

NOISE IMPACT ANALYSIS

**Apollo Senior Care
3141 East Valley Parkway
Escondido, California 92027**

Prepared For

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December 30, 2019

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1.0 EXECUTIVE SUMMARY

The proposed project, Apollo Senior Care, consists of the demolition of existing structures on site and the construction of a new three-story senior care facility. The project site is located at 3141 East Valley Parkway in the City of Escondido, California.

Noise from the anticipated rooftop HVAC equipment and kitchen exhaust fan has been calculated to determine impacts at off-site receivers. Calculations show that noise levels from the rooftop mechanical equipment will be in compliance with the City of Escondido noise regulations found within the Municipal Code. No mitigation is deemed necessary to control project-generated noise impacts from mechanical equipment.

The proposed project is expected to add approximately 253 Average Daily Trips (ADT) to surrounding roadways. Considering the existing traffic volumes present on roadways in the vicinity of the project site, project-generated traffic noise is expected to be less than significant.

The City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday during a week between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. During permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time. An analysis of temporary construction noise considering typical and anticipated activity on site demonstrates that construction noise impacts are expected to remain at or below an hourly average noise level of 75 dBA at surrounding residential properties. Provided construction is limited to the allowable hours of the City of Escondido and equipment is maintained in proper working condition, temporary noise impacts are expected to be less than significant. No mitigation is deemed necessary for the attenuation of temporary noise impacts.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts to and from the project site are summarized in Section 5.3.

2.0 INTRODUCTION

This acoustical analysis report is submitted to satisfy the noise requirements of the City of Escondido. Its purpose is to assess noise impacts from potential project-related noise sources, such as mechanical equipment and project-generated traffic, and to assess temporary construction noise. This analysis aims to determine if mitigation is necessary and feasible to reduce these noise impacts to comply with the applicable noise regulations of the City of Escondido Municipal Code. Potential impacts will also be assessed for significance per the California Environmental Quality Act (CEQA).

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated "dBA," to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol " L_{EQ} ." Unless a different time period is specified, " L_{EQ} " is implied to mean a period of one hour. Some of the data may also be presented as octave-band-filtered and/or A-octave-band-filtered data, which are a series of sound spectra centered about each

stated frequency, with half of the bandwidth above and half of the bandwidth below each stated frequency. This data is typically used for machinery noise analysis and barrier calculations.

Sound pressure is the actual noise experienced by a human or registered by a sound level instrument. When sound pressure is used to describe a noise source, the distance from the noise source must be specified in order to provide complete information. Sound power, on the other hand, is a specialized analytical metric to provide information without the distance requirement, but it may be used to calculate the sound pressure at any desired distance.

2.1 Project Description

The proposed project, Apollo Senior Care, consists of the demolition of existing structures on site and the construction of a new three-story senior care facility. The facility will include 55 assisted living units and 25 memory care units. The total building area is 60,277-square feet. For additional project details, please refer to the project plans provided in Appendix A.

The project site is surrounded by sites zoned Specific Plan (S-P) to the north (across Hidden Trails Road) and east, Residential Estates (R-E) or S-P to the south, and Single-Family Residential (R-1) to the west, across Valley Parkway. Areas zoned S-P are part of the East Grove Specific Plan and are designated for residential or otherwise noise-sensitive use.

2.2 Project Location

The project site is located at 3141 East Valley Parkway in the City of Escondido, California. The Assessor's Parcel Numbers (APN) for the property are 240-110-54, -55, and -56. The site is currently occupied by an existing residence, which will be demolished. For a graphical representation of the site, please refer to the Vicinity Map, Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map, provided as Figures 1 through 4, respectively.

2.3 Applicable Noise Regulations

According to the Escondido Municipal Code, Section 17-229, average hourly noise levels shall not exceed 50 dBA L_{EQ} between the hours of 7 a.m. and 10 p.m. and 45 dBA L_{EQ} between the hours of 10 p.m. and 7 a.m. at residential zones. These noise limits have been applied to noise impacts generated at the project site by HVAC equipment.

Additionally, Section 17-234 of the City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. During permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time, unless a variance has been obtained in advance from the city manager.

For pertinent sections of the City of Escondido Municipal Code, please refer to Appendix B.

3.0 ENVIRONMENTAL SETTING

3.1 Existing Noise Environment

Long-term noise monitoring was conducted near the rear portion of the proposed building on the project site, approximately 430 feet and 280 feet from the centerlines of Valley Parkway and Hidden Trails Road, respectively. Noise monitoring was performed between May 8 and May 9, 2019 to establish the existing ambient noise conditions at the site. The long-term noise monitor was placed at a height of approximately 4 feet above the existing grade. The results of the ambient noise monitoring are shown in Table 1. Please refer to Figure 5 for a graphical representation of the ambient noise measurement location.

Table 1. Long-Term Ambient Noise Monitoring Results		
Date	Time	Noise Level (dBA)
May 8, 2019	1 p.m. – 2 p.m.	52.5
	2 p.m. – 3 p.m.	52.7
	3 p.m. – 4 p.m.	54.4
	4 p.m. – 5 p.m.	53.8
	5 p.m. – 6 p.m.	53.9
	6 p.m. – 7 p.m.	53.4
	7 p.m. – 8 p.m.	51.6
	8 p.m. – 9 p.m.	50.4
	9 p.m. – 10 p.m.	50.1
	10 p.m. – 11 p.m.	47.5
	11 p.m. – 12 a.m.	44.7
May 9, 2019	12 a.m. – 1 a.m.	44.5
	1 a.m. – 2 a.m.	47.5
	2 a.m. – 3 a.m.	42.6
	3 a.m. – 4 a.m.	43.2
	4 a.m. – 5 a.m.	46.7
	5 a.m. – 6 a.m.	51.1
	6 a.m. – 7 a.m.	52.8
	7 a.m. – 8 a.m.	51.6
	8 a.m. – 9 a.m.	52.0
	9 a.m. – 10 a.m.	55.0
	10 a.m. – 11 a.m.	53.1
	11 a.m. – 12 p.m.	52.2
	12 p.m. – 1 p.m.	53.6
	1 p.m. – 2 p.m.	54.6
	2 p.m. – 3 p.m.	54.0

As shown above in Table 1, the ambient noise levels on the project site ranged from 42.6 dBA between the hours of 2 a.m. and 3 a.m. on May 9 to 55.0 dBA between the hours of 9 a.m. and 10 a.m. on May 9.

3.2 Future Noise Environment

The future noise environment in the vicinity of the project site will be primarily a result of the same ambient noise sources, as well as the noise generated by the proposed uses at the project site.

3.2.1 Mechanical Equipment On-Site

Mechanical equipment on site is expected to consist of roof-mounted HVAC units and a kitchen exhaust fan. While detailed mechanical equipment information was not available at the time this study was conducted, according to Joe Holasek, approximately 20 VRF units would be used at the project site. Typical VRF units were therefore selected based on the square footage of the building. It is expected that the HVAC units servicing the building will be comparable to 20 Mitsubishi Electric City Multi PURY-P72 (6-ton) units. Sound pressure levels for the units, measured at a distance of 3.3 feet (1 meter) from equipment, were provided by the manufacturer, and are shown in Table 2 below.

Table 2. Sound Pressure Level Spectrum for Mitsubishi PURY-P72 Units, At 3.3 Feet									
Source	Sound Pressure Level at Octave Band Frequency (dBA)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	
PURY-P72 Unit	65.0	63.5	61.0	54.5	51.5	47.0	40.5	37.5	58.0

In addition to the HVAC units on site, an exhaust fan will likely be needed for the kitchen. Detailed equipment information was not available at the time this study was prepared, and for this reason, a typical exhaust fan that would be used for a restaurant kitchen was incorporated into the analysis. The typical fan selected was the CUBE-300XP exhaust fan, manufactured by Greenheck. Sound power data was provided by the manufacturer and is shown in Table 3.

Table 3. Sound Power Level Spectrum for Greenheck CUBE-300XP Exhaust Fan									
Source	Sound Pressure Level at Octave Band Frequency (dBA)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	
CUBE-300XP	81	85	82	80	76	73	67	63	82

Operational mechanical noise levels have been calculated for the project site using the above information. Results of this analysis are provided in Section 5.1.1. For further details on the mechanical equipment, please refer to Appendix D.

3.2.2 Project-Generated Traffic

The proposed project is anticipated to generate approximately 253 Average Daily Trips (ADT) in the vicinity of the project site, according to the project traffic study, prepared by Reliable Data Collection, LLC and dated July 25, 2019. The impacts of project-generated traffic noise have been assessed using this trip generation value and the following existing traffic volumes, provided in the form of either counts in the SANDAG Transportation Data Average Traffic Volume database, or projections in the SANDAG Series 13 Transportation Forecast Information Center (see references).

- Valley Parkway, North of El Norte Parkway: 29,700 ADT (2014 count)
- Valley Parkway, South of El Norte Parkway: 20,900 ADT (2012 count)
- El Norte Parkway: 6,800 ADT (2012 count)
- Hidden Trails Road: 1,200 ADT (Series 13 2012 projection)

The analysis of project-generated traffic noise is provided in Section 5.1.2.

3.2.3 Temporary Construction Equipment

In order to evaluate anticipated temporary construction noise impacts, typical assumptions have been made regarding stages of construction and equipment to be used. Although no equipment list has been provided for the site, the equipment listed in Table 4 is typical of what is expected to be used on site based on the information provided and professional experience. Unless otherwise noted, construction equipment noise levels were obtained from the DEFRA Construction Equipment Noise Database (see reference).

Table 4. Typical Construction Stages and Equipment Noise Levels			
Stage of Construction	Equipment	Duty Cycle (%)	Noise Level, at 50 feet (dBA)
Grading/Demolition	Backhoe	40	64.3
	Excavator	40	74.3
	Dump Truck	40	75.3
	Dozer	40	71.3
	Water Truck*	40	74.4
Roadway Improvements	Backhoe	40	64.3
Foundations	Concrete Mixer Truck	40	71.3
	Concrete Pump	20	71.3
Paving	Paver	50	71.3
	Roller	20	69.3

*Source: Eilar Associates, Inc. noise measurements performed for Brutoco Engineering & Construction, Inc. for the Orange Line Extension Project, Metro Contract #C0943, City of Los Angeles, California.

These noise levels have been incorporated into the temporary construction noise analysis for the site, provided in Section 5.2.

4.0 METHODOLOGY AND EQUIPMENT

4.1 Methodology

4.1.1 Cadna Noise Modeling Software

Modeling of the outdoor noise environment is accomplished using Cadna Version 2019, 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 alleviation 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. Noise standards used by Cadna that are particularly relevant to this analysis include ISO 9613 (Attenuation of sound during propagation outdoors). Cadna provides results that are in line with basic acoustical calculations for distance attenuation and barrier insertion loss.

4.1.2 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:

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

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.

Project-Generated Traffic Noise Impacts

Changes in traffic noise levels can be predicted by inputting the ratio of the two scenarios into the following logarithmic equation:

$$\Delta = 10 \log(V_2/V_1)$$

where: Δ = Change in sound energy,
 V_1 = original or existing traffic volume, and
 V_2 = future or cumulative traffic volume.

