.2	2,070.00	5.00	0.00	66	10.0	8.0	Y
2-3-1	101	1	-220.2	-385.5	2,070.00	5.00	0.00	66	10.0	8.0	Y
2-4-1	102	1	-256.6	-365.5	2,070.00	5.00	0.00	66	10.0	8.0	Y
3-1-1	103	1	-220.2	-392.6	2,075.60	5.00	0.00	66	10.0	8.0	Y
3-2-1	104	1	-191.0	-410.4	2,075.60	5.00	0.00	66	10.0	8.0	Y
3-3-1	105	1	-221.7	-434.6	2,075.60	5.00	0.00	66	10.0	8.0	Y
3-4-1	106	1	-257.3	-420.4	2,075.60	5.00	0.00	66	10.0	8.0	Y
4-1-1	107	1	-224.5	-443.9	2,078.00	5.00	0.00	66	10.0	8.0	Y
4-2-1	108	1	-191.8	-467.4	2,078.00	5.00	0.00	66	10.0	8.0	Y
4-3-1	109	1	-223.1	-489.5	2,078.00	5.00	0.00	66	10.0	8.0	Y
4-4-1	110	1	-257.3	-470.2	2,078.00	5.00	0.00	66	10.0	8.0	Y
5-1-1	111	1	-225.2	-498.0	2,081.00	5.00	0.00	66	10.0	8.0	Y
5-2-1	112	1	-197.5	-519.4	2,081.00	5.00	0.00	66	10.0	8.0	Y
5-3-1	113	1	-231.6	-545.1	2,081.00	5.00	0.00	66	10.0	8.0	Y
5-4-1	114	1	-258.0	-521.5	2,081.00	5.00	0.00	66	10.0	8.0	Y
6-1-1	115	1	-95.6	-261.5	2,066.00	5.00	0.00	66	10.0	8.0	Y
6-2-1	116	1	-69.2	-286.4	2,066.00	5.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

6-3-1	117	1	-94.9	-309.2	2,066.00	5.00	0.00	66	10.0	8.0	Y
6-4-1	118	1	-124.1	-287.1	2,066.00	5.00	0.00	66	10.0	8.0	Y
7-1-1	119	1	-96.3	-314.9	2,069.00	5.00	0.00	66	10.0	8.0	Y
7-2-1	120	1	-79.2	-340.6	2,069.00	5.00	0.00	66	10.0	8.0	Y
7-3-1	121	1	-100.6	-373.4	2,069.00	5.00	0.00	66	10.0	8.0	Y
7-4-1	122	1	-124.1	-339.2	2,069.00	5.00	0.00	66	10.0	8.0	Y
8-1-1	123	1	-97.7	-441.7	2,080.00	5.00	0.00	66	10.0	8.0	Y
8-2-1	124	1	-69.9	-465.3	2,080.00	5.00	0.00	66	10.0	8.0	Y
8-3-1	125	1	-97.7	-489.5	2,080.00	5.00	0.00	66	10.0	8.0	Y
8-4-1	126	1	-127.6	-466.7	2,080.00	5.00	0.00	66	10.0	8.0	Y
9-1-1	127	1	-94.9	-496.6	2,081.20	5.00	0.00	66	10.0	8.0	Y
9-2-1	128	1	-63.5	-513.7	2,081.20	5.00	0.00	66	10.0	8.0	Y
9-3-1	129	1	-96.3	-539.4	2,081.20	5.00	0.00	66	10.0	8.0	Y
9-4-1	130	1	-125.5	-518.7	2,081.20	5.00	0.00	66	10.0	8.0	Y
10-1-1	131	1	21.3	-317.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
10-2-1	132	1	39.1	-349.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
10-3-1	133	1	19.1	-374.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
10-4-1	134	1	-0.1	-344.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
11-1-1	135	1	25.5	-384.8	2,106.00	5.00	0.00	66	10.0	8.0	Y
11-2-1	136	1	59.7	-407.5	2,106.00	5.00	0.00	66	10.0	8.0	Y
11-3-1	137	1	30.5	-427.5	2,106.00	5.00	0.00	66	10.0	8.0	Y
11-4-1	138	1	2.0	-406.8	2,106.00	5.00	0.00	66	10.0	8.0	Y
12-1-1	139	1	27.7	-436.8	2,104.00	5.00	0.00	66	10.0	8.0	Y
12-2-1	140	1	59.7	-456.7	2,104.00	5.00	0.00	66	10.0	8.0	Y
12-3-1	141	1	31.2	-478.1	2,104.00	5.00	0.00	66	10.0	8.0	Y
12-4-1	142	1	-1.5	-457.4	2,104.00	5.00	0.00	66	10.0	8.0	Y
13-1-1	143	1	27.7	-486.6	2,100.00	5.00	0.00	66	10.0	8.0	Y
13-2-1	144	1	52.6	-506.6	2,100.00	5.00	0.00	66	10.0	8.0	Y
13-3-1	145	1	26.3	-533.7	2,100.00	5.00	0.00	66	10.0	8.0	Y
13-4-1	146	1	-3.7	-511.6	2,100.00	5.00	0.00	66	10.0	8.0	Y
14-1-1	147	1	160.9	-322.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
14-2-1	148	1	180.9	-350.6	2,108.00	5.00	0.00	66	10.0	8.0	Y
14-3-1	149	1	161.6	-378.3	2,108.00	5.00	0.00	66	10.0	8.0	Y
14-4-1	150	1	142.4	-359.1	2,108.00	5.00	0.00	66	10.0	8.0	Y
15-1-1	151	1	158.8	-389.7	2,107.00	5.00	0.00	66	10.0	8.0	Y
15-2-1	152	1	177.3	-410.4	2,107.00	5.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

15-3-1	153	1	158.1	-433.2	2,107.00	5.00	0.00	66	10.0	8.0	Y
15-4-1	154	1	122.4	-417.5	2,107.00	5.00	0.00	66	10.0	8.0	Y
16-1-1	155	1	155.9	-464.5	2,102.00	5.00	0.00	66	10.0	8.0	Y
16-2-1	156	1	174.4	-491.6	2,102.00	5.00	0.00	66	10.0	8.0	Y
16-3-1	157	1	154.5	-520.1	2,102.00	5.00	0.00	66	10.0	8.0	Y
16-4-1	158	1	136.7	-495.9	2,102.00	5.00	0.00	66	10.0	8.0	Y
17-1-1	159	1	146.7	-528.7	2,099.00	5.00	0.00	66	10.0	8.0	Y
17-2-1	160	1	176.6	-545.8	2,099.00	5.00	0.00	66	10.0	8.0	Y
17-3-1	161	1	143.1	-570.7	2,099.00	5.00	0.00	66	10.0	8.0	Y
17-4-1	162	1	113.2	-550.8	2,099.00	5.00	0.00	66	10.0	8.0	Y
1-1-2	164	1	-221.0	-285.0	2,068.00	15.00	0.00	66	10.0	8.0	Y
1-2-2	165	1	-186.8	-308.5	2,068.00	15.00	0.00	66	10.0	8.0	Y
1-3-2	166	1	-222.4	-332.0	2,068.00	15.00	0.00	66	10.0	8.0	Y
1-4-2	167	1	-255.9	-308.5	2,068.00	15.00	0.00	66	10.0	8.0	Y
2-1-2	168	1	-223.8	-339.1	2,070.00	15.00	0.00	66	10.0	8.0	Y
2-2-2	169	1	-190.3	-361.2	2,070.00	15.00	0.00	66	10.0	8.0	Y
2-3-2	170	1	-220.2	-385.5	2,070.00	15.00	0.00	66	10.0	8.0	Y
2-4-2	171	1	-256.6	-365.5	2,070.00	15.00	0.00	66	10.0	8.0	Y
3-1-2	172	1	-220.2	-392.6	2,075.60	15.00	0.00	66	10.0	8.0	Y
3-2-2	173	1	-191.0	-410.4	2,075.60	15.00	0.00	66	10.0	8.0	Y
3-3-2	174	1	-221.7	-434.6	2,075.60	15.00	0.00	66	10.0	8.0	Y
3-4-2	175	1	-257.3	-420.4	2,075.60	15.00	0.00	66	10.0	8.0	Y
4-1-2	176	1	-224.5	-443.9	2,078.00	15.00	0.00	66	10.0	8.0	Y
4-2-2	177	1	-191.8	-467.4	2,078.00	15.00	0.00	66	10.0	8.0	Y
4-3-2	178	1	-223.1	-489.5	2,078.00	15.00	0.00	66	10.0	8.0	Y
4-4-2	179	1	-257.3	-470.2	2,078.00	15.00	0.00	66	10.0	8.0	Y
5-1-2	180	1	-225.2	-498.0	2,081.00	15.00	0.00	66	10.0	8.0	Y
5-2-2	181	1	-197.4	-519.4	2,081.00	15.00	0.00	66	10.0	8.0	Y
5-3-2	182	1	-231.6	-545.0	2,081.00	15.00	0.00	66	10.0	8.0	Y
5-4-2	183	1	-258.0	-521.5	2,081.00	15.00	0.00	66	10.0	8.0	Y
6-1-2	184	1	-95.6	-261.5	2,066.00	15.00	0.00	66	10.0	8.0	Y
6-2-2	185	1	-69.2	-286.4	2,066.00	15.00	0.00	66	10.0	8.0	Y
6-3-2	186	1	-94.9	-309.2	2,066.00	15.00	0.00	66	10.0	8.0	Y
6-4-2	187	1	-124.1	-287.1	2,066.00	15.00	0.00	66	10.0	8.0	Y
7-1-2	188	1	-96.3	-314.9	2,069.00	15.00	0.00	66	10.0	8.0	Y
7-2-2	189	1	-79.2	-340.6	2,069.00	15.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

7-3-2	190	1	-100.6	-373.4	2,069.00	15.00	0.00	66	10.0	8.0	Y
7-4-2	191	1	-124.1	-339.1	2,069.00	15.00	0.00	66	10.0	8.0	Y
8-1-2	192	1	-97.7	-441.8	2,080.00	15.00	0.00	66	10.0	8.0	Y
8-2-2	193	1	-69.9	-465.3	2,080.00	15.00	0.00	66	10.0	8.0	Y
8-3-2	194	1	-97.7	-489.5	2,080.00	15.00	0.00	66	10.0	8.0	Y
8-4-2	195	1	-127.6	-466.7	2,080.00	15.00	0.00	66	10.0	8.0	Y
9-1-2	196	1	-94.9	-496.6	2,081.20	15.00	0.00	66	10.0	8.0	Y
9-2-2	197	1	-63.5	-513.7	2,081.20	15.00	0.00	66	10.0	8.0	Y
9-3-2	198	1	-96.3	-539.3	2,081.20	15.00	0.00	66	10.0	8.0	Y
9-4-2	199	1	-125.5	-518.7	2,081.20	15.00	0.00	66	10.0	8.0	Y
10-1-2	200	1	21.3	-317.1	2,108.00	15.00	0.00	66	10.0	8.0	Y
10-2-2	201	1	39.1	-349.1	2,108.00	15.00	0.00	66	10.0	8.0	Y
10-3-2	202	1	19.1	-374.1	2,108.00	15.00	0.00	66	10.0	8.0	Y
10-4-2	203	1	-0.1	-344.1	2,108.00	15.00	0.00	66	10.0	8.0	Y
11-1-2	204	1	25.5	-384.8	2,106.00	15.00	0.00	66	10.0	8.0	Y
11-2-2	205	1	59.7	-407.5	2,106.00	15.00	0.00	66	10.0	8.0	Y
11-3-2	206	1	30.5	-427.5	2,106.00	15.00	0.00	66	10.0	8.0	Y
11-4-2	207	1	2.0	-406.8	2,106.00	15.00	0.00	66	10.0	8.0	Y
12-1-2	208	1	27.7	-436.8	2,104.00	15.00	0.00	66	10.0	8.0	Y
12-2-2	209	1	59.7	-456.7	2,104.00	15.00	0.00	66	10.0	8.0	Y
12-3-2	210	1	31.2	-478.1	2,104.00	15.00	0.00	66	10.0	8.0	Y
12-4-2	211	1	-1.5	-457.4	2,104.00	15.00	0.00	66	10.0	8.0	Y
13-1-2	212	1	27.7	-486.6	2,100.00	15.00	0.00	66	10.0	8.0	Y
13-2-2	213	1	52.6	-506.6	2,100.00	15.00	0.00	66	10.0	8.0	Y
13-3-2	214	1	26.3	-533.7	2,100.00	15.00	0.00	66	10.0	8.0	Y
13-4-2	215	1	-3.7	-511.6	2,100.00	15.00	0.00	66	10.0	8.0	Y
14-1-2	216	1	160.9	-322.0	2,108.00	15.00	0.00	66	10.0	8.0	Y
14-2-2	217	1	180.9	-350.5	2,108.00	15.00	0.00	66	10.0	8.0	Y
14-3-2	218	1	161.6	-378.3	2,108.00	15.00	0.00	66	10.0	8.0	Y
14-4-2	219	1	142.4	-359.1	2,108.00	15.00	0.00	66	10.0	8.0	Y
15-1-2	220	1	158.8	-389.7	2,107.00	15.00	0.00	66	10.0	8.0	Y
15-2-2	221	1	177.3	-410.4	2,107.00	15.00	0.00	66	10.0	8.0	Y
15-3-2	222	1	158.1	-433.2	2,107.00	15.00	0.00	66	10.0	8.0	Y
15-4-2	223	1	122.4	-417.5	2,107.00	15.00	0.00	66	10.0	8.0	Y
16-1-2	224	1	155.9	-464.5	2,102.00	15.00	0.00	66	10.0	8.0	Y
16-2-2	225	1	174.4	-491.6	2,102.00	15.00	0.00	66	10.0	8.0	Y

**INPUT: RECEIVERS****B50911N1 - Honey Hill Ranch**

16-3-2	226	1	154.5	-520.1	2,102.00	15.00	0.00	66	10.0	8.0	Y
16-4-2	227	1	136.7	-495.9	2,102.00	15.00	0.00	66	10.0	8.0	Y
17-1-2	228	1	146.7	-528.7	2,099.00	15.00	0.00	66	10.0	8.0	Y
17-2-2	229	1	176.6	-545.8	2,099.00	15.00	0.00	66	10.0	8.0	Y
17-3-2	230	1	143.1	-570.7	2,099.00	15.00	0.00	66	10.0	8.0	Y
17-4-2	231	1	113.2	-550.8	2,099.00	15.00	0.00	66	10.0	8.0	Y

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.										7 October 2015									
JB										TNM 2.5									
INPUT: BARRIERS																			
PROJECT/CONTRACT:										B50911N1 - Honey Hill Ranch									
RUN:										Worst-Case OUA									
Barrier										Points									
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg	Ht	Perturbs	On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Commercial Building	W	0.00	99.99	0.00				0.00	point1	1	-411.3	-139.6	2,054.00	20.00	0.00	0	0		
									point2	2	-270.4	-79.3	2,054.00	20.00	0.00	0	0		
									point3	3	-238.6	-147.0	2,054.00	20.00	0.00	0	0		
									point4	4	-384.6	-204.5	2,054.00	20.00	0.00	0	0		
									point5	5	-411.3	-139.6	2,054.00	20.00	0.00	0	0		
Lot 1	W	0.00	99.99	0.00				0.00	point20	20	-194.9	-289.6	2,068.00	20.00	0.00	0	0		
									point21	21	-245.5	-289.9	2,068.00	20.00	0.00	0	0		
									point22	22	-245.6	-309.5	2,068.00	20.00	0.00	0	0		
									point23	23	-251.0	-309.8	2,068.00	20.00	0.00	0	0		
									point24	24	-250.6	-326.4	2,068.00	20.00	0.00	0	0		
									point25	25	-215.4	-326.8	2,068.00	20.00	0.00	0	0		
									point26	26	-215.7	-328.9	2,068.00	20.00	0.00	0	0		
									point27	27	-192.6	-329.2	2,068.00	20.00	0.00	0	0		
									point28	28	-192.3	-309.9	2,068.00	20.00	0.00	0	0		
									point29	29	-200.8	-309.6	2,068.00	20.00	0.00	0	0		
									point30	30	-200.9	-301.6	2,068.00	20.00	0.00	0	0		
									point31	31	-195.1	-301.5	2,068.00	20.00	0.00	0	0		
									point32	32	-194.9	-289.6	2,068.00	20.00	0.00	0	0		
Lot 2	W	0.00	99.99	0.00				0.00	point33	33	-194.8	-342.7	2,070.00	20.00	0.00	0	0		
									point34	34	-217.4	-342.9	2,070.00	20.00	0.00	0	0		
									point35	35	-218.0	-345.3	2,070.00	20.00	0.00	0	0		
									point36	36	-252.8	-345.6	2,070.00	20.00	0.00	0	0		
									point37	37	-252.6	-362.5	2,070.00	20.00	0.00	0	0		
									point38	38	-247.4	-363.2	2,070.00	20.00	0.00	0	0		
									point39	39	-247.6	-382.5	2,070.00	20.00	0.00	0	0		
									point40	40	-196.5	-382.1	2,070.00	20.00	0.00	0	0		
									point41	41	-196.3	-371.4	2,070.00	20.00	0.00	0	0		
									point42	42	-202.8	-371.4	2,070.00	20.00	0.00	0	0		
									point43	43	-202.8	-362.8	2,070.00	20.00	0.00	0	0		
									point44	44	-194.3	-362.5	2,070.00	20.00	0.00	0	0		
									point45	45	-194.8	-342.7	2,070.00	20.00	0.00	0	0		
Lot 3	W	0.00	99.99	0.00				0.00	point46	46	-194.7	-394.9	2,075.60	20.00	0.00	0	0		
									point47	47	-245.0	-394.9	2,075.60	20.00	0.00	0	0		
									point48	48	-245.4	-413.5	2,075.60	20.00	0.00	0	0		
									point49	49	-251.1	-413.5	2,075.60	20.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point50	50	-250.3	-431.1	2,075.60	20.00	0.00	0	0		
									point51	51	-215.4	-430.2	2,075.60	20.00	0.00	0	0		
									point52	52	-215.6	-434.5	2,075.60	20.00	0.00	0	0		
									point53	53	-192.1	-434.1	2,075.60	20.00	0.00	0	0		
									point54	54	-192.6	-414.3	2,075.60	20.00	0.00	0	0		
									point55	55	-200.4	-414.5	2,075.60	20.00	0.00	0	0		
									point56	56	-200.9	-406.5	2,075.60	20.00	0.00	0	0		
									point57	57	-194.7	-406.5	2,075.60	20.00	0.00	0	0		
									point58	58	-194.7	-394.9	2,075.60	20.00					
Lot 4	W	0.00	99.99	0.00				0.00	point59	59	-194.6	-446.8	2,078.00	20.00	0.00	0	0		
									point60	60	-218.2	-446.4	2,078.00	20.00	0.00	0	0		
									point61	61	-218.6	-449.9	2,078.00	20.00	0.00	0	0		
									point62	62	-253.2	-449.8	2,078.00	20.00	0.00	0	0		
									point63	63	-253.8	-467.3	2,078.00	20.00	0.00	0	0		
									point64	64	-248.2	-467.7	2,078.00	20.00	0.00	0	0		
									point65	65	-248.1	-486.9	2,078.00	20.00	0.00	0	0		
									point66	66	-197.5	-486.3	2,078.00	20.00	0.00	0	0		
									point67	67	-198.0	-475.1	2,078.00	20.00	0.00	0	0		
									point68	68	-203.4	-475.2	2,078.00	20.00	0.00	0	0		
									point69	69	-203.7	-467.3	2,078.00	20.00	0.00	0	0		
									point70	70	-195.5	-467.3	2,078.00	20.00	0.00	0	0		
									point71	71	-194.6	-446.8	2,078.00	20.00					
Lot 5	W	0.00	99.99	0.00				0.00	point84	84	-200.8	-500.7	2,081.00	20.00	0.00	0	0		
									point85	85	-252.3	-500.8	2,081.00	20.00	0.00	0	0		
									point86	86	-251.7	-519.6	2,081.00	20.00	0.00	0	0		
									point87	87	-249.4	-520.1	2,081.00	20.00	0.00	0	0		
									point88	88	-249.5	-526.9	2,081.00	20.00	0.00	0	0		
									point89	89	-252.1	-527.3	2,081.00	20.00	0.00	0	0		
									point90	90	-251.7	-541.1	2,081.00	20.00	0.00	0	0		
									point91	91	-211.4	-540.9	2,081.00	20.00	0.00	0	0		
									point92	92	-211.9	-533.0	2,081.00	20.00	0.00	0	0		
									point93	93	-203.6	-533.0	2,081.00	20.00	0.00	0	0		
									point94	94	-204.2	-520.6	2,081.00	20.00	0.00	0	0		
									point95	95	-200.5	-520.7	2,081.00	20.00	0.00	0	0		
									point96	96	-200.8	-500.7	2,081.00	20.00					
Lot 6	W	0.00	99.99	0.00				0.00	point97	97	-71.9	-265.9	2,066.00	20.00	0.00	0	0		
									point98	98	-112.4	-265.6	2,066.00	20.00	0.00	0	0		
									point99	99	-112.1	-274.1	2,066.00	20.00	0.00	0	0		
									point100	100	-120.1	-274.7	2,066.00	20.00	0.00	0	0		
									point101	101	-120.6	-306.1	2,066.00	20.00	0.00	0	0		
									point102	102	-72.4	-306.7	2,066.00	20.00	0.00	0	0		
									point103	103	-71.9	-265.9	2,066.00	20.00					
Lot 7	W	0.00	99.99	0.00				0.00	point104	104	-82.0	-319.2	2,069.00	20.00	0.00	0	0		
									point105	105	-113.4	-320.5	2,069.00	20.00	0.00	0	0		
									point106	106	-114.2	-346.4	2,069.00	20.00	0.00	0	0		
									point107	107	-122.2	-350.3	2,069.00	20.00	0.00	0	0		
									point108	108	-121.4	-371.1	2,069.00	20.00	0.00	0	0		
									point109	109	-81.5	-371.4	2,069.00	20.00	0.00	0	0		
									point110	110	-82.0	-319.2	2,069.00	20.00					

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

Lot 8	W	0.00	99.99	0.00				0.00	point111	111	-73.0	-457.9	2,080.00	20.00	0.00	0	0		
									point112	112	-72.7	-444.1	2,080.00	20.00	0.00	0	0		
									point113	113	-113.1	-444.2	2,080.00	20.00	0.00	0	0		
									point114	114	-113.2	-452.8	2,080.00	20.00	0.00	0	0		
									point115	115	-120.6	-452.4	2,080.00	20.00	0.00	0	0		
									point116	116	-121.4	-465.1	2,080.00	20.00	0.00	0	0		
									point117	117	-123.9	-465.1	2,080.00	20.00	0.00	0	0		
									point118	118	-123.9	-485.4	2,080.00	20.00	0.00	0	0		
									point119	119	-73.0	-485.6	2,080.00	20.00	0.00	0	0		
									point120	120	-73.8	-465.4	2,080.00	20.00	0.00	0	0		
									point121	121	-76.7	-465.1	2,080.00	20.00	0.00	0	0		
									point122	122	-75.9	-458.5	2,080.00	20.00	0.00	0	0		
									point123	123	-73.0	-457.9	2,080.00	20.00					
Lot 9	W	0.00	99.99	0.00				0.00	point124	124	-100.7	-496.9	2,081.20	20.00	0.00	0	0		
									point125	125	-123.8	-497.3	2,081.20	20.00	0.00	0	0		
									point126	126	-122.9	-517.1	2,081.20	20.00	0.00	0	0		
									point127	127	-116.0	-517.1	2,081.20	20.00	0.00	0	0		
									point128	128	-115.8	-525.5	2,081.20	20.00	0.00	0	0		
									point129	129	-122.0	-524.6	2,081.20	20.00	0.00	0	0		
									point130	130	-122.3	-535.7	2,081.20	20.00	0.00	0	0		
									point131	131	-70.5	-536.4	2,081.20	20.00	0.00	0	0		
									point132	132	-70.7	-516.6	2,081.20	20.00	0.00	0	0		
									point133	133	-65.6	-517.1	2,081.20	20.00	0.00	0	0		
									point134	134	-66.1	-500.2	2,081.20	20.00	0.00	0	0		
									point135	135	-100.9	-499.8	2,081.20	20.00	0.00	0	0		
									point136	136	-100.7	-496.9	2,081.20	20.00					
Lot 10	W	0.00	99.99	0.00				0.00	point137	137	42.5	-321.1	2,108.00	20.00	0.00	0	0		
									point138	138	1.9	-320.8	2,108.00	20.00	0.00	0	0		
									point139	139	1.8	-372.1	2,108.00	20.00	0.00	0	0		
									point140	140	35.1	-372.3	2,108.00	20.00	0.00	0	0		
									point141	141	35.1	-345.2	2,108.00	20.00	0.00	0	0		
									point142	142	39.5	-341.0	2,108.00	20.00	0.00	0	0		
									point143	143	42.8	-341.2	2,108.00	20.00	0.00	0	0		
									point144	144	42.5	-321.1	2,108.00	20.00					
Lot 11	W	0.00	99.99	0.00				0.00	point145	145	47.6	-399.2	2,106.00	20.00	0.00	0	0		
									point146	146	47.9	-387.3	2,106.00	20.00	0.00	0	0		
									point147	147	5.2	-387.1	2,106.00	20.00	0.00	0	0		
									point148	148	5.3	-424.7	2,106.00	20.00	0.00	0	0		
									point149	149	32.5	-424.1	2,106.00	20.00	0.00	0	0		
									point150	150	32.5	-426.8	2,106.00	20.00	0.00	0	0		
									point151	151	55.0	-427.1	2,106.00	20.00	0.00	0	0		
									point152	152	55.8	-406.8	2,106.00	20.00	0.00	0	0		
									point153	153	45.9	-407.1	2,106.00	20.00	0.00	0	0		
									point154	154	45.8	-399.0	2,106.00	20.00	0.00	0	0		
									point155	155	47.6	-399.2	2,106.00	20.00					
Lot 12	W	0.00	99.99	0.00				0.00	point156	156	35.4	-440.2	2,104.00	20.00	0.00	0	0		
									point157	157	-0.4	-440.2	2,104.00	20.00	0.00	0	0		
									point158	158	-0.4	-456.8	2,104.00	20.00	0.00	0	0		
									point159	159	4.7	-456.8	2,104.00	20.00	0.00	0	0		