4.2 Measurement Equipment

The following equipment was used at the site to measure existing noise levels:

- Larson Davis Model 720 Type 2 Sound Level Meter, Serial # 0312
- Larson Davis Model CA150 Calibrator, Serial # 5954
- Microphone with windscreen, tripods

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.

5.0 IMPACTS AND MITIGATION

5.1 Permanent Project-Related Noise Impacts

5.1.1 Mechanical Equipment Noise

Noise levels from rooftop HVAC units and the kitchen exhaust fan were calculated in Cadna at the nearest properties using data presented in Section 3.2.1. All equipment was assumed to be in constant operation for 100 percent of the time, although in actuality, equipment will only operate intermittently. Calculations consider the topography of the surrounding area as well as shielding that would be provided by the proposed on-site structure, with the exception of any parapet walls. For this reason, the analysis is considered to represent a conservative estimate of noise impacts at off-site receivers.

Table 5 shows the project-related mechanical noise impacts at surrounding receivers. All receivers have been calculated at a height of five feet above their respective grade. Additional information is provided in Appendix D: Cadna Analysis Data and Results. For a graphic showing mechanical equipment noise contours and receiver locations, please refer to Figure 6.

Table 5. Project-Related Mechanical Noise Impacts			
Receiver	Description	Noise Limit (dBA)	Noise Level (dBA)
R1	North Property Line	45	28.2
R2	South Property Line	45	41.5
R3	East Property Line	45	34.4
R4	West Property Line	45	25.7

As shown above, noise levels at adjacent property lines are anticipated to comply with the applicable nighttime noise limits of the City of Escondido with the project as currently designed. For

these reasons, no mitigation is deemed necessary to reduce noise impacts from rooftop mechanical equipment.

5.1.2 Project-Generated Traffic Noise

As detailed herein, the proposed project is anticipated to generate approximately 253 ADT on surrounding roadways. The project does not exceed the thresholds above which a detailed traffic impact analysis would be prepared. For a worst-case analysis of project-generated traffic noise, the anticipated project traffic has been added to each surrounding roadway's existing traffic volume to determine the anticipated increase in noise levels along each roadway resulting from the addition of project traffic. A significant impact is generally expected to be an increase of three decibels. Project-generated traffic noise increases are shown in Table 6.

Table 6. Anticipated Traffic Noise Increases with Project-Generated Traffic			
Roadway	Traffic Volume (ADT)		Noise Level Increase (dB)
	Existing	Existing + Project	
Valley Parkway, North of El Norte Parkway	29,700	29,953	0.0
Valley Parkway, South of El Norte Parkway	20,900	21,153	0.1
El Norte Parkway	6,800	7,053	0.2
Hidden Trails Parkway	1,200	1,453	0.8

As shown in Table 6, based on the minimal amount of traffic generated by the project, the increase in noise levels on surrounding roadways will be well below the three-decibel threshold of significance. Project-generated traffic noise levels are therefore less than significant.

5.2 Temporary Construction Noise Impacts

The City of Escondido states that, during permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time. It is assumed that this noise standard would be applied at surrounding noise-sensitive property lines.

Estimated construction noise impacts have been calculated assuming the typical stages and pieces of equipment shown in Table 4. Noise levels were calculated using Cadna with equipment placed at various locations around the project site to account for varying noise levels as equipment moves around the site. Noise levels have been calculated along the south property line of the project site, as these locations represent the nearest potentially affected receivers. Any other potentially affected receivers are located at a greater distance from the project site, and therefore would be subject to lower noise impacts due to additional distance attenuation or shielding provided by intervening structures or topography.

Calculated construction noise impacts are shown in Table 7. Graphics showing anticipated construction noise contours during each stage of operation are provided as Figures 7 through 10. Please refer to Appendix D for additional information.

Table 7. Temporary Construction Noise Levels at Surrounding Properties				
Stage	Equipment	Receiver Location	Distance from Center of Activity (ft)	Average Hourly Noise Level (dBA)
Grading/Demolition	Backhoe, Excavator, Dump Truck, Dozer, Water Truck	C1 (Southwest)	158	66.4
		C2 (Southeast)	57	74.8
Roadway Improvements	Backhoe	C1 (Southwest)	27	65.0
		C2 (Southeast)	245	43.9
Foundations	Concrete Mixer Truck, Concrete Pump	C1 (Southwest)	265	55.1
		C2 (Southeast)	57	67.8
Paving	Paver, Roller	C1 (Southwest)	27	74.6
		C2 (Southeast)	225	56.5

As shown in Table 7, based on the typical noise levels and duty cycles of construction equipment, average hourly noise levels are anticipated to remain at or below 75 dBA at the nearest noise-sensitive property lines. Any other noise-sensitive properties are located at a greater distance from on-site activity and therefore would be exposed to lesser noise levels. It should be noted that actual occupied residential structures are located at a significant distance beyond the calculated property line receiver locations, thereby further reducing construction noise levels at actual sensitive receiver locations.

Despite the fact that noise impacts are expected to remain in compliance with the construction noise limit of the City of Escondido, the following “good practice” measures should still be practiced as a courtesy to residential neighbors.

1. Staging areas should be placed as far as possible from residential receivers.
2. Place stationary equipment in locations that will have a lesser noise impact on nearby sensitive receivers.
3. Turn off equipment when not in use.
4. Limit the use of enunciators or public address systems, except for emergency notifications.
5. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured, to prevent rattling and banging.
6. Schedule work to avoid simultaneous construction activities that both generate high noise levels.
7. Use equipment with effective mufflers.

8. Minimize the use of backup alarms.

With operating hours limited to those permitted by the City of Escondido and adherence to the general good practice construction noise control techniques, temporary construction noise impacts are expected to be less than significant at surrounding properties.

5.3 CEQA Significance Determination

Noise impacts from the project site are summarized below and classified per the noise portion of the CEQA Environmental Checklist form. This list summarizes conclusions made within the report and classifies the level of significance as: Potentially Significant Impact, Less than Significant with Mitigation Incorporated, Less than Significant Impact, or No Impact.

Italics are used to denote language from the CEQA Environmental Checklist form.

XII. *NOISE—Would the project result in:*

- a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant Impact. Operational noise impacts calculated in Section 5.1.1 are not expected to generate a substantial permanent increase in ambient noise levels in the vicinity of the project site. A substantial increase would be considered an increase of three decibels or more, which would represent a doubling of sound energy.

In order to demonstrate this fact, minimum measured ambient noise levels have been compared to the calculated noise impacts of the rooftop equipment. Results are shown in Table 8. Please refer to Figure 5 for a graphic showing the noise monitoring location and to Figure 6 for the mechanical equipment noise contours and receiver locations.

Table 8. Operational Noise Impacts Compared to Minimum Ambient Noise Levels					
Receiver	Description	Noise Level (dBA)			
		Minimum Existing Ambient	Operational Noise Impacts	Ambient + Operational	Increase
R1	North Property Line	42.6	28.2	42.8	0.2
R2	South Property Line	42.6	41.5	45.1	2.5
R3	East Property Line	42.6	34.4	43.2	0.6
R4	West Property Line	42.6	25.7	42.7	0.1

As demonstrated in Table 8, the increase in ambient noise levels is not expected to exceed the three-decibel threshold of significance, and therefore, this impact is considered to be less than significant.

Additionally, as demonstrated in Section 5.1.2 of this report, noise impacts from project-generated traffic are not expected to cause a significant increase (greater than three decibels) on any surrounding roadway. This impact is also considered to be less than significant.

As shown in Section 5.2 of this report, noise from temporary construction is expected be less than significant considering the anticipated construction schedule and assuming that equipment is maintained in proper operating condition and using appropriate mufflers. Noise impacts from anticipated construction activity are expected to remain at or below the 75 dBA construction noise limit set by the City of Escondido. It is also unlikely that noise from temporary construction activity will cause a significant increase in ambient noise levels at actual sensitive receiver locations beyond property lines, due to high levels of traffic noise from Valley Parkway. Additionally, no construction activity will take place during the more sensitive nighttime hours when ambient noise levels tend to be lower, as per City of Escondido requirements. For these reasons, this impact is deemed to be less than significant.

As demonstrated above, the project is not expected to cause a substantial permanent or temporary increase in ambient noise levels, and therefore, this impact can be classified as less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Proposed construction phases for this project are not expected to include any significant vibration-inducing equipment, such as pile driving or heavy soil compaction. As these types of equipment will not be present, excessive levels of groundborne vibration and groundborne levels are not expected to be received by any persons.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is not located within an airport land use plan nor is it located within two miles of a private airstrip, public airport, or public use airport. Therefore, the proposed project would not expose people working in the project area to excessive noise levels from such uses.

6.0 CONCLUSION

Noise from the anticipated rooftop HVAC equipment and kitchen exhaust fan has been calculated to determine impacts at off-site receivers. Calculations show that noise levels from the rooftop mechanical equipment will be in compliance with the City of Escondido noise regulations found within the Municipal Code. No mitigation is deemed necessary to control project-generated noise impacts from mechanical equipment.

The proposed project is expected to add approximately 253 ADT to surrounding roadways. Considering the existing traffic volumes present on roadways in the vicinity of the project site, project-generated traffic noise is expected to be less than significant.

The City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday during a week between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. An analysis of temporary construction noise considering typical and anticipated activity on site demonstrates that construction noise impacts are expected to remain at or below an hourly average noise level of 75 dBA at surrounding residential properties. Provided construction is limited to the allowable hours of the City of Escondido and equipment is maintained in proper working condition, temporary noise impacts are expected to be less than significant. No mitigation is deemed necessary for the attenuation of temporary noise impacts.

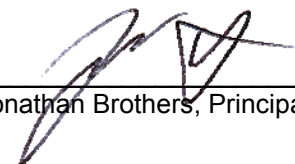
The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts to and from the project site are summarized in Section 5.3.

7.0 CERTIFICATION

All recommendations for noise control are based on the best information available at the time our consulting services are provided. However, as there are many factors involved in sound transmission, and Eilar Associates has no control over the construction, workmanship or materials, Eilar Associates is specifically not liable for final results of any recommendations or implementation of the recommendations.

This report is based on the related project information received and measured noise levels, and represents a true and factual analysis of the acoustical impact issues associated with the Apollo Senior Care project to be located at 3141 East Valley Parkway in the City of Escondido, California. This report was prepared by Amy Hool and Jonathan Brothers.

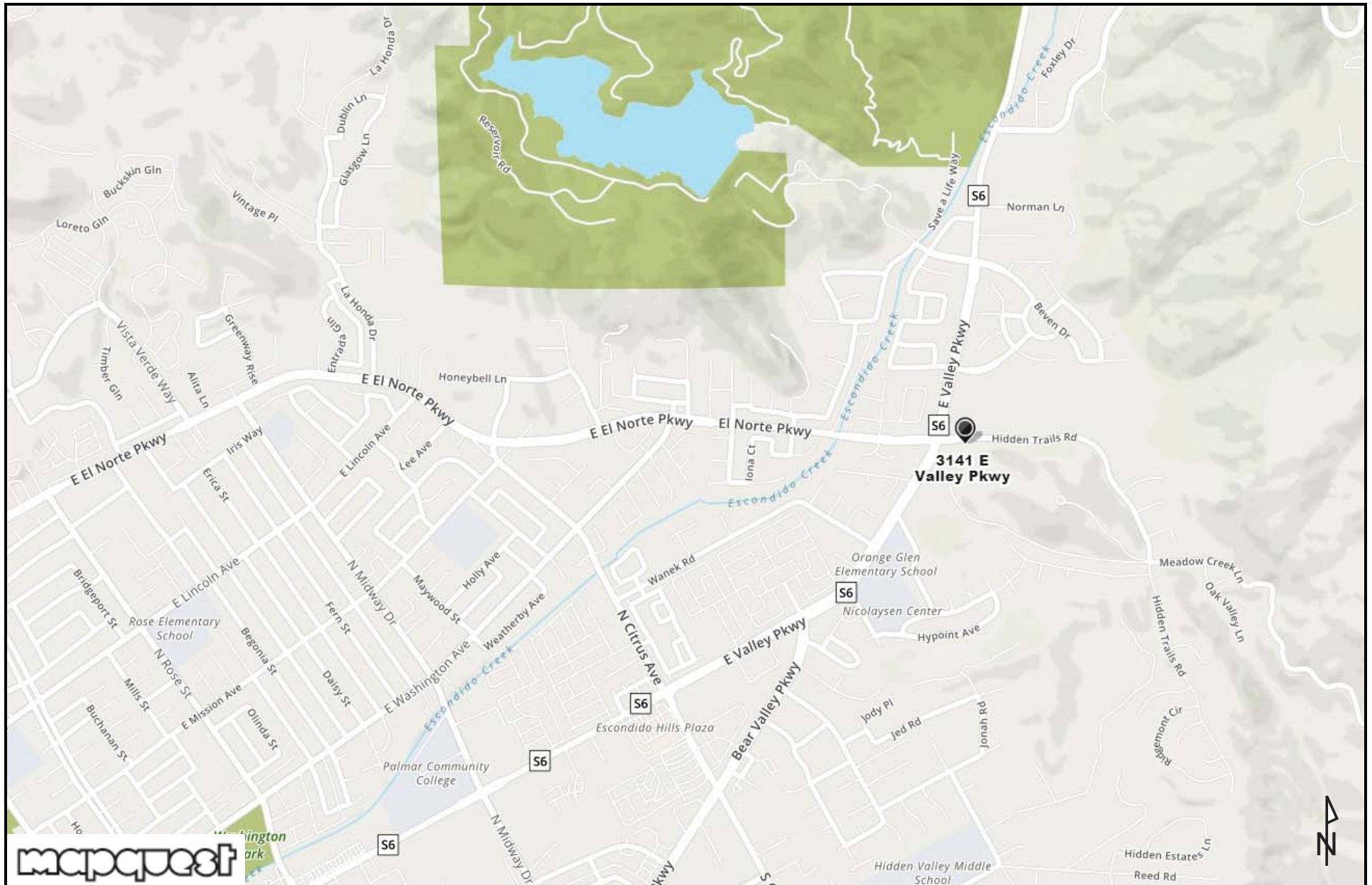

Amy Hool, Senior Acoustical Consultant


Jonathan Brothers, Principal Acoustical Consultant

8.0 REFERENCES

1. City of Escondido Municipal Code, Article 12. Noise Abatement and Control.
2. California Environmental Quality Act (CEQA), Statute and Guidelines, 2018.
3. Reliable Data Collection, LLC, Traffic Study for Proposed Multi-Residential Units Assisted Living/Memory Care Facility at 3141 East Valley Parkway, Escondido, CA, Dated July 25, 2019.
4. San Diego Association of Governments (SANDAG), Average Traffic Volumes – Local Jurisdictions, http://www.sandag.org/resources/demographics_and_other_data/transportation/adtv/index.asp.
5. San Diego Association of Governments (SANDAG), Transportation Forecast Information Center (TFIC), Series 13, <http://tfic.sandag.org/>.
6. Department for Environment Food and Rural Affairs (DEFRA), Update of Noise Database for Prediction of Noise on Construction and Open Sites, 2005.
7. DataKustik, CadnaA (Computer Aided Noise Abatement), Version 2019.

FIGURES



Eilar Associates, Inc.
 210 South Juniper Street, Suite 100
 Escondido, California 92025
 760-738-5570

Vicinity Map
Job # S190415

Figure 1



**San Diego County
Assessor's
Parcel Number:**

**240-110-54-00
240-110-55-00
240-110-56-00**

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025
760-738-5570

**Assessor's Parcel Map
Job # S190415**

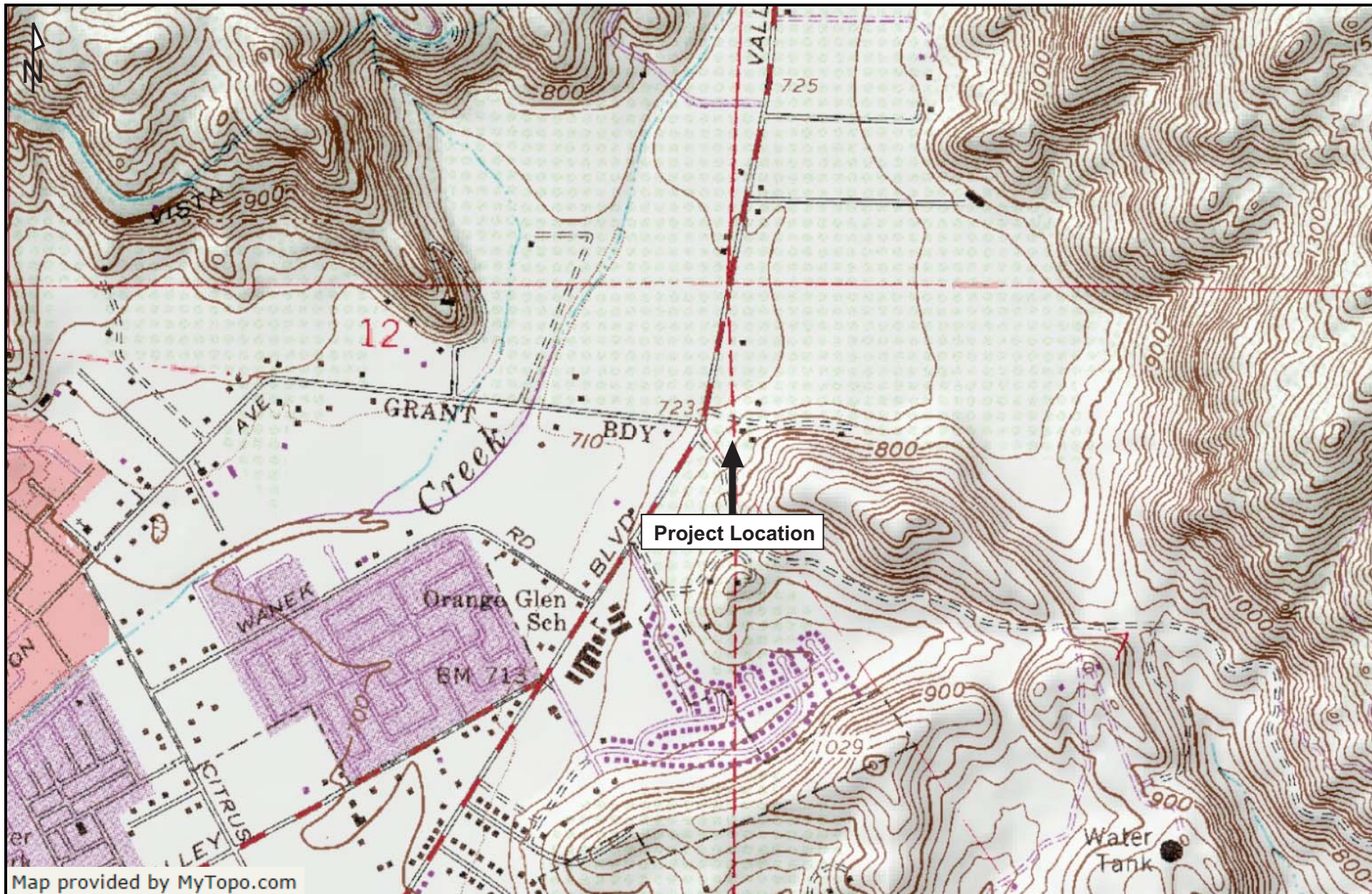
Figure 2



Eilar Associates, Inc.
 210 South Juniper Street, Suite 100
 Escondido, California 92025
 760-738-5570

Satellite Aerial Photograph
 Job # S190415

Figure 3



Eilar Associates, Inc.
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 760-738-5570

Topographic Map
 Job # S190415

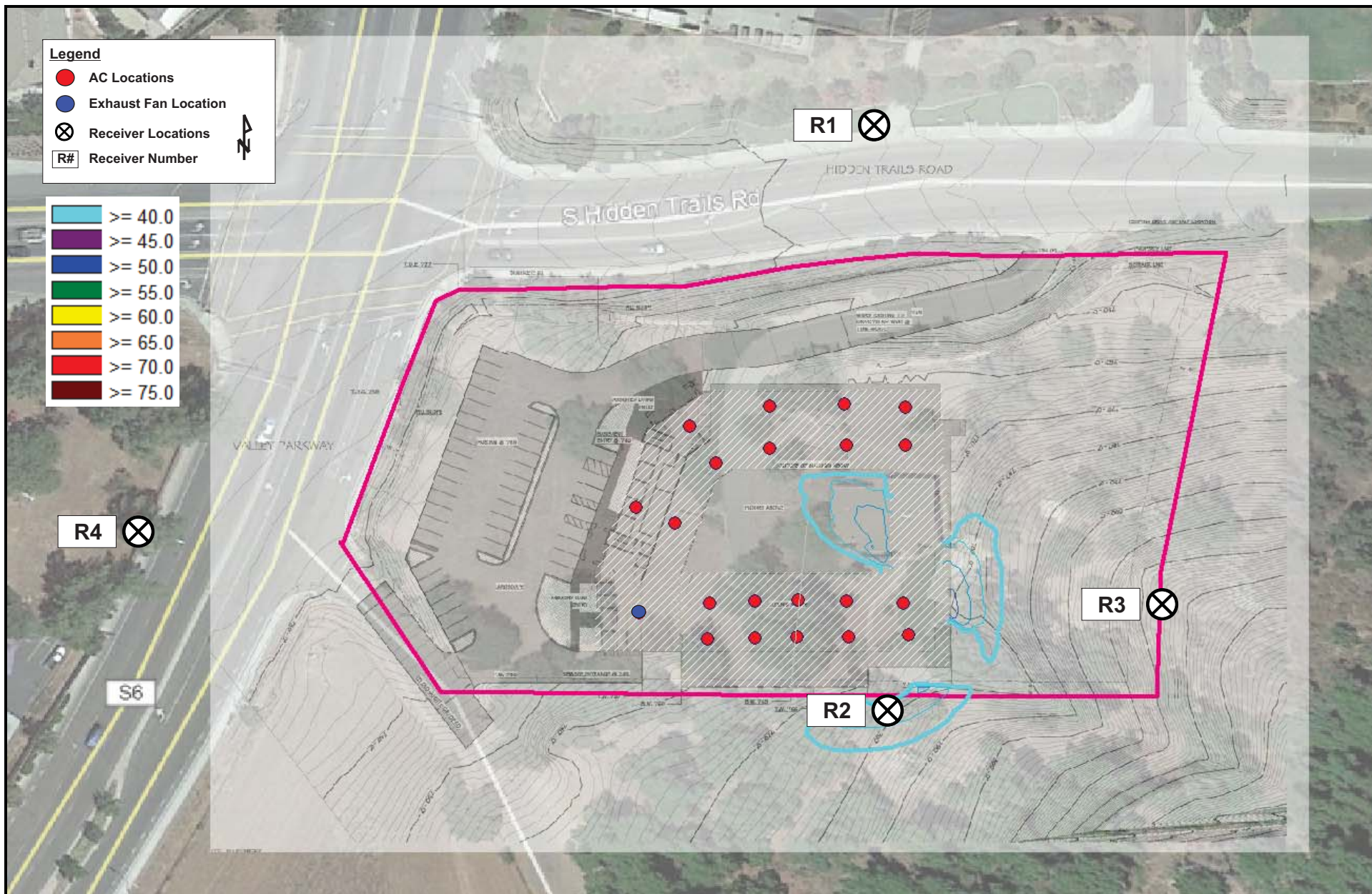
Figure 4



Eilar Associates, Inc.
 210 South Juniper Street, Suite 100
 Escondido, California 92025
 760-738-5570