## INPUT: BARRIERS

## B50911N1 - Honey Hill Ranch

									point160	160	4.9	-475.7	2,104.00	20.00	0.00	0	0		
									point161	161	56.9	-476.4	2,104.00	20.00	0.00	0	0		
									point162	162	56.2	-465.3	2,104.00	20.00	0.00	0	0		
									point163	163	49.6	-465.7	2,104.00	20.00	0.00	0	0		
									point164	164	50.2	-456.8	2,104.00	20.00	0.00	0	0		
									point165	165	57.8	-456.6	2,104.00	20.00	0.00	0	0		
									point166	166	58.7	-437.3	2,104.00	20.00	0.00	0	0		
									point167	167	35.4	-437.3	2,104.00	20.00	0.00	0	0		
									point168	168	35.4	-440.2	2,104.00	20.00					
Lot 13	W	0.00	99.99	0.00				0.00	point169	169	50.0	-490.1	2,100.00	20.00	0.00	0	0		
									point170	170	-1.1	-490.4	2,100.00	20.00	0.00	0	0		
									point171	171	-0.6	-510.1	2,100.00	20.00	0.00	0	0		
									point172	172	1.8	-509.7	2,100.00	20.00	0.00	0	0		
									point173	173	2.3	-517.7	2,100.00	20.00	0.00	0	0		
									point174	174	-2.4	-517.2	2,100.00	20.00	0.00	0	0		
									point175	175	-1.5	-531.4	2,100.00	20.00	0.00	0	0		
									point176	176	38.9	-530.6	2,100.00	20.00	0.00	0	0		
									point177	177	39.1	-523.5	2,100.00	20.00	0.00	0	0		
									point178	178	47.1	-523.5	2,100.00	20.00	0.00	0	0		
									point179	179	46.7	-510.6	2,100.00	20.00	0.00	0	0		
									point180	180	50.2	-510.4	2,100.00	20.00	0.00	0	0		
									point181	181	50.0	-490.1	2,100.00	20.00					
Lot 14	W	0.00	99.99	0.00				0.00	point182	182	177.0	-325.0	2,108.00	20.00	0.00	0	0		
									point183	183	136.8	-324.8	2,108.00	20.00	0.00	0	0		
									point184	184	136.0	-345.0	2,108.00	20.00	0.00	0	0		
									point185	185	140.2	-345.6	2,108.00	20.00	0.00	0	0		
									point186	186	143.4	-349.3	2,108.00	20.00	0.00	0	0		
									point187	187	143.7	-376.2	2,108.00	20.00	0.00	0	0		
									point188	188	177.0	-375.7	2,108.00	20.00	0.00	0	0		
									point189	189	177.0	-325.0	2,108.00	20.00					
Lot 15	W	0.00	99.99	0.00				0.00	point190	190	174.6	-393.0	2,107.00	20.00	0.00	0	0		
									point191	191	134.1	-392.7	2,107.00	20.00	0.00	0	0		
									point192	192	134.6	-412.7	2,107.00	20.00	0.00	0	0		
									point193	193	125.1	-413.5	2,107.00	20.00	0.00	0	0		
									point194	194	125.6	-433.5	2,107.00	20.00	0.00	0	0		
									point195	195	148.0	-434.3	2,107.00	20.00	0.00	0	0		
									point196	196	147.4	-430.0	2,107.00	20.00	0.00	0	0		
									point197	197	175.1	-430.3	2,107.00	20.00	0.00	0	0		
									point198	198	174.6	-393.0	2,107.00	20.00					
Lot 16	W	0.00	99.99	0.00				0.00	point199	199	171.9	-466.3	2,102.00	20.00	0.00	0	0		
									point200	200	131.2	-466.3	2,102.00	20.00	0.00	0	0		
									point201	201	131.0	-486.9	2,102.00	20.00	0.00	0	0		
									point202	202	135.0	-486.9	2,102.00	20.00	0.00	0	0		
									point203	203	139.3	-491.2	2,102.00	20.00	0.00	0	0		
									point204	204	139.6	-517.4	2,102.00	20.00	0.00	0	0		
									point205	205	172.0	-517.4	2,102.00	20.00	0.00	0	0		
									point206	206	171.9	-466.3	2,102.00	20.00					
Lot 17	W	0.00	99.99	0.00				0.00	point207	207	138.0	-527.8	2,099.00	20.00	0.00	0	0		
									point208	208	114.4	-528.0	2,099.00	20.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point209	209	114.2	-547.1	2,099.00	20.00	0.00	0	0		
									point210	210	123.5	-548.2	2,099.00	20.00	0.00	0	0		
									point211	211	124.0	-556.0	2,099.00	20.00	0.00	0	0		
									point212	212	117.3	-556.4	2,099.00	20.00	0.00	0	0		
									point213	213	116.7	-566.9	2,099.00	20.00	0.00	0	0		
									point214	214	167.9	-567.8	2,099.00	20.00	0.00	0	0		
									point215	215	169.1	-547.8	2,099.00	20.00	0.00	0	0		
									point216	216	173.7	-548.0	2,099.00	20.00	0.00	0	0		
									point217	217	173.3	-530.2	2,099.00	20.00	0.00	0	0		
									point218	218	138.6	-530.9	2,099.00	20.00	0.00	0	0		
									point219	219	138.0	-527.8	2,099.00	20.00					
Commercial Building 2	W	0.00	99.99	0.00				0.00	point220	220	135.7	-126.1	2,064.00	15.00	0.00	0	0		
									point221	221	180.3	-133.7	2,064.00	15.00	0.00	0	0		
									point222	222	167.6	-209.2	2,064.00	15.00	0.00	0	0		
									point223	223	118.7	-199.2	2,064.00	15.00	0.00	0	0		
									point224	224	120.8	-186.1	2,064.00	15.00	0.00	0	0		
									point225	225	130.4	-188.1	2,064.00	15.00	0.00	0	0		
									point226	226	136.3	-153.7	2,064.00	15.00	0.00	0	0		
									point227	227	130.4	-152.2	2,064.00	15.00	0.00	0	0		
									point228	228	135.7	-126.1	2,064.00	15.00					

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.												
JB												
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT: B50911N1 - Honey Hill Ranch												
RUN: Worst-Case OUA												
BARRIER DESIGN: INPUT HEIGHTS												
ATMOSPHERICS: 68 deg F, 50% RH												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	With Barrier				
								Type Impact	Calculated LAeq1h	Noise Reduction		
										Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1-1-1	95	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
1-2-1	96	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
1-3-1	97	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0
1-4-1	98	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
2-1-1	99	1	0.0	45.6	66	45.6	10	----	45.6	0.0	8	-8.0
2-2-1	100	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
2-3-1	101	1	0.0	40.9	66	40.9	10	----	40.9	0.0	8	-8.0
2-4-1	102	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
3-1-1	103	1	0.0	45.5	66	45.5	10	----	45.5	0.0	8	-8.0
3-2-1	104	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
3-3-1	105	1	0.0	40.2	66	40.2	10	----	40.2	0.0	8	-8.0
3-4-1	106	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
4-1-1	107	1	0.0	43.1	66	43.1	10	----	43.1	0.0	8	-8.0
4-2-1	108	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
4-3-1	109	1	0.0	38.4	66	38.4	10	----	38.4	0.0	8	-8.0
4-4-1	110	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
5-1-1	111	1	0.0	42.0	66	42.0	10	----	42.0	0.0	8	-8.0
5-2-1	112	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0
5-3-1	113	1	0.0	40.1	66	40.1	10	----	40.1	0.0	8	-8.0
5-4-1	114	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
6-1-1	115	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
6-2-1	116	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
6-3-1	117	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0
6-4-1	118	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

7-1-1	119	1	0.0	45.9	66	45.9	10	----	45.9	0.0	8	-8.0
7-2-1	120	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
7-3-1	121	1	0.0	40.4	66	40.4	10	----	40.4	0.0	8	-8.0
7-4-1	122	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
8-1-1	123	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
8-2-1	124	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0
8-3-1	125	1	0.0	36.7	66	36.7	10	----	36.7	0.0	8	-8.0
8-4-1	126	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0
9-1-1	127	1	0.0	39.2	66	39.2	10	----	39.2	0.0	8	-8.0
9-2-1	128	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0
9-3-1	129	1	0.0	36.2	66	36.2	10	----	36.2	0.0	8	-8.0
9-4-1	130	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0
10-1-1	131	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
10-2-1	132	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
10-3-1	133	1	0.0	40.7	66	40.7	10	----	40.7	0.0	8	-8.0
10-4-1	134	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
11-1-1	135	1	0.0	60.4	66	60.4	10	----	60.4	0.0	8	-8.0
11-2-1	136	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
11-3-1	137	1	0.0	39.3	66	39.3	10	----	39.3	0.0	8	-8.0
11-4-1	138	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
12-1-1	139	1	0.0	41.4	66	41.4	10	----	41.4	0.0	8	-8.0
12-2-1	140	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
12-3-1	141	1	0.0	37.3	66	37.3	10	----	37.3	0.0	8	-8.0
12-4-1	142	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
13-1-1	143	1	0.0	38.7	66	38.7	10	----	38.7	0.0	8	-8.0
13-2-1	144	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0
13-3-1	145	1	0.0	36.1	66	36.1	10	----	36.1	0.0	8	-8.0
13-4-1	146	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
14-1-1	147	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
14-2-1	148	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
14-3-1	149	1	0.0	40.3	66	40.3	10	----	40.3	0.0	8	-8.0
14-4-1	150	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
15-1-1	151	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
15-2-1	152	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
15-3-1	153	1	0.0	37.9	66	37.9	10	----	37.9	0.0	8	-8.0
15-4-1	154	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
16-1-1	155	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
16-2-1	156	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
16-3-1	157	1	0.0	36.1	66	36.1	10	----	36.1	0.0	8	-8.0
16-4-1	158	1	0.0	39.2	66	39.2	10	----	39.2	0.0	8	-8.0
17-1-1	159	1	0.0	39.7	66	39.7	10	----	39.7	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

17-2-1	160	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
17-3-1	161	1	0.0	36.1	66	36.1	10	----	36.1	0.0	8	-8.0
17-4-1	162	1	0.0	51.7	66	51.7	10	----	51.7	0.0	8	-8.0
1-1-2	164	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
1-2-2	165	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
1-3-2	166	1	0.0	49.6	66	49.6	10	----	49.6	0.0	8	-8.0
1-4-2	167	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
2-1-2	168	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
2-2-2	169	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
2-3-2	170	1	0.0	47.6	66	47.6	10	----	47.6	0.0	8	-8.0
2-4-2	171	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
3-1-2	172	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
3-2-2	173	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
3-3-2	174	1	0.0	46.8	66	46.8	10	----	46.8	0.0	8	-8.0
3-4-2	175	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
4-1-2	176	1	0.0	51.3	66	51.3	10	----	51.3	0.0	8	-8.0
4-2-2	177	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
4-3-2	178	1	0.0	45.0	66	45.0	10	----	45.0	0.0	8	-8.0
4-4-2	179	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
5-1-2	180	1	0.0	50.9	66	50.9	10	----	50.9	0.0	8	-8.0
5-2-2	181	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
5-3-2	182	1	0.0	45.4	66	45.4	10	----	45.4	0.0	8	-8.0
5-4-2	183	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
6-1-2	184	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
6-2-2	185	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
6-3-2	186	1	0.0	49.2	66	49.2	10	----	49.2	0.0	8	-8.0
6-4-2	187	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
7-1-2	188	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0
7-2-2	189	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0
7-3-2	190	1	0.0	46.4	66	46.4	10	----	46.4	0.0	8	-8.0
7-4-2	191	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
8-1-2	192	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
8-2-2	193	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
8-3-2	194	1	0.0	44.3	66	44.3	10	----	44.3	0.0	8	-8.0
8-4-2	195	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
9-1-2	196	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0
9-2-2	197	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0
9-3-2	198	1	0.0	43.2	66	43.2	10	----	43.2	0.0	8	-8.0
9-4-2	199	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
10-1-2	200	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
10-2-2	201	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

10-3-2	202	1	0.0	45.3	66	45.3	10	----	45.3	0.0	8	-8.0
10-4-2	203	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
11-1-2	204	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
11-2-2	205	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
11-3-2	206	1	0.0	44.2	66	44.2	10	----	44.2	0.0	8	-8.0
11-4-2	207	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
12-1-2	208	1	0.0	45.6	66	45.6	10	----	45.6	0.0	8	-8.0
12-2-2	209	1	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
12-3-2	210	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0
12-4-2	211	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
13-1-2	212	1	0.0	42.9	66	42.9	10	----	42.9	0.0	8	-8.0
13-2-2	213	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
13-3-2	214	1	0.0	42.2	66	42.2	10	----	42.2	0.0	8	-8.0
13-4-2	215	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
14-1-2	216	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
14-2-2	217	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
14-3-2	218	1	0.0	45.4	66	45.4	10	----	45.4	0.0	8	-8.0
14-4-2	219	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
15-1-2	220	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
15-2-2	221	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
15-3-2	222	1	0.0	44.2	66	44.2	10	----	44.2	0.0	8	-8.0
15-4-2	223	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
16-1-2	224	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
16-2-2	225	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
16-3-2	226	1	0.0	42.5	66	42.5	10	----	42.5	0.0	8	-8.0
16-4-2	227	1	0.0	44.5	66	44.5	10	----	44.5	0.0	8	-8.0
17-1-2	228	1	0.0	43.6	66	43.6	10	----	43.6	0.0	8	-8.0
17-2-2	229	1	0.0	63.1	66	63.1	10	----	63.1	0.0	8	-8.0
17-3-2	230	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0
17-4-2	231	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		136	0.0	0.0	0.0							
All Impacted		10	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

## INPUT: BARRIERS

## B50911N1 - Honey Hill Ranch

Eilar Associates, Inc.																			
JB																			
INPUT: BARRIERS																			
PROJECT/CONTRACT:																			
RUN:																			
Barrier																			
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)		Height	Segment					
		Min	Max	\$ per	\$ per	Top	Run:Rise	\$ per			X	Y	Z	at	Seg Ht	Perturbs	On	Important	
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Commercial Building	W	0.00	99.99	0.00				0.00	point1	1	-411.3	-139.6	2,054.00	20.00	0.00	0	0		
									point2	2	-270.4	-79.3	2,054.00	20.00	0.00	0	0		
									point3	3	-238.6	-147.0	2,054.00	20.00	0.00	0	0		
									point4	4	-384.6	-204.5	2,054.00	20.00	0.00	0	0		
									point5	5	-411.3	-139.6	2,054.00	20.00	0.00	0	0		
Lot 1	W	0.00	99.99	0.00				0.00	point20	20	-194.9	-289.6	2,068.00	12.00	0.00	0	0		
									point21	21	-245.5	-289.9	2,068.00	12.00	0.00	0	0		
									point22	22	-245.6	-309.5	2,068.00	12.00	0.00	0	0		
									point23	23	-251.0	-309.8	2,068.00	12.00	0.00	0	0		
									point24	24	-250.6	-326.4	2,068.00	12.00	0.00	0	0		
									point25	25	-215.4	-326.8	2,068.00	12.00	0.00	0	0		
									point26	26	-215.7	-328.9	2,068.00	12.00	0.00	0	0		
									point27	27	-192.6	-329.2	2,068.00	12.00	0.00	0	0		
									point28	28	-192.3	-309.9	2,068.00	12.00	0.00	0	0		
									point29	29	-200.8	-309.6	2,068.00	12.00	0.00	0	0		
									point30	30	-200.9	-301.6	2,068.00	12.00	0.00	0	0		
									point31	31	-195.1	-301.5	2,068.00	12.00	0.00	0	0		
									point32	32	-194.9	-289.6	2,068.00	12.00	0.00	0	0		
Lot 2	W	0.00	99.99	0.00				0.00	point33	33	-194.8	-342.7	2,070.00	12.00	0.00	0	0		
									point34	34	-217.4	-342.9	2,070.00	12.00	0.00	0	0		
									point35	35	-218.0	-345.3	2,070.00	12.00	0.00	0	0		
									point36	36	-252.8	-345.6	2,070.00	12.00	0.00	0	0		
									point37	37	-252.6	-362.5	2,070.00	12.00	0.00	0	0		
									point38	38	-247.4	-363.2	2,070.00	12.00	0.00	0	0		
									point39	39	-247.6	-382.5	2,070.00	12.00	0.00	0	0		
									point40	40	-196.5	-382.1	2,070.00	12.00	0.00	0	0		
									point41	41	-196.3	-371.4	2,070.00	12.00	0.00	0	0		
									point42	42	-202.8	-371.4	2,070.00	12.00	0.00	0	0		
									point43	43	-202.8	-362.8	2,070.00	12.00	0.00	0	0		
									point44	44	-194.3	-362.5	2,070.00	12.00	0.00	0	0		
									point45	45	-194.8	-342.7	2,070.00	12.00	0.00	0	0		
Lot 3	W	0.00	99.99	0.00				0.00	point46	46	-194.7	-394.9	2,075.60	12.00	0.00	0	0		
									point47	47	-245.0	-394.9	2,075.60	12.00	0.00	0	0		
									point48	48	-245.4	-413.5	2,075.60	12.00	0.00	0	0		
									point49	49	-251.1	-413.5	2,075.60	12.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point50	50	-250.3	-431.1	2,075.60	12.00	0.00	0	0		
									point51	51	-215.4	-430.2	2,075.60	12.00	0.00	0	0		
									point52	52	-215.6	-434.5	2,075.60	12.00	0.00	0	0		
									point53	53	-192.1	-434.1	2,075.60	12.00	0.00	0	0		
									point54	54	-192.6	-414.3	2,075.60	12.00	0.00	0	0		
									point55	55	-200.4	-414.5	2,075.60	12.00	0.00	0	0		
									point56	56	-200.9	-406.5	2,075.60	12.00	0.00	0	0		
									point57	57	-194.7	-406.5	2,075.60	12.00	0.00	0	0		
									point58	58	-194.7	-394.9	2,075.60	12.00					
Lot 4	W	0.00	99.99	0.00				0.00	point59	59	-194.6	-446.8	2,078.00	12.00	0.00	0	0		
									point60	60	-218.2	-446.4	2,078.00	12.00	0.00	0	0		
									point61	61	-218.6	-449.9	2,078.00	12.00	0.00	0	0		
									point62	62	-253.2	-449.8	2,078.00	12.00	0.00	0	0		
									point63	63	-253.8	-467.3	2,078.00	12.00	0.00	0	0		
									point64	64	-248.2	-467.7	2,078.00	12.00	0.00	0	0		
									point65	65	-248.1	-486.9	2,078.00	12.00	0.00	0	0		
									point66	66	-197.5	-486.3	2,078.00	12.00	0.00	0	0		
									point67	67	-198.0	-475.1	2,078.00	12.00	0.00	0	0		
									point68	68	-203.4	-475.2	2,078.00	12.00	0.00	0	0		
									point69	69	-203.7	-467.3	2,078.00	12.00	0.00	0	0		
									point70	70	-195.5	-467.3	2,078.00	12.00	0.00	0	0		
									point71	71	-194.6	-446.8	2,078.00	12.00					
Lot 5	W	0.00	99.99	0.00				0.00	point84	84	-200.8	-500.7	2,081.00	12.00	0.00	0	0		
									point85	85	-252.3	-500.8	2,081.00	12.00	0.00	0	0		
									point86	86	-251.7	-519.6	2,081.00	12.00	0.00	0	0		
									point87	87	-249.4	-520.1	2,081.00	12.00	0.00	0	0		
									point88	88	-249.5	-526.9	2,081.00	12.00	0.00	0	0		
									point89	89	-252.1	-527.3	2,081.00	12.00	0.00	0	0		
									point90	90	-251.7	-541.1	2,081.00	12.00	0.00	0	0		
									point91	91	-211.4	-540.9	2,081.00	12.00	0.00	0	0		
									point92	92	-211.9	-533.0	2,081.00	12.00	0.00	0	0		
									point93	93	-203.6	-533.0	2,081.00	12.00	0.00	0	0		
									point94	94	-204.2	-520.6	2,081.00	12.00	0.00	0	0		
									point95	95	-200.5	-520.7	2,081.00	12.00	0.00	0	0		
									point96	96	-200.8	-500.7	2,081.00	12.00					
Lot 6	W	0.00	99.99	0.00				0.00	point97	97	-71.9	-265.9	2,066.00	12.00	0.00	0	0		
									point98	98	-112.4	-265.6	2,066.00	12.00	0.00	0	0		
									point99	99	-112.1	-274.1	2,066.00	12.00	0.00	0	0		
									point100	100	-120.1	-274.7	2,066.00	12.00	0.00	0	0		
									point101	101	-120.6	-306.1	2,066.00	12.00	0.00	0	0		
									point102	102	-72.4	-306.7	2,066.00	12.00	0.00	0	0		
									point103	103	-71.9	-265.9	2,066.00	12.00					
Lot 7	W	0.00	99.99	0.00				0.00	point104	104	-82.0	-319.2	2,069.00	12.00	0.00	0	0		
									point105	105	-113.4	-320.5	2,069.00	12.00	0.00	0	0		
									point106	106	-114.2	-346.4	2,069.00	12.00	0.00	0	0		
									point107	107	-122.2	-350.3	2,069.00	12.00	0.00	0	0		
									point108	108	-121.4	-371.1	2,069.00	12.00	0.00	0	0		
									point109	109	-81.5	-371.4	2,069.00	12.00	0.00	0	0		
									point110	110	-82.0	-319.2	2,069.00	12.00					