Satellite Aerial Photograph Showing Noise Measurement Location
 Job # S190415

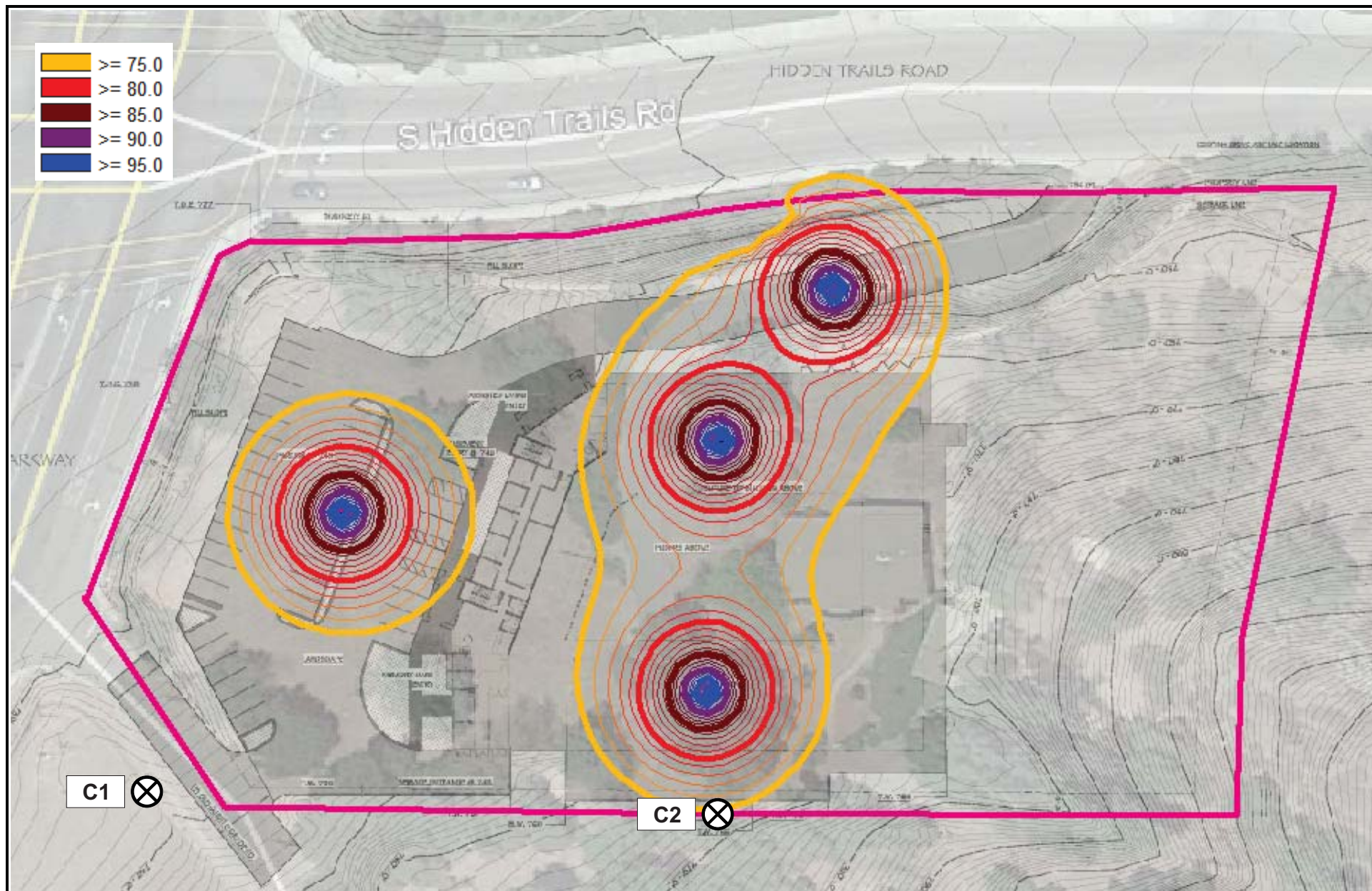
Figure 5



Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025
760-738-5570

Satellite Aerial Photograph Showing Mechanical
Equipment Noise Contours and Receiver Locations
Job # S190415

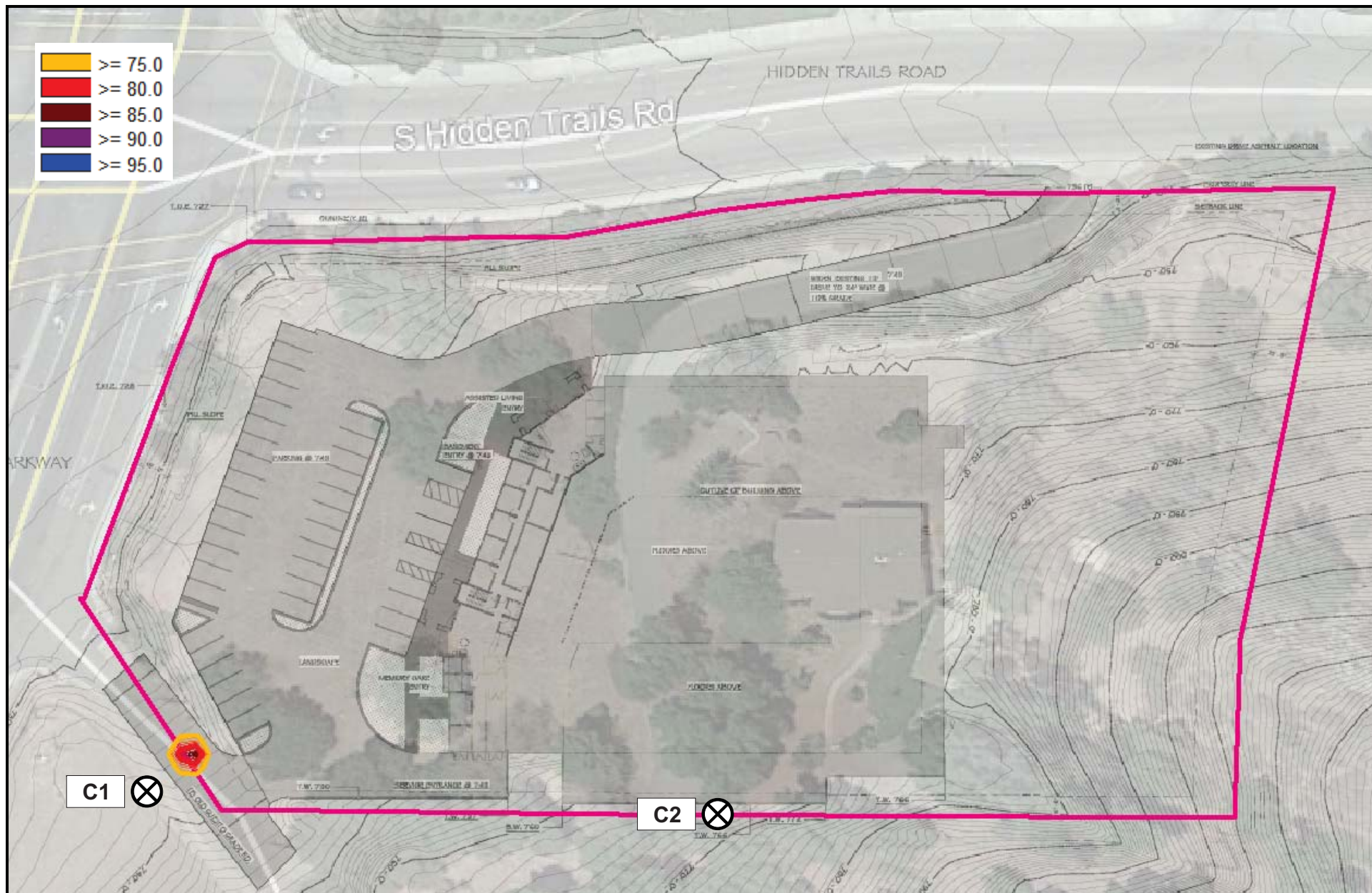
Figure 6



Eilar Associates, Inc.
 210 South Juniper Street, Suite 100
 Escondido, California 92025
 760-738-5570

Satellite Aerial Photograph Showing Construction
 Noise Contours and Receiver Locations - Grading
 Job # S190415

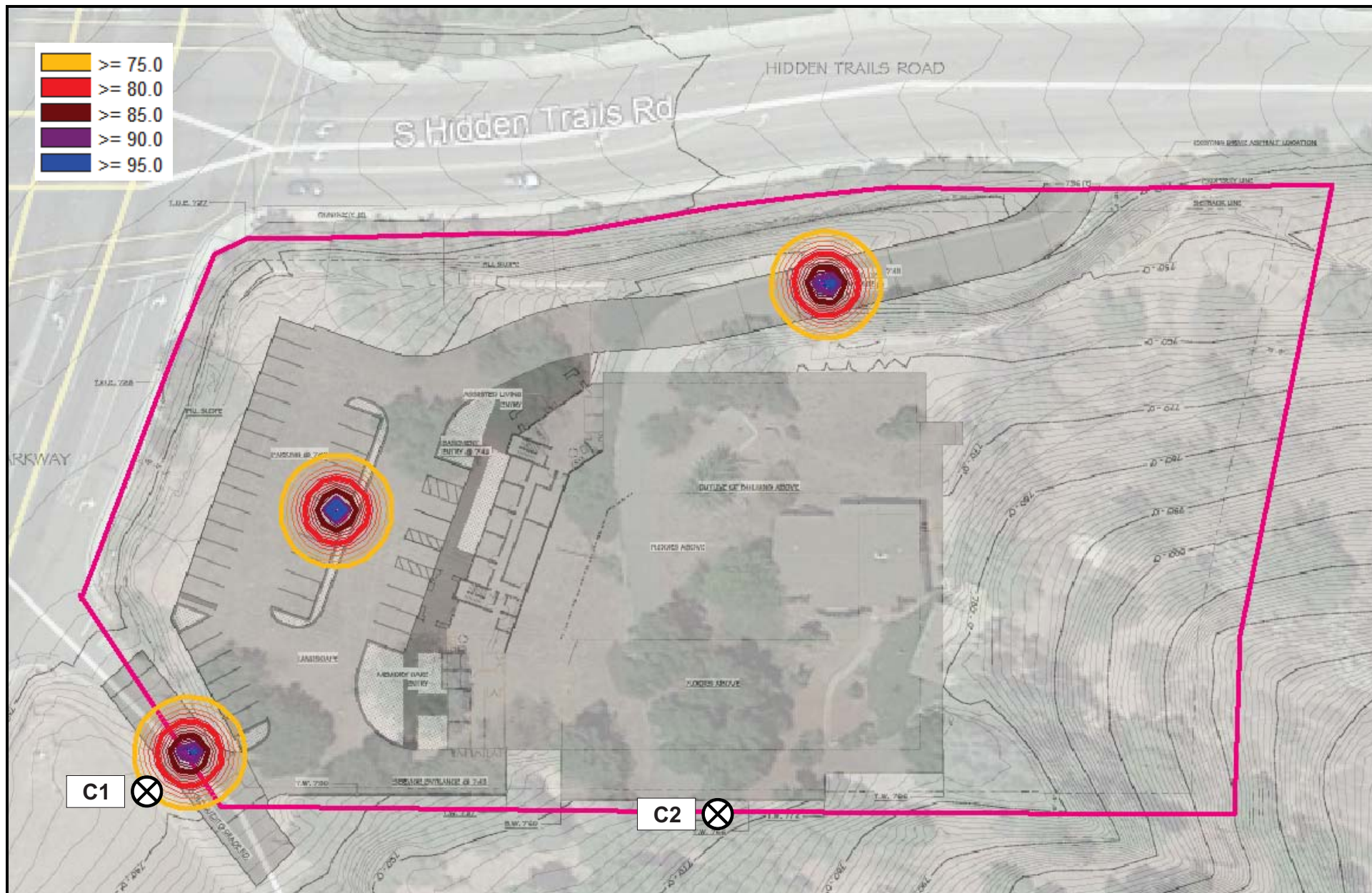
Figure 7



Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025
760-738-5570

Satellite Aerial Photograph Showing Construction Noise
Contours and Receiver Locations - Roadway Improvements
Job # S190415

Figure 8



Eilar Associates, Inc.
 210 South Juniper Street, Suite 100
 Escondido, California 92025
 760-738-5570

Satellite Aerial Photograph Showing Construction
 Noise Contours and Receiver Locations - Paving
 Job # S190415

Figure 10

APPENDIX A

Project Plans

THE USE AND PUBLICATION OF THESE PLANS, SPECIFICATIONS, AND DETAILS SHALL BE RESTRICTED TO THE ORIGINAL SITE AND PHASE FOR WHICH THEY WERE PREPARED AND TITLE THEREOF REMAINS IN THE ARCHITECT. USE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS PROHIBITED. VISUAL CONTACT CONSTITUTES ACCEPTANCE OF THESE RESTRICTIONS.

- [illegible]

[illegible]

	PROPERTY LINE		DETAIL CUT		RAU CRESCENT STEP
	PLUMBLINE (AC)		PARTIAL BUILDING SECTION		WALL MOUNTED LIGHT FEATURE
	EDGE OF OVERHUNG PLUMB		BUILDING SECTION		FINDMENT MOUNTED LIGHT FEATURE
	CENTER LINE		EXTENSION ELEVATION		SURFACE MOUNTED LIGHT FEATURE
	FACE OF BUILDING DIMENSION LIND		REGULAR		RECESSED LIGHT FEATURE
	CORNER DIMENSION LIND		REGULAR		NIGHT LIGHT
	PIE INCREASE		☒		EXIT SIGN
	NEW WINDOW		☒		Grip, Hold, Ceiling
	DOOR		☒		ACOUSTIC TILE CEILING
	NEW CONSTRUCTION NOTES				RECESSED PLUNGER CUT FEATURE
	DEMOLITION NOTES				2x4 STUD FOR SECTION
	INTERIOR ELEVATION				ONE STUD WALL



3141 E. VALLEY PARKWAY
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

COOLTRAC
E-2.1

PROPOSED LRP
R0FE

200000
200000

CONTACT:
AFOLIO BINDER CARE LLC
2661 FURNACE COURT
ESCONDIDO, CA 92029
ATTN: CHINTU PATEL
760-855-8547

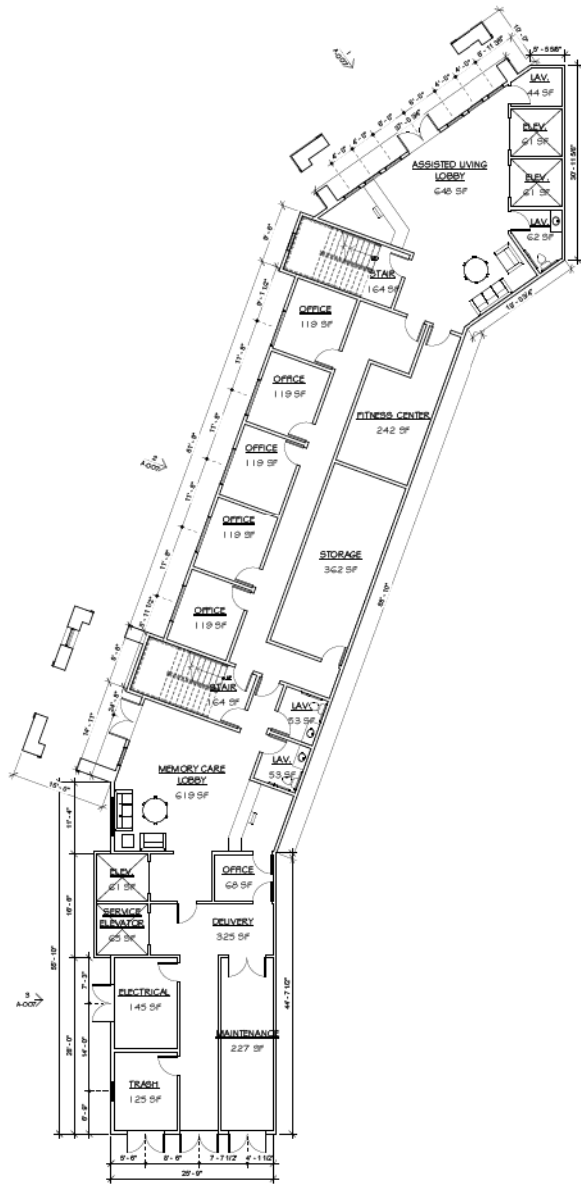
ARCHITECTURAL DESIGN TEAM:
HGA GROUP
4000 N. HARBOR DR., SUITE 2101
SAN DIEGO, CA 92106
CONTACT: JOE MOLARSKI

ARCHITECTURAL	
A-001	OUTER STREET ROADS
A-002	PAVEMENT FLOOR PLANS
A-003	FIRST FLOOR PLANS
A-004	SECOND FLOOR PLANS
A-005	THIRD FLOOR PLANS
A-006	ROOF PLANS
A-007	ELEVATIONS
A-008	SECTIONS
A-009	ALLOWABLE BUILDING HEIGHT TABULATION
A-010	SITE PLANS
CIVIL	
C-1	CONCEPTUAL GRADING PLANS
LANDSCAPE	
L-1	TITLE / LEGEND
L-2	PRELIMINARY LANDSCAPE PLAN

<u>ADULTS' LIVING</u>	STUDIO (30-6:57 SF)	3.4 UNITS
	ONE BEDROOM (510-556 SF)	2.1 UNITS
	TWO BEDROOM (627 SF)	1 UNIT
	TOTAL:	5.5 UNITS
<u>MEMBER CASE:</u>	STUDIO (30-6:5)	8 UNITS
	DOUBLE TWO (484 SF)	1.7 UNITS

<u>TRADING</u>	REGULAR	57 STOCKS
	MANAGED	3 STOCKS
	TOTAL	60 STOCKS

FLOOR & CLAMP FOOTAGE:	BAYMENT	5,035 SF
	1ST FLOOR	15,544 SF
	2ND FLOOR	26,062 SF
	Subtotal	46,641 SF
	TOTAL	60,277 SF



APOLLO - SENIOR CARE
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

REV	DATE	BY	CHK
1	02/20/19	ND	ND

REVISIONS

Project No.	Project Name
Project Start Date	Project End Date
Owner	Designer
Checker	Checker
Checker	Checker
Checker	Checker

**BASEMENT
FLOOR
PLAN**

Scale: 1/8" = 1'-0"
Sheet No:



A-002

3/20/2019 9:22:11 AM

1 BASEMENT
Ref A-001 / Scale: 1/8" = 1'-0"

APOLLO - SENIOR CARE
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

REV	DATE	BY
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Project No. Project Number		
Project Start Date Design Phase		
Owner Designer		
Checked by Checker		
Drawn by Drafter		