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

Lot 8	W	0.00	99.99	0.00				0.00	point111	111	-73.0	-457.9	2,080.00	12.00	0.00	0	0		
									point112	112	-72.7	-444.1	2,080.00	12.00	0.00	0	0		
									point113	113	-113.1	-444.2	2,080.00	12.00	0.00	0	0		
									point114	114	-113.2	-452.8	2,080.00	12.00	0.00	0	0		
									point115	115	-120.6	-452.4	2,080.00	12.00	0.00	0	0		
									point116	116	-121.4	-465.1	2,080.00	12.00	0.00	0	0		
									point117	117	-123.9	-465.1	2,080.00	12.00	0.00	0	0		
									point118	118	-123.9	-485.4	2,080.00	12.00	0.00	0	0		
									point119	119	-73.0	-485.6	2,080.00	12.00	0.00	0	0		
									point120	120	-73.8	-465.4	2,080.00	12.00	0.00	0	0		
									point121	121	-76.7	-465.1	2,080.00	12.00	0.00	0	0		
									point122	122	-75.9	-458.5	2,080.00	12.00	0.00	0	0		
									point123	123	-73.0	-457.9	2,080.00	12.00					
Lot 9	W	0.00	99.99	0.00				0.00	point124	124	-100.7	-496.9	2,081.20	12.00	0.00	0	0		
									point125	125	-123.8	-497.3	2,081.20	12.00	0.00	0	0		
									point126	126	-122.9	-517.1	2,081.20	12.00	0.00	0	0		
									point127	127	-116.0	-517.1	2,081.20	12.00	0.00	0	0		
									point128	128	-115.8	-525.5	2,081.20	12.00	0.00	0	0		
									point129	129	-122.0	-524.6	2,081.20	12.00	0.00	0	0		
									point130	130	-122.3	-535.7	2,081.20	12.00	0.00	0	0		
									point131	131	-70.5	-536.4	2,081.20	12.00	0.00	0	0		
									point132	132	-70.7	-516.6	2,081.20	12.00	0.00	0	0		
									point133	133	-65.6	-517.1	2,081.20	12.00	0.00	0	0		
									point134	134	-66.1	-500.2	2,081.20	12.00	0.00	0	0		
									point135	135	-100.9	-499.8	2,081.20	12.00	0.00	0	0		
									point136	136	-100.7	-496.9	2,081.20	12.00					
Lot 10	W	0.00	99.99	0.00				0.00	point137	137	42.5	-321.1	2,108.00	12.00	0.00	0	0		
									point138	138	1.9	-320.8	2,108.00	12.00	0.00	0	0		
									point139	139	1.8	-372.1	2,108.00	12.00	0.00	0	0		
									point140	140	35.1	-372.3	2,108.00	12.00	0.00	0	0		
									point141	141	35.1	-345.2	2,108.00	12.00	0.00	0	0		
									point142	142	39.5	-341.0	2,108.00	12.00	0.00	0	0		
									point143	143	42.8	-341.2	2,108.00	12.00	0.00	0	0		
									point144	144	42.5	-321.1	2,108.00	12.00					
Lot 11	W	0.00	99.99	0.00				0.00	point145	145	47.6	-399.2	2,106.00	12.00	0.00	0	0		
									point146	146	47.9	-387.3	2,106.00	12.00	0.00	0	0		
									point147	147	5.2	-387.1	2,106.00	12.00	0.00	0	0		
									point148	148	5.3	-424.7	2,106.00	12.00	0.00	0	0		
									point149	149	32.5	-424.1	2,106.00	12.00	0.00	0	0		
									point150	150	32.5	-426.8	2,106.00	12.00	0.00	0	0		
									point151	151	55.0	-427.1	2,106.00	12.00	0.00	0	0		
									point152	152	55.8	-406.8	2,106.00	12.00	0.00	0	0		
									point153	153	45.9	-407.1	2,106.00	12.00	0.00	0	0		
									point154	154	45.8	-399.0	2,106.00	12.00	0.00	0	0		
									point155	155	47.6	-399.2	2,106.00	12.00					
Lot 12	W	0.00	99.99	0.00				0.00	point156	156	35.4	-440.2	2,104.00	12.00	0.00	0	0		
									point157	157	-0.4	-440.2	2,104.00	12.00	0.00	0	0		
									point158	158	-0.4	-456.8	2,104.00	12.00	0.00	0	0		
									point159	159	4.7	-456.8	2,104.00	12.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point160	160	4.9	-475.7	2,104.00	12.00	0.00	0	0		
									point161	161	56.9	-476.4	2,104.00	12.00	0.00	0	0		
									point162	162	56.2	-465.3	2,104.00	12.00	0.00	0	0		
									point163	163	49.6	-465.7	2,104.00	12.00	0.00	0	0		
									point164	164	50.2	-456.8	2,104.00	12.00	0.00	0	0		
									point165	165	57.8	-456.6	2,104.00	12.00	0.00	0	0		
									point166	166	58.7	-437.3	2,104.00	12.00	0.00	0	0		
									point167	167	35.4	-437.3	2,104.00	12.00	0.00	0	0		
									point168	168	35.4	-440.2	2,104.00	12.00					
Lot 13	W	0.00	99.99	0.00				0.00	point169	169	50.0	-490.1	2,100.00	12.00	0.00	0	0		
									point170	170	-1.1	-490.4	2,100.00	12.00	0.00	0	0		
									point171	171	-0.6	-510.1	2,100.00	12.00	0.00	0	0		
									point172	172	1.8	-509.7	2,100.00	12.00	0.00	0	0		
									point173	173	2.3	-517.7	2,100.00	12.00	0.00	0	0		
									point174	174	-2.4	-517.2	2,100.00	12.00	0.00	0	0		
									point175	175	-1.5	-531.4	2,100.00	12.00	0.00	0	0		
									point176	176	38.9	-530.6	2,100.00	12.00	0.00	0	0		
									point177	177	39.1	-523.5	2,100.00	12.00	0.00	0	0		
									point178	178	47.1	-523.5	2,100.00	12.00	0.00	0	0		
									point179	179	46.7	-510.6	2,100.00	12.00	0.00	0	0		
									point180	180	50.2	-510.4	2,100.00	12.00	0.00	0	0		
									point181	181	50.0	-490.1	2,100.00	12.00					
Lot 14	W	0.00	99.99	0.00				0.00	point182	182	177.0	-325.0	2,108.00	12.00	0.00	0	0		
									point183	183	136.8	-324.8	2,108.00	12.00	0.00	0	0		
									point184	184	136.0	-345.0	2,108.00	12.00	0.00	0	0		
									point185	185	140.2	-345.6	2,108.00	12.00	0.00	0	0		
									point186	186	143.4	-349.3	2,108.00	12.00	0.00	0	0		
									point187	187	143.7	-376.2	2,108.00	12.00	0.00	0	0		
									point188	188	177.0	-375.7	2,108.00	12.00	0.00	0	0		
									point189	189	177.0	-325.0	2,108.00	12.00					
Lot 15	W	0.00	99.99	0.00				0.00	point190	190	174.6	-393.0	2,107.00	12.00	0.00	0	0		
									point191	191	134.1	-392.7	2,107.00	12.00	0.00	0	0		
									point192	192	134.6	-412.7	2,107.00	12.00	0.00	0	0		
									point193	193	125.1	-413.5	2,107.00	12.00	0.00	0	0		
									point194	194	125.6	-433.5	2,107.00	12.00	0.00	0	0		
									point195	195	148.0	-434.3	2,107.00	12.00	0.00	0	0		
									point196	196	147.4	-430.0	2,107.00	12.00	0.00	0	0		
									point197	197	175.1	-430.3	2,107.00	12.00	0.00	0	0		
									point198	198	174.6	-393.0	2,107.00	12.00					
Lot 16	W	0.00	99.99	0.00				0.00	point199	199	171.9	-466.3	2,102.00	12.00	0.00	0	0		
									point200	200	131.2	-466.3	2,102.00	12.00	0.00	0	0		
									point201	201	131.0	-486.9	2,102.00	12.00	0.00	0	0		
									point202	202	135.0	-486.9	2,102.00	12.00	0.00	0	0		
									point203	203	139.3	-491.2	2,102.00	12.00	0.00	0	0		
									point204	204	139.6	-517.4	2,102.00	12.00	0.00	0	0		
									point205	205	172.0	-517.4	2,102.00	12.00	0.00	0	0		
									point206	206	171.9	-466.3	2,102.00	12.00					
Lot 17	W	0.00	99.99	0.00				0.00	point207	207	138.0	-527.8	2,099.00	12.00	0.00	0	0		
									point208	208	114.4	-528.0	2,099.00	12.00	0.00	0	0		

INPUT: BARRIERS

B50911N1 - Honey Hill Ranch

									point209	209	114.2	-547.1	2,099.00	12.00	0.00	0	0		
									point210	210	123.5	-548.2	2,099.00	12.00	0.00	0	0		
									point211	211	124.0	-556.0	2,099.00	12.00	0.00	0	0		
									point212	212	117.3	-556.4	2,099.00	12.00	0.00	0	0		
									point213	213	116.7	-566.9	2,099.00	12.00	0.00	0	0		
									point214	214	167.9	-567.8	2,099.00	12.00	0.00	0	0		
									point215	215	169.1	-547.8	2,099.00	12.00	0.00	0	0		
									point216	216	173.7	-548.0	2,099.00	12.00	0.00	0	0		
									point217	217	173.3	-530.2	2,099.00	12.00	0.00	0	0		
									point218	218	138.6	-530.9	2,099.00	12.00	0.00	0	0		
									point219	219	138.0	-527.8	2,099.00	12.00					
Commercial Building 2	W	0.00	99.99	0.00				0.00	point220	220	135.7	-126.1	2,064.00	15.00	0.00	0	0		
									point221	221	180.3	-133.7	2,064.00	15.00	0.00	0	0		
									point222	222	167.6	-209.2	2,064.00	15.00	0.00	0	0		
									point223	223	118.7	-199.2	2,064.00	15.00	0.00	0	0		
									point224	224	120.8	-186.1	2,064.00	15.00	0.00	0	0		
									point225	225	130.4	-188.1	2,064.00	15.00	0.00	0	0		
									point226	226	136.3	-153.7	2,064.00	15.00	0.00	0	0		
									point227	227	130.4	-152.2	2,064.00	15.00	0.00	0	0		
									point228	228	135.7	-126.1	2,064.00	15.00					
Lot 1 Sound Wall	W	0.00	99.99	0.00				0.00	point229	229	-245.0	-285.0	2,068.00	6.00	0.00	0	0		
									point230	230	-268.6	-285.1	2,068.00	6.00	0.00	0	0		
									point231	231	-270.0	-294.0	2,068.00	6.00					
Lot 10 Sound Wall	W	0.00	99.99	0.00				0.00	point232	232	7.0	-314.2	2,108.00	6.00	0.00	0	0		
									point233	233	-1.5	-314.8	2,108.00	6.00	0.00	0	0		
									point234	234	-7.9	-333.7	2,108.00	6.00	0.00	0	0		
									point235	235	-9.3	-374.2	2,108.00	6.00					
Lot 14 Sound Wall	W	0.00	99.99	0.00				0.00	point239	239	170.0	-319.5	2,108.00	6.00	0.00	0	0		
									point240	240	188.1	-319.5	2,108.00	6.00	0.00	0	0		
									point241	241	201.6	-333.2	2,108.00	6.00	0.00	0	0		
									point242	242	201.6	-373.9	2,108.00	6.00	0.00	0	0		
									point243	243	202.6	-378.0	2,108.00	6.00					

**RESULTS: SOUND LEVELS**
**B50911N1 - Honey Hill Ranch**

Eilar Associates, Inc.								7 October 2015					
JB								TNM 2.5					
								Calculated with TNM 2.5					
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		B50911N1 - Honey Hill Ranch											
RUN:		Worst-Case OUA (Mitigated)											
BARRIER DESIGN:		INPUT HEIGHTS							Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier				With Barrier					
			LAeq1h	LAeq1h		Increase over	existing	Type	Calculated	Noise Reduction			
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated	
							Sub'l Inc					minus	
												Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
OUA1	1	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0	
OUA2	3	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0	
OUA3	4	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0	
OUA4	5	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0	
OUA5	6	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0	
OUA6	7	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0	
OUA7	8	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0	
OUA8	9	1	0.0	59.6	66	59.6	10	----	59.6	0.0	8	-8.0	
OUA9	10	1	0.0	55.7	66	55.7	10	----	55.7	0.0	8	-8.0	
OUA10	11	1	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0	
OUA11	12	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0	
OUA12	13	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0	
OUA13	14	1	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0	
OUA14	15	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0	
OUA15	16	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0	
OUA16	17	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0	
OUA17	18	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		17	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

## **APPENDIX C**

### **Pertinent Sections of the County of San Diego Noise Element to the General Plan and Noise Ordinance**



## Noise Effects

Noise has a significant effect on quality of life. An individual's reaction to a particular noise depends on many factors such as the source of the noise, its loudness relative to the background noise level, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. Because of the nature of the human ear, a sound must be about ten dB greater than the reference sound to be judged as twice as loud. In general, a three dB change in community noise levels is perceivable, while one to two dB changes generally are not perceived. Although the reaction to noise may vary, it is clear that noise is a significant component of the environment, and excessively noisy conditions can affect an individual's health and well-being. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on a community can be organized into six broad categories: noise-induced hearing loss; interference with communication; effects on sleep; effects on performance and behavior; extra-auditory health effects; and annoyance.