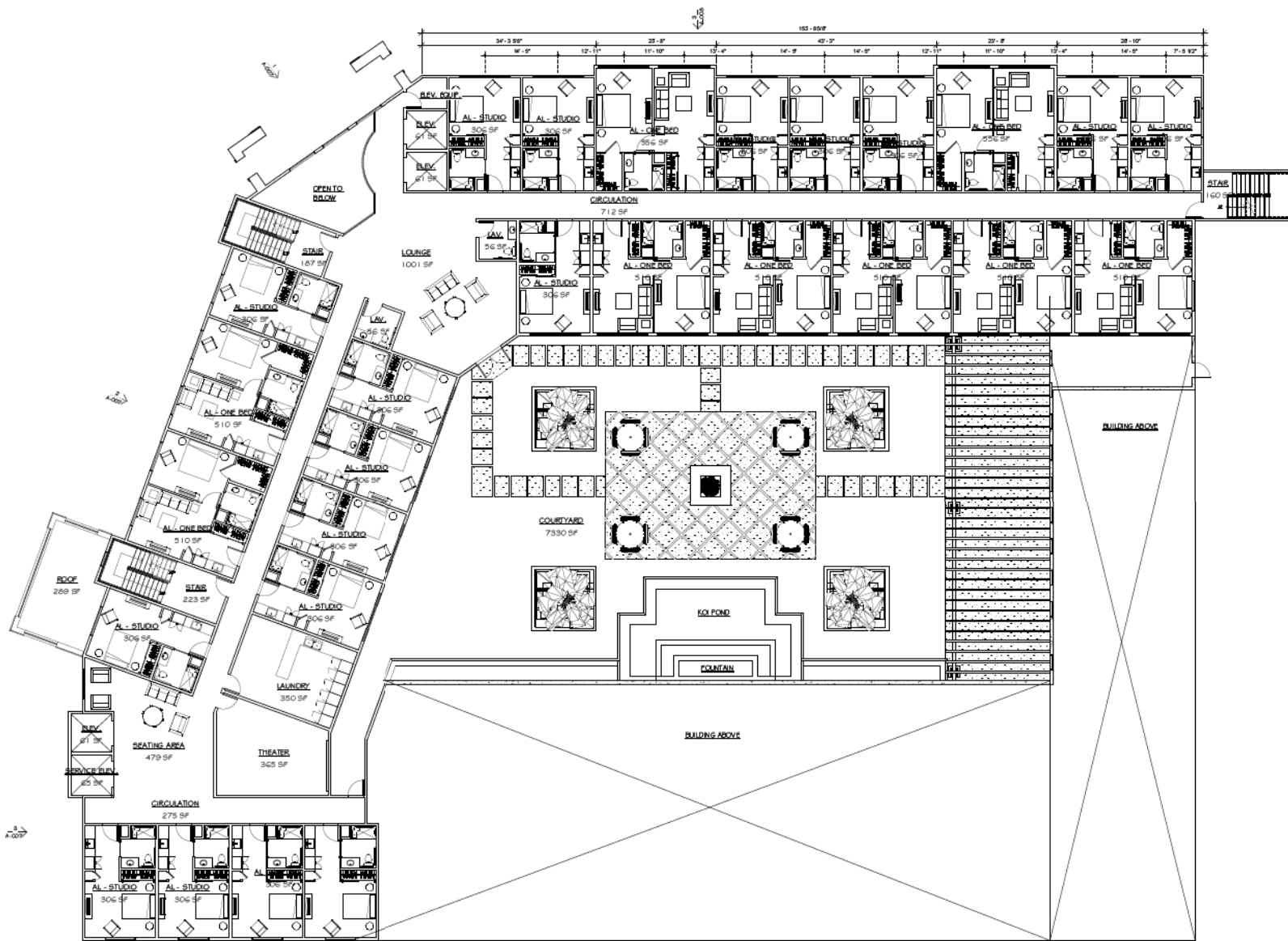
FIRST
FLOOR
PLAN

Scale: 1/8" = 1'-0"

Sheet No.

A-003

3/20/2018 9:22:15 AM



1ST FLOOR
Ref A-001 / Scale: 1/8" = 1'-0"

APOLLO - SENIOR CARE
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

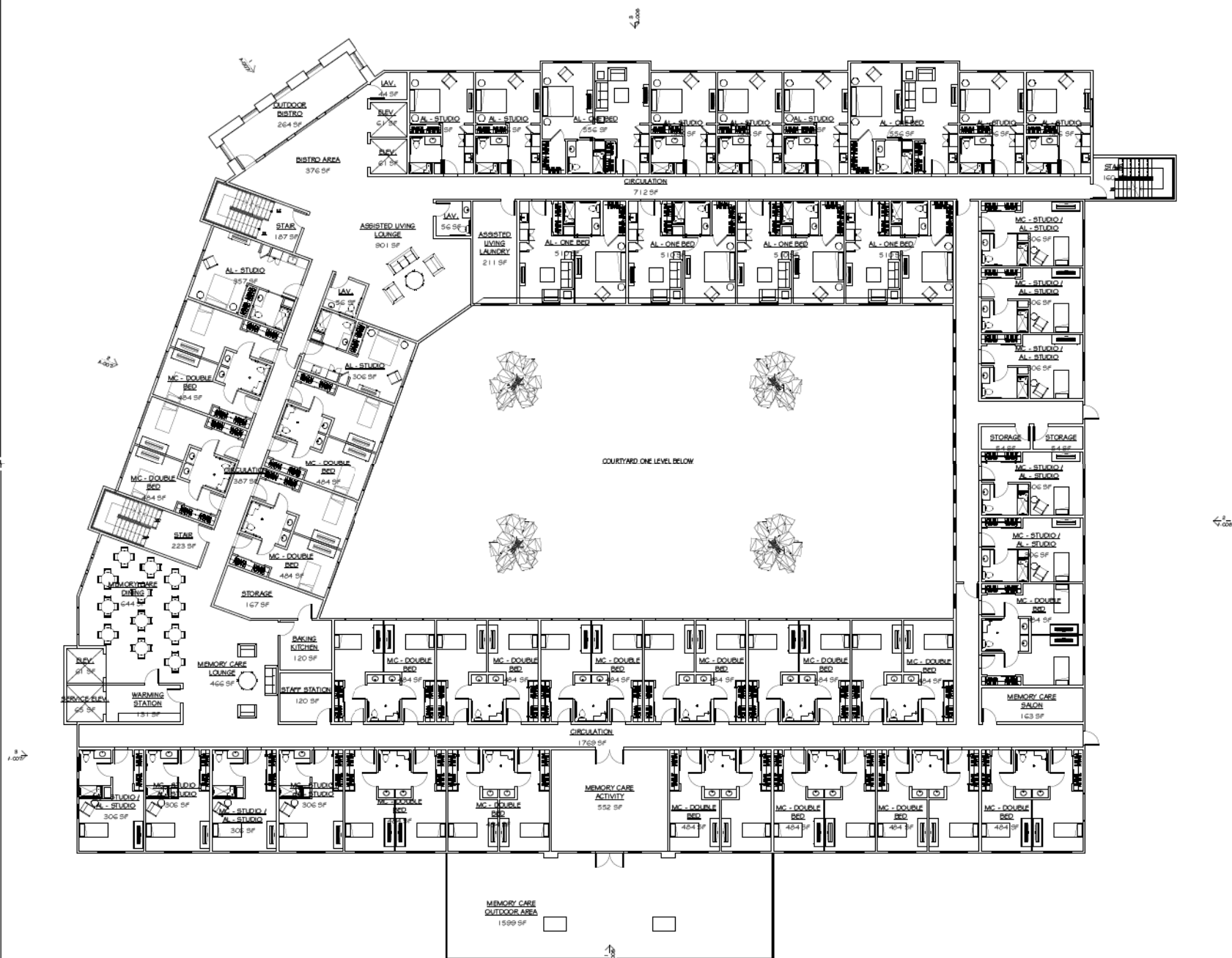
NO.	DATE	REVISION
REVISION HISTORY		
Project No.	Project Number	
Project Start Date	Issue Date	
Drawn	Designed	
Checked	Checked	
Revision		

SECOND FLOOR PLAN

Scale: $1\text{in}^2 = 1'-0"$
Sheet No:

A-004

3/20/2019 9:22:21 AM



APOLLO - SENIOR CARE
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

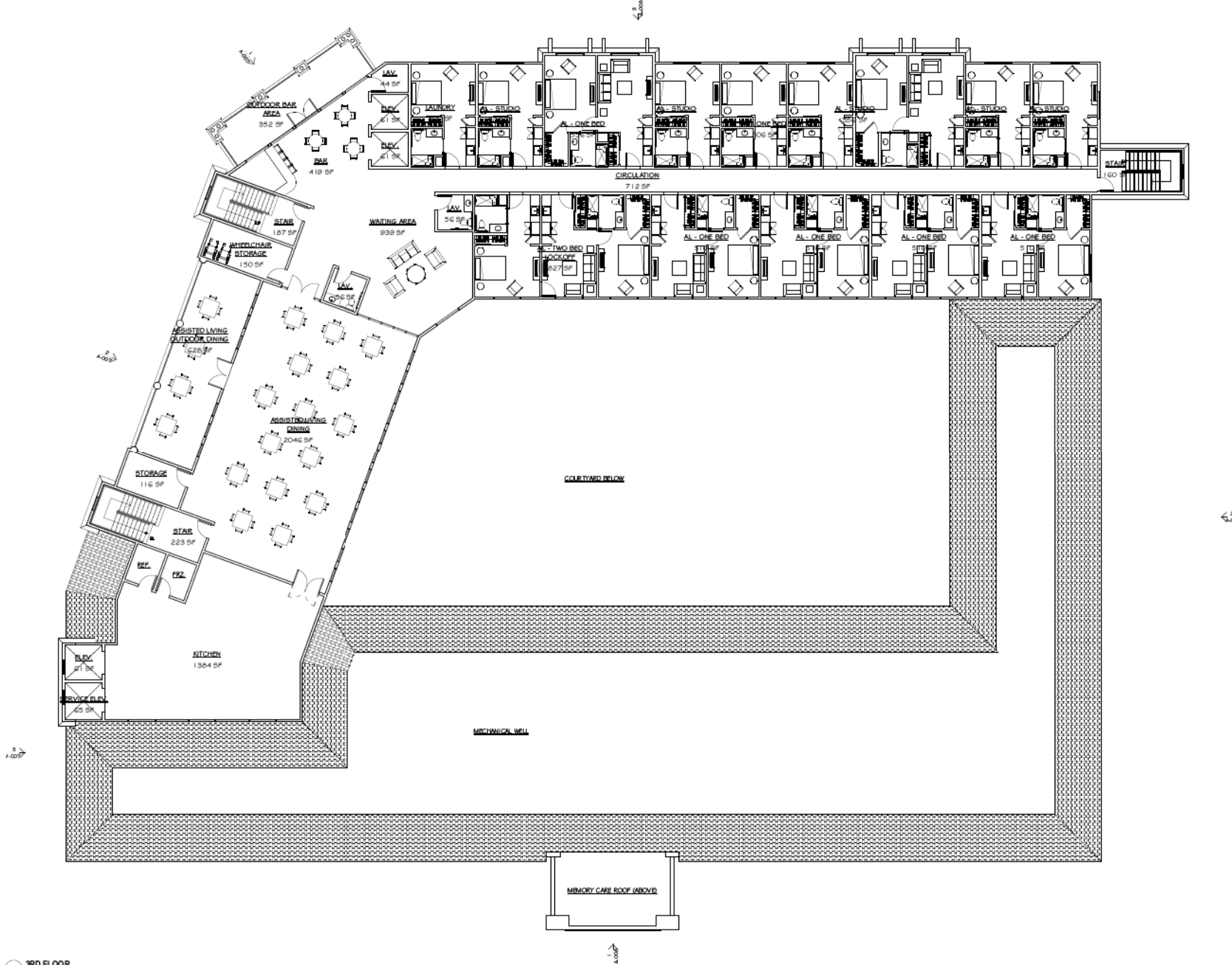
REV	DATE	BY
1	08/11/2017	NDAA
REVISIONS		
Project No.	Project Name	Project Location
Drawn	Checked	Reviewed
Author	Checker	Reviewer

THIRD
FLOOR
PLAN

Scale: 1/8" = 1'-0"
Sheet No:

A-005

3/20/2019 9:22:24 AM



APOLLO - SENIOR CARE
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ESCONDIDO, CA 92027