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## Noise Standards

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Noise exposure criteria are incorporated into land use planning to reduce future conflicts between noise and land use. This is achieved by specifying acceptable noise exposure ranges for various land uses throughout the County. The County uses the Noise Compatibility Guidelines listed in Table N-1 (Noise Compatibility Guidelines) to determine the compatibility of land use when evaluating proposed development projects.

The Noise Compatibility Guidelines indicate ranges of compatibility and are intended to be flexible enough to apply to a range of projects and environments. For example, a commercial project would be evaluated differently than a residential project in a rural area or a mixed-use project in a more densely developed area of the County.

A land use located in an area identified as "acceptable" indicates that standard construction methods would attenuate exterior noise to an acceptable indoor noise level and that people can carry out outdoor activities with minimal noise interference. Land uses that fall into the "conditionally acceptable" noise environment should have an acoustical study that considers the type of noise source, the sensitivity of the noise receptor, and the degree to which the noise source may interfere with sleep, speech, or other activities characteristic of the land use. For land uses indicated as "conditionally acceptable," structures must be able to attenuate the exterior noise to the indoor noise level as indicated in the Noise Standards listed in Table N-2 (Noise Standards). For land uses where the exterior noise levels fall within the "unacceptable" range, new construction generally should not be undertaken.

Table N-1 Noise Compatibility Guidelines									
Land Use Category		Exterior Noise Level (CNEL)							
			55	60	65	70	75	80	
A	Residential—single family residences, mobile homes, senior housing, convalescent homes								
B	Residential—multi-family residences, mixed-use (commercial/residential)								
C	Transient lodging—motels, hotels, resorts								
D*	Schools, churches, hospitals, nursing homes, child care facilities								
E*	Passive recreational parks, nature preserves, contemplative spaces, cemeteries								
F*	Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation								
G*	Office/professional, government, medical/dental, commercial, retail, laboratories								
H*	Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair								
	ACCEPTABLE—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.								
	CONDITIONALLY ACCEPTABLE—New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table N-2, Noise Standards. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate county decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.								
	UNACCEPTABLE—New construction or development shall not be undertaken.								

* Denotes facilities used for part of the day; therefore, an hourly standard would be used rather than CNEL (refer to Table N-2).

*Note: For projects located within an Airport Influence Area of an adopted Airport Land Use Compatibility Plan (ALUCP), additional Noise Compatibility Criteria restrictions may apply as specified in the ALUCP.*

**Table N-2** Noise Standards^{Note}

1. The exterior noise level (as defined in Item 3) standard for Category A shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
2. The exterior noise level standard for Categories B and C shall be 65 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
3. The exterior noise level standard for Categories D and G shall be 65 CNEL and the interior noise level standard shall be 50 dBA L _{eq} (one hour average).
4. For single-family detached dwelling units, "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in area, the exterior area shall include 10 percent of the lot area; (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.
5. For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas which are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trails, but not including off-street parking and loading areas or driveways.
6. For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.
7. For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.
8. The exterior noise standard does not apply for land uses where no exterior use area is proposed or necessary, such as a library.
9. For Categories E and F the exterior noise level standard shall not exceed the limit defined as "Acceptable" in Table N-1 or an equivalent one-hour noise standard.

Note: Exterior Noise Level compatibility guidelines for Land Use Categories A-H are identified in Table N-1, Noise Compatibility Guidelines.

In addition, the County has adopted community noise control standards as part of the County's Noise Abatement and Control Ordinance (County Code of Regulatory Ordinances, Title 3, Division 6, Chapter 4) and provides guidance for implementation of the County's noise policies and ordinance in the County's *California Environmental Quality Act* (CEQA) Guidelines for Determining Significance for Noise. The Noise Ordinance defines limits for activities that generate excessive noise and sets noise level limits for land uses. The County's CEQA significance guidelines provide guidance on the use of the General Plan Noise Element and the County Noise Abatement and Control Ordinance when considering the environmental impact of noise exposure to high or excessive noise levels.

Cross reference(s)--Definitions, § [12.101](#) et seq.

 **SEC. 36.403. SOUND LEVEL MEASUREMENT.**

(a) A sound level measurement made pursuant to this chapter shall be measured with a sound level meter using A-weighting and a "slow" response time, as these terms are used in ANSI S1.1-1994 or its latest revision.

(b) Each measurement shall be conducted at the boundary line of the property on which the noise source is located or any place on the affected property, but no closer than five feet from the noise source.

(c) The sound level meter shall be calibrated and adjusted by means of an acoustical calibrator of the coupler-type to assure meter accuracy within the tolerances in the ANSI specifications for sound level meters, ANSI S1.4-1983 or its latest revision. The sound level meter shall be used as provided in the manufacturer's instructions.

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.404. GENERAL SOUND LEVEL LIMITS.**

(a) Except as provided in section [36.409](#) of this chapter, it shall be unlawful for any person to cause or allow the creation of any noise, which exceeds the one-hour average sound level limits in [Table 36.404](#), when the one-hour average sound level is measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

**TABLE 36.404**  
**SOUND LEVEL LIMITS IN DECIBELS (dBA)**

ZONE	TIME	ONE-HOUR AVERAGE SOUND LEVEL LIMITS (dBA)
(1) RS, RD, RR, RMH, A70, A72, S80, S81, S90, S92, RV, and RU with a General Plan Land Use Designation density of less than 10.9 dwelling units per acre.	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
(2) RRO, RC, RM, S86, V5, RV and RU with a General Plan Land Use Designation density of 10.9 or more dwelling units per acre.	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
(3) S94, V4, and all commercial zones.	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
(4) V1, V2	7 a.m. to 7 p.m.	60
V1, V2	7 p.m. to 10 p.m.	55
V1	10 p.m. to 7 a.m.	55
V2	10 p.m. to 7 a.m.	50
V3	7 a.m. to 10 p.m.	70
	10 p.m. to 7 a.m.	65
(5) M50, M52, and M54	Anytime	70

(6)	S82, M56, and M58.	Anytime	75
(7)	S88 (see subsection (c) below)		

(b) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit, which authorizes the noise-generating use or activity and the decision making body approving the Major Use Permit determined that those mitigation measures reduce potential noise impacts to a level below significance, implementation and compliance with those noise mitigation measures shall constitute compliance with subsection (a) above.

(c) S88 zones are Specific Planning Areas which allow different uses. The sound level limits in [Table 36.404](#) above that apply in an S88 zone depend on the use being made of the property. The limits in [Table 36.404](#), subsection (1) apply to property with a residential, agricultural or civic use. The limits in subsection (3) apply to property with a commercial use. The limits in subsection (5) apply to property with an industrial use that would only be allowed in an M50, M52 or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.

(d) If the measured ambient noise level exceeds the applicable limit in [Table 36.404](#), the allowable one-hour average sound level shall be the one-hour average ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

(e) The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones. The one-hour average sound level limit applicable to extractive industries, however, including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone in which the extractive industry is located.

(f) A fixed-location public utility distribution or transmission facility located on or adjacent to a property line shall be subject to the sound level limits of this section measured at or beyond six feet from the boundary of the easement upon which the facility is located.

(Amended by Ord. No. 7094 (N.S.), effective 3-25-86; amended by Ord. No. 9478 (N.S.), effective 7-19-02; amended by Ord. No. 9621 (N.S.), effective 1-9-04; amended by Ord. No. 9962 (N.S.), effective 1-9-09; amended by Ord. No. 10211 (N.S.), effective 6-1-12)

#### **SEC. 36.405. REPAIRING, REBUILDING OR TESTING MOTOR VEHICLES.**

It shall be unlawful for any person to repair, rebuild or test any motor vehicle in such a manner as to cause a disturbing, excessive or offensive noise as defined in section [36.402](#) of this chapter.

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

#### **SEC. 36.406. POWERED MODEL VEHICLES.**

It shall be unlawful for any person to operate a powered model vehicle between 9 p.m. and 7 a.m. A powered model vehicle operated in a County park shall meet the daytime sound level standards for an RS zone measured at a point 100 feet from the park property line or 100 feet from where the model vehicle is being operated, whichever is less.

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

#### **SEC. 36.407. REFUSE VEHICLES & PARKING LOT SWEEPERS.**

No person shall operate or allow to be operated, a refuse compacting, processing, or collection vehicle or a parking lot sweeper between the hours of 10 p.m. to 6 a.m., in or within 100 feet of a residential zone.

(Amended by Ord. No. 7428 (N.S.), effective 2-4-88; amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.408. HOURS OF OPERATION OF CONSTRUCTION EQUIPMENT.**

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment:

(a) Between 7 p.m. and 7 a.m.

(b) On a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, December 25th and any day appointed by the President as a special national holiday or the Governor of the State as a special State holiday. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in sections [36.409](#) and [36.410](#).

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.409. SOUND LEVEL LIMITATIONS ON CONSTRUCTION EQUIPMENT.**

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

(Amended by Ord. No. 9700 (N.S.), effective 2-4-05; amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.410. SOUND LEVEL LIMITATIONS ON IMPULSIVE NOISE.**

In addition to the general limitations on sound levels in section [36.404](#) and the limitations on construction equipment in section [36.409](#), the following additional sound level limitations shall apply:

(a) Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in [Table 36.410A](#), when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in [Table 36.410A](#) are as described in the County Zoning Ordinance.

**TABLE 36.410A.  
MAXIMUM SOUND LEVEL (IMPULSIVE) MEASURED AT OCCUPIED PROPERTY IN DECIBELS (dBA)**

OCCUPIED PROPERTY USE	DECIBELS (dBA)
Residential, village zoning or civic use	82
Agricultural, commercial or industrial use	85

(b) Except for emergency work, no person working on a public road project shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in [Table 36.410B](#), when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in [Table 36.410B](#) are as described in the County Zoning Ordinance.

**TABLE 36.410B.**  
**MAXIMUM SOUND LEVEL (IMPULSIVE) MEASURED AT OCCUPIED PROPERTY IN DECIBELS (dBA)**  
**FOR PUBLIC ROAD PROJECTS**

OCCUPIED PROPERTY USE	dB(A)
Residential, village zoning or civic use	85
Agricultural, commercial or industrial use	90

(c) The minimum measurement period for any measurements conducted under this section shall be one hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute.

(Added by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.411. CONTAINERS AND CONSTRUCTION MATERIAL.**

It shall be unlawful for any person to handle, transport, or cause to be handled or transported in any public place, any container or any construction material in such a way as to create a disturbing, excessive, or offensive noise as defined in section [36.402](#) of this chapter.

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.412. SIGNAL DEVICE FOR FOOD TRUCKS.**

No person shall operate or cause to have operated or used any sound signal device other than sound-amplification equipment attached to a motor vehicle wagon or manually propelled cart from which food or any other items are sold which emits a sound signal more frequently than once every ten minutes in any one street block and with a duration of more than ten seconds for any single emission. The sound level of this sound signal shall not exceed 90 decibels at 50 feet from the point of the noise source.

(Amended by Ord. No. 9962 (N.S.), effective 1-9-09)

 **SEC. 36.413. MULTIPLE FAMILY DWELLING UNITS.**

Notwithstanding any other provision of this chapter it shall be unlawful for any person to create, maintain or cause to be maintained any sound within the interior of any multiple family dwelling unit which causes the noises level to exceed those limits set forth below in another dwelling unit:

**TABLE 36.413**  
**ALLOWABLE INTERIOR NOISE LEVEL**

Type of Land Use	Hours		Allowable Interior Noise Level (dBA)	
		No Time	1 min in 1 hour	5 min in 1 hour
Multifamily	10 pm- 7 am	> 45	40	35
Residential	7 am-10 pm	> 55	50	35

( > greater than)

## **APPENDIX D**

### **Manufacturer Data Sheets**

**24ACB3**  
**Performance™ 13 Series Air Conditioner**  
**with Puron® Refrigerant**  
**1–1/2 To 5 Nominal Tons (Size 18 To 60)**



## Product Data



Performance  
SERIES

Carrier's Air Conditioners with Puron® refrigerant provide a collection of features unmatched by any other family of equipment. The 24ACB has been designed utilizing Carrier's Puron refrigerant. The environmentally sound refrigerant allows you to make a responsible decision in the protection of the earth's ozone layer.