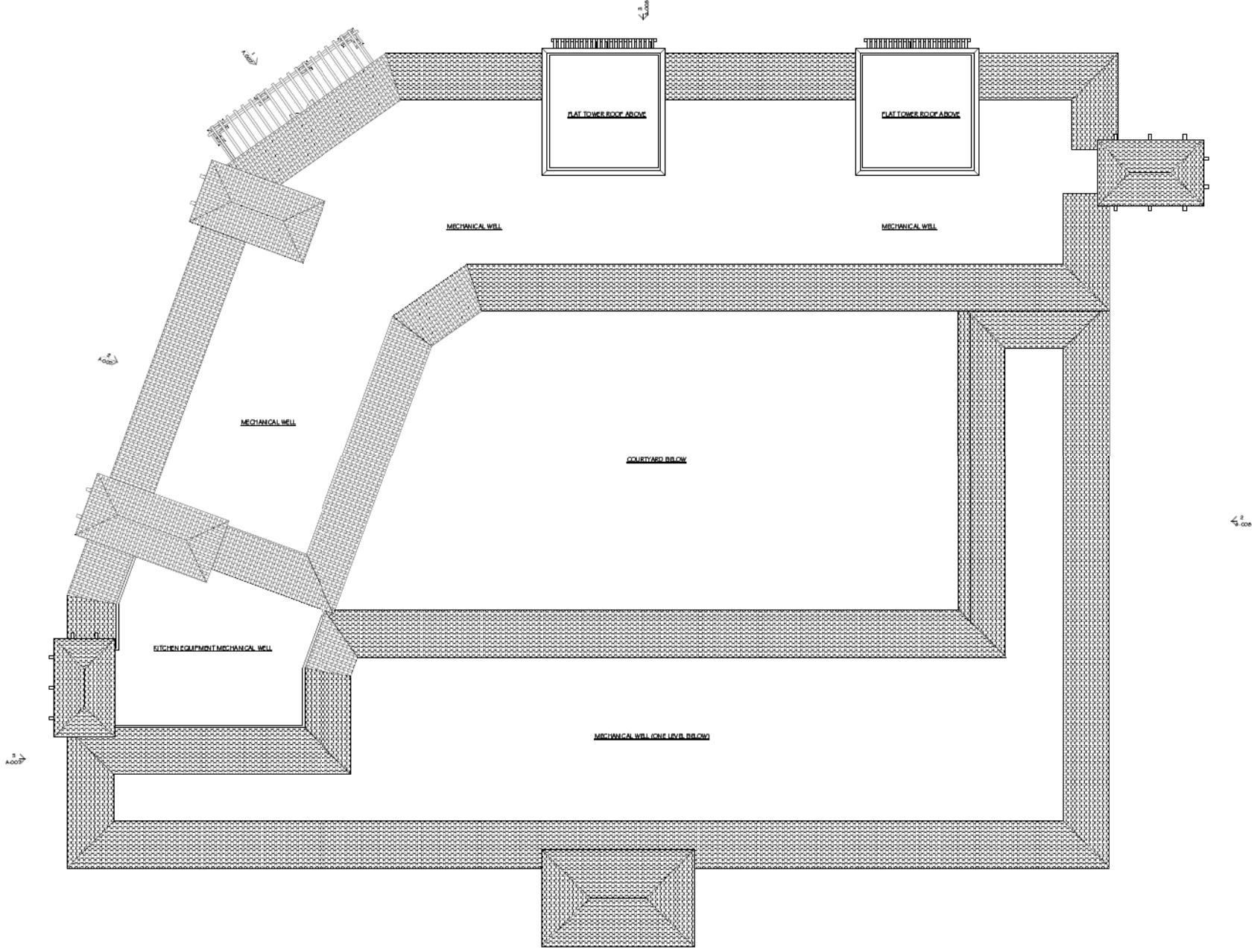
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PROJECT NO. 3141 E. VALLEY PARKWAY			
PROJECT START DATE: 11/11/98			
DESIGN: NDAA			
CHECKED: NDAA			
DRAWN: NDAA			

ROOF
PLAN

Scale: 1/8" = 1'-0"
Sheet No:

A-006

3/20/2019 9:22:28 AM



ELEVATION NOTES

1. CONCRETE S-FILL (FINI) PROFILE, COLOR TO BE MILD TAN/GRAVEL.
2. BRICK
3. HEAVY TAPER TRUSS, STAINED COLOR TO BE DARK BROWN.
4. PRECAST TWO-Piece CONCRETE COLUMN, COLOR TO BE NATURAL.
5. JELD REN VINYL CLAD WINDOWS, TFM COLOR TO BE BROWN.
6. METAL HAND RAILS AND POSTS, COLOR TO BE BROWN.
7. GRC CONCRETE MOUNTAIN, COLOR TO BE DARK SAND.
8. GRC MOUNTAIN CROWN TRAIL, COLOR TO BE BROWN.
9. GRC TRAIL, COLOR TO BE DARK SAND.
10. SAND FINISH STUCCO, COLOR TO BE SOFT WHITE.
11. DECORATIVE LIGHT FIXTURES, STAINLESS.
12. SAND FINISH STUCCO MOUNTAIN, COLOR TO BE DARK SAND.



1 AL ENTRANCE
Ref A-002 / Scale: 1/8" = 1'-0"



2 NORTH-WEST
Ref A-002 / Scale: 1/8" = 1'-0"



3 WEST
Ref A-002 / Scale: 1/8" = 1'-0"

APOLLO - SENIOR CARE
3141 E VALLEY PARKWAY
ESCONDIDO, CA 92027

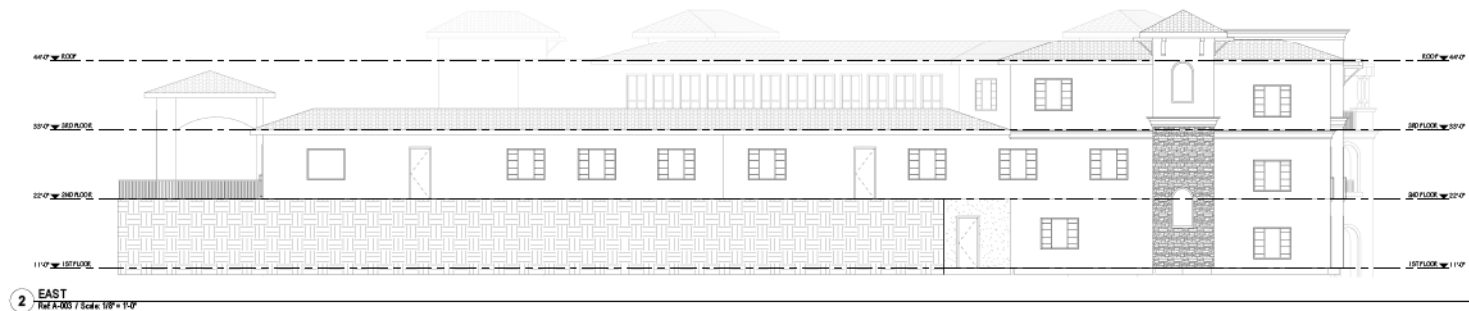
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3	08/11/2010	NDAA
4	08/11/2010	NDAA
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6	08/11/2010	NDAA
7	08/11/2010	NDAA
8	08/11/2010	NDAA
9	08/11/2010	NDAA
10	08/11/2010	NDAA
11	08/11/2010	NDAA
12	08/11/2010	NDAA

ELEVATIONS



ELEVATION NOTES

1. CONCRETE BLUE FINISH PROMINENT COLOR TO BE DARK TURQUOISE BLEND.
2. PAINT: INTERIOR, STAINED COLOR TO BE DARK BROWN.
3. PRECAST TWO-PIECE CONCRETE COLUMNS, COLOR TO BE NATURAL.
4. ADD METAL CLADDING PANELS, COLOR TO BE BROWN.
5. METAL GUARD RAILS AND FENCES, COLOR TO BE BROWN.
6. GRC CORNER PANELING, COLOR TO BE DARK GRAY.
7. GRC WINDOW / OPENING TRIM, COLOR TO BE BROWN.
8. GRC TRIM, COLOR TO BE DARK GRAY.
9. EUROPEAN-STYLE CLADDING.
10. SAND PEARL FINISH, COLOR TO BE LIGHT WHITE.
11. EUROPEAN-STYLE FINISHES, WHITE TRIM.
12. SAND PEARL FINISH, COLOR TO BE DARK GRAY.



APOLLO - SENIOR CARE
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

REV	DATE	BY	CHK
1	08/11/2010	MM	MM
REVISIONS			
Project No.	Project Name	Project Location	Project Date
Owner	Designer	Checker	Checker
Revised	Revised	Revised	Revised

ELEVATIONS

Scale: As indicated
Sheet No.

A-008
1/20/2010 9:22:39 AM



NORTH SIDE: (15)		EAST SIDE: (20)		TOTAL ELEVATION HEIGHTS: 585.25
	752.8		761	TOTAL ELEVATION POINTS: 77
	753.5		762.8	
	754.3		763.8	
	755.1		765.8	AVERAGE ELEVATION
	756.2		767.4	$58,528 / 77 = 760.06$
	757.5		768.2	
	758.5		769.3	ALLOWABLE HEIGHT = 39'-0"
	759.2		767.4	
	760		768.6	$760.06 + 39' = 799.06 \text{ MAXIMUM HEIGHT}$
	760.4		770.1	
	760.5		771	THE PROPOSED FINISH FLOOR IS AT 794'
	760.5		771.3	AND THE PROPOSED BUILDING HEIGHT
	760.5		773.4	+/- TALL AT ITS TALLEST POINT, INCLUDE
	760.6		775	MECHANICAL WELLS, WHICH IS AT 794'
	<u>760.6</u>		776.4	794 < 799, THEREFORE OK
TOTAL:	11,370.2		777.2	
			777.8	
SOUTH SIDE: (20)	750.7		778.3	
	751.6		777.1	
	752.1	TOTAL:	<u>775.6</u>	
	753.3		1,541.5	
	754.1			
	755.4	WEST SIDE: (20)	748.7	
	757.0		748.4	
	758.8		747.6	
	761.8		747.3	
	762.7		746.6	
	763.3		746.2	
	764.4		746.2	
	765.6		746.3	
	766.4		746.5	
	767.0		746.7	
	767.6		746.9	
	768.1		747.2	
	768.9		747.4	
	772.3		747.7	
	774.4		746	
	775.1		748.5	
	<u>775.6</u>		749.1	
TOTAL:	16,786.2		749.6	
			750	
			<u>750.2</u>	
		TOTAL:	1,4856.1	

APOLLO - SENIOR CARE
3141 E VALLEY PARKWAY
ESCONDIDO, CA 92027

NO.	DATE	NAME
REVISION HISTORY		
Project No.	Project Number	
Project Start Date	Issue Date	
Drawn	Designed	
Checked	Checked	
Remarks		