This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency when matched with appropriate coil components. Refer to the combination ratings in the Product Data for system combinations that meet Energy Star® guidelines.

**NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory ([www.ahridirectory.org](http://www.ahridirectory.org)) for the most up-to-date ratings information.**

### INDUSTRY LEADING FEATURES / BENEFITS

#### EFFICIENCY

- 13 - 15 SEER/11 - 12 EER
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

#### SOUND

- Sound level as low as 74 dBA

#### COMFORT

- System supports Thermidistat™ Control or standard thermostat

#### RELIABILITY

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- Scroll compressor
- Internal pressure-relief valve
- Internal thermal overload
- Low-pressure switch
- High-pressure switch
- Filter drier
- Balanced refrigeration system for maximum reliability

#### DURABILITY

WeatherArmor Ultra™ protection package:

- Solid, durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

#### APPLICATIONS

- Long-line - up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to -20°F/-28.9°C) with accessory kit

## ELECTRICAL DATA

UNIT SIZE – VOLTAGE, SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MIN WIRE SIZE†	MIN WIRE SIZE†	MAX LENGTH ft (m)‡	MAX LENGTH ft (m)‡	MAX FUSE** or CKT BRK AMPS
		MAX	MIN.	LRA	RLA	FLA		60° C	75° C	60° C	75° C	
18–30	208–230–1	253	197	48.0	9.0	0.5	11.8	14	14	67 (20.4)	64 (19.5)	15
24–30				58.3	13.5	0.75	17.6	14	14	45 (13.7)	43 (13.1)	25
30–30				64.0	12.8	0.75	16.8	14	14	47 (14.3)	45 (13.7)	25
36–30				77.0	14.1	1.4	19.0	12	12	66 (20.1)	63 (19.2)	30
42–30				112.0	17.9	1.2	23.6	12	12	53 (16.2)	51 (15.5)	40
48–30				109.0	19.9	1.2	26.2	10	10	76 (23.2)	73 (22.3)	40
60–31				134.0	26.4	1.2	34.2	8	8	91 (27.7)	86 (26.2)	50

* Permissible limits of the voltage range at which the unit will operate satisfactorily

† If wire is applied at ambient greater than 30° C (86° F), consult table 310–16 of the NEC (ANSI/NFPA 70). The ampacity of non-metallic-sheathed cable (NM), trade name ROMEX, shall be that of 60° C (140° F) conditions, per the NEC (ANSI/NFPA 70) Article 336–26. If other than uncoated (no-plated), 60° or 75° C (140° or 167° C) insulation, copper wire (solid wire for 10 AWG or smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

** Time–Delay fuse.

**FLA** – Full Load Amps

**LRA** – Locked Rotor Amps

**MCA** – Minimum Circuit Amps

**RLA** – Rated Load Amps

**NOTE:** Control circuit is 24–V on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

Complies with 2007 requirements of ASHRAE Standards 90.1

24ACB3

## A-WEIGHTED SOUND POWER (dBA)

UNIT SIZE – VOLTAGE, SERIES	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18–30	74	50.0	61.5	64.5	66.5	64.0	61.0	54.5
24–30	75	55.5	63.5	67.0	70.0	66.0	63.5	57.0
30–30	74	52.5	63.0	68.5	70.0	66.5	62.5	56.5
36–30	75	57.0	65.0	67.5	69.5	67.5	65.0	60.0
42–30	74	55.0	64.0	68.0	68.5	64.5	60.0	54.0
48–30	74	52.5	62.5	65.5	69.0	63.5	60.5	56.0
60–31	74	54.0	59.0	65.5	67.5	63.5	60.0	55.5

**NOTE:** Tested in accordance with AHRI Standard 270–2008 (not listed in AHRI).

## CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE – VOLTAGE, SERIES	REQUIRED SUBCOOLING °F (°C)
18–30	8 (4.4)
24–30	13 (7.2)
30–30	16 (8.9)
36–30	16 (8.9)
42–30	10 (5.6)
48–30	17 (9.4)
60–31	11 (6.1)

## **APPENDIX E**

### **Cadna Analysis Data and Results**

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 45.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-1

Path Calculation

Source to Receiver Direct Path Distance:  $r = 45.0$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>23.2</b>	<b>31.2</b>	<b>33.7</b>	<b>35.7</b>	<b>33.7</b>	<b>31.2</b>	<b>26.2</b>	(dBA) at 45.0 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 40.6 (dBA)  
# of sources 1  
Combined Sound Pressure Level: **40.6** (dBA) at 45.0 (ft)

**Total Sound Pressure Level at Receiver 43.3 dBA**

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 105.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-1

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 105.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>15.8</b>	<b>23.8</b>	<b>26.3</b>	<b>28.3</b>	<b>26.3</b>	<b>23.8</b>	<b>18.8</b>	(dBA) at 105.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 33.3 (dBA)  
# of sources 2  
Combined Sound Pressure Level: **36.3** (dBA) at 105.0 (ft)

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**Sound Power Level to Sound Pressure Level Analysis**

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 200.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-1

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 200.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>10.2</b>	<b>18.2</b>	<b>20.7</b>	<b>22.7</b>	<b>20.7</b>	<b>18.2</b>	<b>13.2</b>	(dBA) at 200.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 27.7 (dBA)  
# of sources 5  
Combined Sound Pressure Level: **34.7** (dBA) at 200.0 (ft)

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**Sound Power Level to Sound Pressure Level Analysis**

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 300.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-1

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 300.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>6.7</b>	<b>14.7</b>	<b>17.2</b>	<b>19.2</b>	<b>17.2</b>	<b>14.7</b>	<b>9.7</b>	(dBA) at 300.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 24.2 (dBA)  
# of sources 9  
Combined Sound Pressure Level: **33.7** (dBA) at 300.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 35.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-2

Path Calculation

Source to Receiver Direct Path Distance:  $r = 35.1$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>25.4</b>	<b>33.4</b>	<b>35.9</b>	<b>37.9</b>	<b>35.9</b>	<b>33.4</b>	<b>28.4</b>	(dBA) at 35.1 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 42.8 (dBA)  
# of sources 1  
Combined Sound Pressure Level: **42.8** (dBA) at 35.1 (ft)

**Total Sound Pressure Level at Receiver 45.3 dBA**

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 80.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-2

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 80.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>18.2</b>	<b>26.2</b>	<b>28.7</b>	<b>30.7</b>	<b>28.7</b>	<b>26.2</b>	<b>21.2</b>	(dBA) at 80.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 35.7 (dBA)  
# of sources 3  
Combined Sound Pressure Level: **40.4** (dBA) at 80.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 250.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-2

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 250.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>8.3</b>	<b>16.3</b>	<b>18.8</b>	<b>20.8</b>	<b>18.8</b>	<b>16.3</b>	<b>11.3</b>	(dBA) at 250.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 25.8 (dBA)  
# of sources 8  
Combined Sound Pressure Level: **34.8** (dBA) at 250.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 480.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-2

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 480.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>2.6</b>	<b>10.6</b>	<b>13.1</b>	<b>15.1</b>	<b>13.1</b>	<b>10.6</b>	<b>5.6</b>	(dBA) at 480.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 20.1 (dBA)  
# of sources 5  
Combined Sound Pressure Level: **27.1** (dBA) at 480.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 100.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-3

Path Calculation

Source to Receiver Direct Path Distance:  $r = 100.0$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>16.2</b>	<b>24.2</b>	<b>26.7</b>	<b>28.7</b>	<b>26.7</b>	<b>24.2</b>	<b>19.2</b>	(dBA) at 100.0 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 33.7 (dBA)  
# of sources 2  
Combined Sound Pressure Level: **36.7** (dBA) at 100.0 (ft)

**Total Sound Pressure Level at Receiver 40.8 dBA**

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 150.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-3

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 150.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>12.7</b>	<b>20.7</b>	<b>23.2</b>	<b>25.2</b>	<b>23.2</b>	<b>20.7</b>	<b>15.7</b>	(dBA) at 150.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 30.2 (dBA)  
# of sources 3  
Combined Sound Pressure Level: **35.0** (dBA) at 150.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 250.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-3

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 250.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	8.3	16.3	18.8	20.8	18.8	16.3	11.3	(dBA) at 250.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 25.8 (dBA)  
# of sources: 8  
Combined Sound Pressure Level: 34.8 (dBA) at 250.0 (ft)

EILAR ASSOCIATES  
ACOUSTICAL CONSULTING

Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 300.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-3

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 300.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	6.7	14.7	17.2	19.2	17.2	14.7	9.7	(dBA) at 300.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 24.2 (dBA)  
# of sources: 4  
Combined Sound Pressure Level: 30.2 (dBA) at 300.0 (ft)

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ACOUSTICAL CONSULTING

Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 95.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-4

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 95.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>16.7</b>	<b>24.7</b>	<b>27.2</b>	<b>29.2</b>	<b>27.2</b>	<b>24.7</b>	<b>19.7</b>	(dBA) at 95.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 34.2 (dBA)  
# of sources 3  
Combined Sound Pressure Level: **38.9** (dBA) at 95.0 (ft)

**Total Sound Pressure Level at Receiver 41.0 dBA**

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Sound Power Level to Sound Pressure Level Analysis

**Distances**

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 140.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-4

**Path Calculation**

Source to Receiver Direct Path Distance:  $r = 140.0$  (ft)

**Sound Power to Sound Pressure Calculations**

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	<b>13.3</b>	<b>21.3</b>	<b>23.8</b>	<b>25.8</b>	<b>23.8</b>	<b>21.3</b>	<b>16.3</b>	(dBA) at 140.0 (ft)

**Combined Sound Pressure Level at Receiver**

Total Sound Pressure Level: 30.8 (dBA)  
# of sources 2  
Combined Sound Pressure Level: **33.8** (dBA) at 140.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 280.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-4

Path Calculation

Source to Receiver Direct Path Distance:  $r = 280.0$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	7.3	15.3	17.8	19.8	17.8	15.3	10.3	(dBA) at 280.0 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 24.8 (dBA)  
# of sources 4  
Combined Sound Pressure Level: 30.8 (dBA) at 280.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 340.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-4

Path Calculation

Source to Receiver Direct Path Distance:  $r = 340.0$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	5.6	13.6	16.1	18.1	16.1	13.6	8.6	(dBA) at 340.0 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 23.1 (dBA)  
# of sources: 4  
Combined Sound Pressure Level: 29.1 (dBA) at 340.0 (ft)

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Sound Power Level to Sound Pressure Level Analysis

Distances

Source Height:  $h_s = 3.0$  (ft)  
Receiver Height:  $h_R = 5.0$  (ft)  
Source to Receiver Distance:  $d_{SR} = 520.0$  (ft)

Project Name: Honey Hill  
Project Number: B50911N1  
Date: 10/5/2015  
Source Description: AC Noise  
Path Description: R-4

Path Calculation

Source to Receiver Direct Path Distance:  $r = 520.0$  (ft)

Sound Power to Sound Pressure Calculations

Octave Band	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	(Hz)
Sound Power Level: $L_w$	57.0	65.0	67.5	69.5	67.5	65.0	60.0	(dBA)
Sound Pressure Level: $L_p = L_w - 20 \log(r) - 0.75$	1.9	9.9	12.4	14.4	12.4	9.9	4.9	(dBA) at 520.0 (ft)

Combined Sound Pressure Level at Receiver

Total Sound Pressure Level: 19.4 (dBA)  
# of sources: 4  
Combined Sound Pressure Level: 25.4 (dBA) at 520.0 (ft)

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Cadna Noise Model - Sound Levels													
Name	ID	Type											Source
			Weight	125	250	500	1000	2000	4000	8000	A	lin	
Carrier 24ACB3	L_1	Li	A	57	65	67.5	69.5	67.5	65	60	74.5	78.6	Carrier Data Sheet

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Cadna Noise Model - Point Sources								
Name	ID	Result. PWL	Lw / Li		Height	Coordinates		
		Day	Type	Value		X	Y	Z
		(dBA)			(m)	(m)	(m)	(m)
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38317.20	-8723.51	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38316.82	-8741.33	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38317.10	-8754.66	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38317.10	-8773.25	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38316.39	-8788.61	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38372.20	-8717.53	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38369.65	-8734.72	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38372.20	-8771.25	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38373.47	-8788.30	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38392.56	-8735.61	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38393.71	-8753.30	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38393.45	-8770.86	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38392.43	-8784.74	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38448.69	-8737.26	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38448.05	-8755.34	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38447.42	-8779.14	0.91
HVAC Unit	S_1	74.5	Lw	L_1	0.91	38446.53	-8797.72	0.91

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Cadna Noise Model - Barrier					Cadna Noise Model - Barrier				
Name	ID	Coordinates			Name	ID	Coordinates		
		X	Y	Z			X	Y	Z
		(m)	(m)	(m)			(m)	(m)	(m)
House	B_1	38435.29	-8729.09	6.1	House	B_1	38395.34	-8747.96	6.1
		38447.64	-8728.85	6.1			38408.25	-8747.96	6.1
		38447.64	-8744.57	6.1			38407.87	-8753.94	6.1
		38437.38	-8744.01	6.1			38411.05	-8754.2	6.1
		38438.18	-8736.71	6.1			38410.99	-8759.92	6.1
		38435.21	-8735.11	6.1			38403.54	-8759.99	6.1
House	B_1	38434.46	-8749.72	6.1	House	B_1	38395.53	-8759.29	6.1
		38446.68	-8749.78	6.1			38394.44	-8727.52	6.1
		38446.87	-8760.66	6.1			38406.98	-8727.84	6.1
		38434.65	-8760.91	6.1			38406.6	-8734.01	6.1
House	B_1	38433.63	-8772.18	6.1	House	B_1	38405.71	-8733.69	6.1
		38446.23	-8772.24	6.1			38404.18	-8734.97	6.1
		38446.3	-8787.51	6.1			38404.43	-8743.24	6.1
		38436.37	-8787.83	6.1			38394.44	-8743.24	6.1
		38436.31	-8779.81	6.1			38359.27	-8711	6.1
		38433.95	-8778.16	6.1			38371.8	-8711	6.1
House	B_1	38428.8	-8790.88	6.1	House	B_1	38371.93	-8714.95	6.1
		38446.87	-8791.9	6.1			38370.85	-8715.27	6.1
		38446.81	-8796.93	6.1			38370.98	-8717.49	6.1
		38444.96	-8797.31	6.1			38371.55	-8717.3	6.1
		38444.71	-8802.59	6.1			38371.8	-8723.28	6.1
		38429.31	-8802.78	6.1			38356.15	-8723.16	6.1
House	B_1	38393.11	-8779.63	6.1	House	B_1	38356.02	-8716.98	6.1
		38408.95	-8779.51	6.1			38356.92	-8717.18	6.1
		38409.08	-8785.55	6.1			38356.98	-8713.04	6.1
		38407.93	-8785.93	6.1			38359.46	-8713.36	6.1
		38407.87	-8789.18	6.1			38358.63	-8727.38	6.1
		38405.71	-8789.43	6.1			38368.81	-8727.64	6.1
		38405.9	-8791.41	6.1			38368.62	-8742.97	6.1
		38393.62	-8791.85	6.1			38356.53	-8742.91	6.1
House	B_1	38393.68	-8764.01	6.1	House	B_1	38355.96	-8736.8	6.1
		38404.5	-8764.07	6.1			38357.23	-8736.86	6.1
		38404.5	-8763.31	6.1			38359.14	-8735.34	6.1
		38411.94	-8763.24	6.1					
		38411.82	-8769.54	6.1					
		38410.99	-8775.14	6.1					
		38395.46	-8775.27	6.1					
		38395.46	-8769.48	6.1					
		38393.68	-8769.22	6.1					

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Cadna Noise Model - Barrier					Cadna Noise Model - Barrier				
Name	ID	Coordinates			Name	ID	Coordinates		
		X	Y	Z			X	Y	Z
		(m)	(m)	(m)			(m)	(m)	(m)
House	B_1	38359.21	-8765.43	6.1	House	B_1	38318.83	-8750.1	6.1
		38371.49	-8765.56	6.1			38334.8	-8750.22	6.1
		38371.36	-8769.7	6.1			38334.55	-8753.53	6.1
		38370.66	-8769.63	6.1			38332.45	-8753.79	6.1
		38370.79	-8771.67	6.1			38332.57	-8756.08	6.1
		38371.23	-8771.8	6.1			38335.31	-8756.33	6.1
		38371.8	-8777.84	6.1			38334.99	-8762.25	6.1
		38355.52	-8777.46	6.1			38327.99	-8762.06	6.1
		38356.15	-8771.54	6.1			38327.87	-8761.36	6.1
		38356.79	-8771.48	6.1			38317.11	-8761.23	6.1
		38356.79	-8767.85	6.1			38317.37	-8756.33	6.1
		38358.95	-8767.85	6.1			38318.89	-8756.02	6.1
		38356.02	-8781.3	6.1			38316.92	-8735	6.1
		38363.02	-8781.24	6.1			38327.36	-8734.88	6.1
House	B_1	38363.09	-8782.38	6.1	House	B_1	38327.48	-8734.11	6.1
		38373.14	-8782.38	6.1			38334.48	-8734.37	6.1
		38373.78	-8787.6	6.1			38334.23	-8740.48	6.1
		38372.25	-8787.47	6.1			38331.81	-8740.48	6.1
		38372.38	-8793.01	6.1			38331.94	-8742.51	6.1
		38356.79	-8793.26	6.1			38333.91	-8743.02	6.1
		38356.47	-8789.76	6.1			38333.97	-8746.2	6.1
		38358.82	-8789.96	6.1			38318.07	-8746.2	6.1
		38358.38	-8787.73	6.1			38318.07	-8740.48	6.1
		38356.02	-8787.41	6.1			38316.67	-8740.35	6.1
		38316.79	-8782.26	6.1			38318.83	-8718.14	6.1
		38332.32	-8782.32	6.1			38334.55	-8718.14	6.1
		38332.32	-8788.49	6.1			38334.61	-8721.64	6.1
		38331.62	-8788.36	6.1			38332.57	-8721.76	6.1
House	B_1	38331.18	-8792.37	6.1			38332.77	-8724.12	6.1
		38329.33	-8792.31	6.1			38335.31	-8724.25	6.1
		38328.82	-8795.3	6.1			38334.87	-8730.29	6.1
		38316.92	-8794.79	6.1			38328.18	-8730.29	6.1
		38316.79	-8790.46	6.1			38327.99	-8729.4	6.1
		38317.43	-8790.53	6.1			38317.62	-8729.59	6.1
		38317.75	-8788.62	6.1			38317.24	-8724.44	6.1
		38316.86	-8788.24	6.1			38318.77	-8724.18	6.1
		38316.29	-8766.86	6.1					
		38327.36	-8766.99	6.1					
		38327.42	-8766.09	6.1					
		38334.1	-8766.35	6.1					
		38334.29	-8772.08	6.1					
		38331.62	-8772.2	6.1					
		38331.68	-8774.68	6.1					
		38333.53	-8775	6.1					
		38333.08	-8778.37	6.1					
		38317.94	-8778.18	6.1					
		38318.07	-8772.08	6.1					
		38316.09	-8772.27	6.1					
House	B_1								

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Cadna Noise Model - Noise Levels at Receivers							
Name	ID	Level Lr		Height	Coordinates		
		w/o bldg	w/ bldg		X	Y	Z
		(dBA)	(dBA)	(m)	(m)	(m)	(m)
Commercial	R-1	41.7	40.8	1.52	38373.17	-8704.53	1.52
Park	R-2	44.8	44.5	1.52	38457.06	-8755.25	1.52
Residential	R-3	37.8	36.8	1.52	38384.04	-8815.07	1.52
Commercial	R-4	38.1	37.1	1.52	38289.00	-8744.77	1.52

## **APPENDIX F**

### **Construction Equipment Noise Calculations**

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## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Dozer  
Receiver: R1 - Grading/Utilities

### Noise Source

Noise Level (dBA) 77.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

### Sound Pressure Level

72.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 68.7

### Summation

Number of Sources: 3  
Level during 8 hour day: 72.3

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Excavator**  
Receiver: R1 - Grading/Utilities

### Noise Source

Noise Level (dBA) 75.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

Sound Pressure Level 70.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 66.7

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Dump Truck**  
Receiver: R1 - Grading/Utilities

### Noise Source

Noise Level (dBA) 75.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

Sound Pressure Level 70.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 66.7

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Dozer  
Receiver: R2 - Grading/Utilities

### Noise Source

Noise Level (dBA) 77.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

### Sound Pressure Level

70.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 66.9

### Summation

Number of Sources: 3  
Level during 8 hour day: 70.4

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Excavator**  
Receiver: R2 - Grading/Utilities

### Noise Source

Noise Level (dBA) 75.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

Sound Pressure Level 68.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 64.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Dump Truck**  
Receiver: R2 - Grading/Utilities

### Noise Source

Noise Level (dBA) 75.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

Sound Pressure Level 68.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 64.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Concrete Mixer  
Receiver: R1 - Foundations/Pads

### Noise Source

Noise Level (dBA) 76.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

### Sound Pressure Level

71.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 67.7

### Summation

Number of Sources: 2  
Level during 8 hour day: 68.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Concrete Pump  
Receiver: R1 - Foundations/Pads

### Noise Source

Noise Level (dBA) 74.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

Sound Pressure Level 69.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 20  
Level During 8 Hour day: 62.7

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Concrete Mixer  
Receiver: R2 - Foundations/Pads

### Noise Source

Noise Level (dBA) 76.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

### Sound Pressure Level

69.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 65.9

### Summation

Number of Sources: 2  
Level during 8 hour day: 67.1

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Concrete Pump  
Receiver: R2 - Foundations/Pads

### Noise Source

Noise Level (dBA) 74.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

Sound Pressure Level 67.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 20  
Level During 8 Hour day: 60.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Paver  
Receiver: R1 - Paving

### Noise Source

Noise Level (dBA) 79.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

### Sound Pressure Level

74.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 50  
Level During 8 Hour day: 71.7

### Summation

Number of Sources: 2  
Level during 8 hour day: 71.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Roller**  
Receiver: R1 - Paving

### Noise Source

Noise Level (dBA) 69.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

Sound Pressure Level 64.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 20  
Level During 8 Hour day: 57.7

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Paver  
Receiver: R2 - Paving

### Noise Source

Noise Level (dBA) 79.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

### Sound Pressure Level

72.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 50  
Level During 8 Hour day: 69.8

### Summation

Number of Sources: 2  
Level during 8 hour day: 70.0

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: **Roller**  
Receiver: R2 - Paving

### Noise Source

Noise Level (dBA) 69.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

Sound Pressure Level 62.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 20  
Level During 8 Hour day: 55.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Forklift  
Receiver: R1 - Building Construction

### Noise Source

Noise Level (dBA) 74.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

### Sound Pressure Level

69.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 65.7

### Summation

Number of Sources: 2  
Level during 8 hour day: 65.9

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Compressor  
Receiver: R1 - Building Construction

### Noise Source

Noise Level (dBA) 61.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 85 feet

### Path Calculation

Source to Receiver Direct Path Distance: 85 feet

Sound Pressure Level 56.7 at 85 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 52.7

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Forklift  
Receiver: R2 - Building Construction

### Noise Source

Noise Level (dBA) 74.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

### Sound Pressure Level

67.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 63.9

### Summation

Number of Sources: 2  
Level during 8 hour day: 64.1

---

## Noise Attenuation by Distance Calculation

Job: Honey Hill Ranch  
Job #: B50911N1  
Date: 9/28/2015  
Source: Compressor  
Receiver: R2 - Building Construction

### Noise Source

Noise Level (dBA) 61.3 at 50 feet

### Distances

Source Elevation 0 feet at 5 feet above grade  
Receiver Elevation: 0 feet at 5 feet above grade  
Source to Receiver Distance: 105 feet

### Path Calculation

Source to Receiver Direct Path Distance: 105 feet

Sound Pressure Level 54.9 at 105 feet  
Hours of Use: 8  
Duty Cycle (%): 40  
Level During 8 Hour day: 50.9