ALLOWABLE BUILDING HEIGHT TABULATION

Scale:	As indicated
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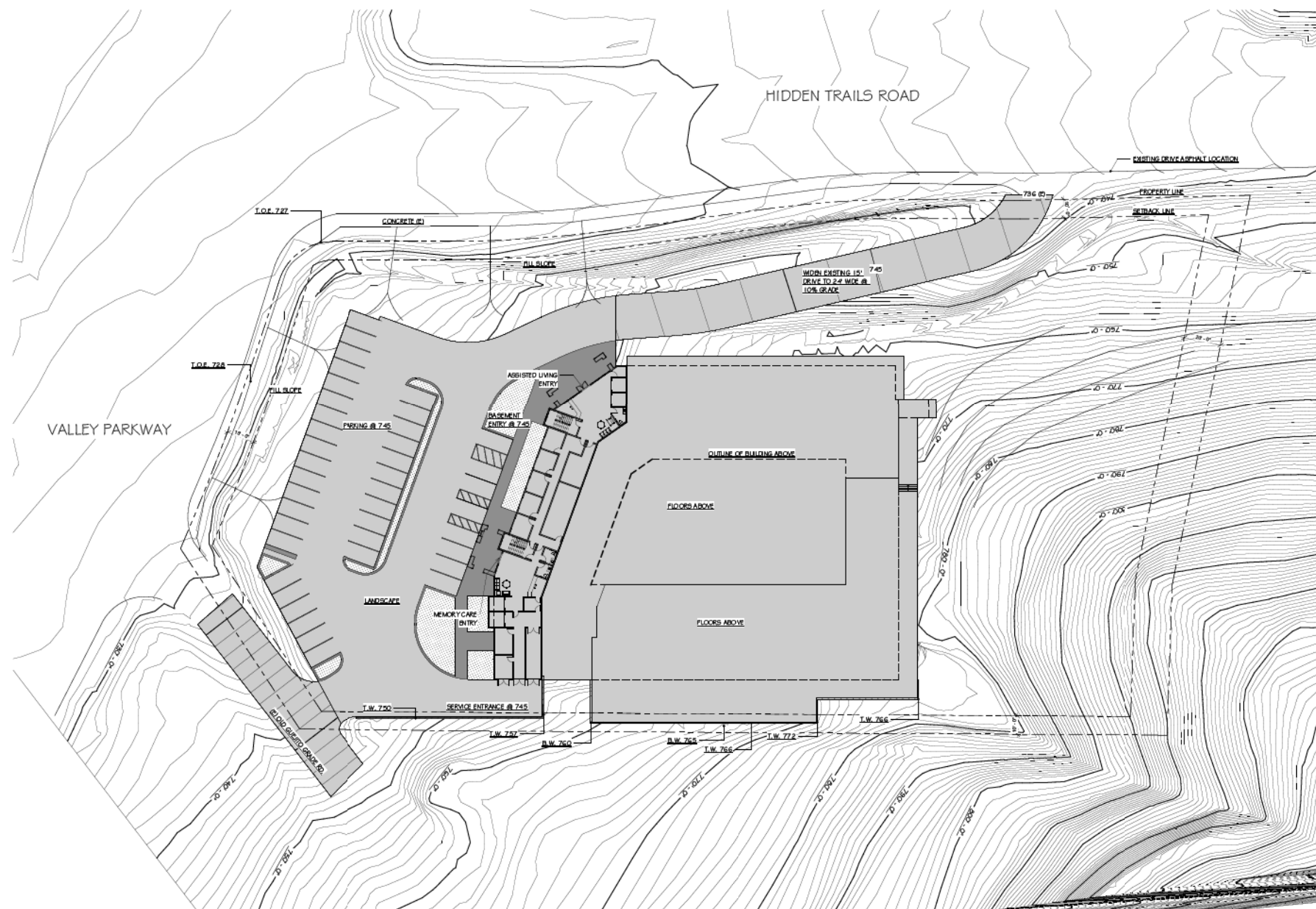
A-009

3/20/2019 9:20:54 AM

NO.	DATE	SCALE
REVISIONS IN CH. SCALE		
Project No.	Project Number	
Project Start Date	Issue	Cost
Drawn	Designed	
Checked	Checked	
Revision		
Sheet Name		

Scale: 1" = 20'-0"

3/20/2019 8:33:45 AM



1 SITE - BASEMENT
Scale: 1" = 20'-0"

APPENDIX B

Pertinent Sections of the City of Escondido Municipal Code

(c) For outside measurements, the microphone shall be not less than four (4) feet above the ground, at least four (4) feet distant from walls or other large reflecting surfaces and shall be protected from the effects of wind noises by the use of appropriate wind screens and the location selected shall be at any point on the affected property. In cases when the microphone must be located within ten (10) feet of walls or similar large reflecting surfaces, the actual measured distances and orientation of sources, microphone and reflecting surfaces shall be noted and recorded. In no case shall a noise measurement be taken within five (5) feet of the noise source.

(d) For inside measurements, the microphone shall be at least three (3) feet distant from any wall, ceiling or partition, and the average measurement of at least three (3) microphone positions throughout the room shall be determined. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-229. Sound level limits.

(a) Unless a variance has been applied for and granted pursuant to this article, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth in the following table, except that construction noise level limits shall be governed by Section 17-234 of this article.

TABLE 17-229

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light industrial/ Industrial park zones	Anytime	70*
General industrial zones	Anytime	75*

*Subject to provisions of Section 17-229 (c)(5).

(b) Maximum Permissible Sound Levels by Receiving Land Use.

(1) The noise standards for the various categories of land use as presented in subsection (a) of this section shall, unless otherwise specifically indicated, apply to each property or portion of property substantially used for a particular type of land use reasonably similar to the land use types shown in subsection (a) of this section. Where two (2) or more dissimilar land uses occur on a single property, the more restrictive noise limits shall apply.

(2) Additional land use classifications may be added by action of the city council to reflect both lower and higher existing ambient levels than those shown.

(3) Where doubt exists when making identification of receiving land use, the city manager shall make an interpretation.

(4) No person shall operate or cause to be operated, any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level to exceed the environmental and/or nuisance interpretation of the applicable limits given in subsection (a) of this section.

(5)(A) Environmental noise shall be measured by the equivalent sound level (Leq) for such hours as are specified.

(B) Nuisance noise shall be measured as a sound level not to be exceeded at any time.

(C) Sound levels by receiving land use shall be measured at the boundary or at any point within the boundary of the property affected.

(D) Fixed location public utility distribution or fixed transmission facilities, located on or adjacent to a property line shall be subject to noise level limits of this section measured at or beyond six (6) feet from the boundary of the easement upon which the equipment is located.

(c) Corrections to Exterior Noise Level Limits.

(1) If the noise is continuous, the Leq for any hour will be represented by any lesser time period within that hour. Noise measurements of a few minutes only will thus suffice to define the noise level.

(2) If the noise is intermittent, the Leq for any hour may be represented by a time period typical of the operating cycle. Measurement should be made of a representative number of noisy/quiet periods. A measurement period of not less than fifteen (15) minutes is, however, strongly recommended when dealing with intermittent noise.

(3) In the event the alleged offensive noise, as judged by the enforcement officer, contains a steady, audible sound such as a whine, screech or hum, or contains a repetitive impulsive noise such as hammering or riveting, the standard limits set forth in Table 17-229 shall be reduced by ten (10) dB or to the ambient noise level when such noises are not occurring.

(4) If the measured ambient level exceeds that permissible in subsection (a) of this section, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violations source is not operating.

(5) The sound level limit at a location on a boundary between two (2) land use classifications is the limit applicable to the receiving land use; provided, however, that the one-hour average sound level limit applicable to extractive industries including but not limited to borrow pits and mines, shall be seventy-five (75) decibels (dB) at the property line regardless of the zone where the extractive industry is actually located.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of this section, measured at or beyond six (6) feet from the boundary of the easement upon which the equipment is located. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-230. Motor vehicles.

(a) Repairs of Motor Vehicles. It shall be unlawful for any person within the city to repair, rebuild or test any motor vehicle in such a manner as to cause disturbing, excessive, or offensive noises as defined in section 17-227 (k) of this article.

(b) On-Highway. Violations for exceeding applicable noise level limits as to persons operating motor vehicles on a public street or highway in the city shall be prosecuted under applicable California Vehicle Code provisions and under federal regulation adopted pursuant to 42 U.S.C. 4905 (a)(1)(A), (B), and (C)(ii), (iii) for which enforcement responsibility is delegated to local governmental agencies.

(c) Off-Highway. Except as otherwise provided for in this article, it shall be unlawful to operate any motor vehicle of any type on any site other than on a public street or highway as defined in the California Vehicle Code in a manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table "35 miles per hour or less speed limits" contained in Section 23130 of the California Vehicle Code.

(d) Emergency Vehicles. Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations.

(e) Urban Transit Buses. Buses as defined in the California Vehicle Code shall at all times comply with the requirements of this section. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-231. Powered model vehicles.

It shall be unlawful for any person to operate any powered model vehicle except between the hours of seven (7) a.m. and nine (9) p.m. and then only in such a manner so as not to emit noise in excess of those levels set forth in section 17-229; however, if powered model vehicles are operated in public parks at a point more than one hundred (100) feet from the property line, the noise level shall be determined at a distance of one hundred (100) feet from the noise source instead of at the property line, and noises from powered model vehicles measured at that distance in excess of the noise limits specified in section 17-229 of this article are prohibited. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-232. Refuse vehicles and parking lot sweepers.

No person shall operate, or permit to be operated, a refuse compacting, processing, or collection vehicle or parking lot sweeper between the hours of ten (10) p.m. to six (6) a.m. in or adjacent to any residential zone unless a variance has been applied for and granted pursuant to this article. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-233. Reserved.

Sec. 17-234. Construction equipment.

Except for emergency work, it shall be unlawful for any person, including the City of Escondido, to operate construction equipment as follows:

- (a) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site, except on Monday through Friday during a week between the hours of seven (7) a.m. and six (6) p.m. and on Saturdays between the hours of nine (9) a.m. and five (5) p.m., and provided that the operation of such construction equipment complies with the requirements of subsection (d) of this section.
- (b) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site on Sundays and on days designated by the president, governor or city council as public holidays.
- (c) A person may operate construction equipment at his/her residence or for the purpose of constructing or modifying a residence for himself/herself on Monday through Friday of a week between the hours of seven (7) a.m. and six (6) p.m., and on Saturdays, Sundays, and holidays between the hours of nine (9) a.m. and five (5) p.m.; provided, that such operation of construction equipment is not carried on for profit or livelihood and complies with the requirements of subsection (d) of this section.
- (d) No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of seventy-five (75) dB at any time, unless a variance has been obtained in advance from the city manager.
- (e) Persons engaged in construction for profit or as a business shall post signs at conspicuous places on a construction site, indicating hours of work as prescribed by this article or authorized by permit and the applicable noise level limits. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-235. Containers and construction material.

It shall be unlawful for any person to handle or 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 under section 17-227 (k) of this article. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-236. 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 (10) minutes in any one street block and with a duration of more than ten (10) seconds for any single emission. The sound level of this sound signal shall not exceed ninety (90) decibels at fifty (50) feet. (Ord. No. 90-8, § 2, 3-28-90)

APPENDIX C

Manufacturer Data Sheets

AIR CONDITIONING SYSTEMS

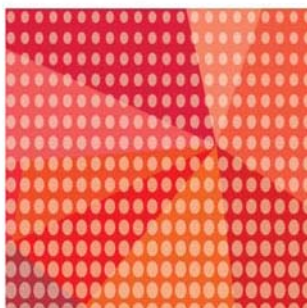
CITY MULTI

DATA BOOK

MODEL

PURY-P72-288T(S)KMU-A (-BS)

PURY-P72-288Y(S)KMU-A (-BS)



Heat Recovery R2-Series (K) - 208-230 V



Type(BTU/h)	72K	96K	120K	144K
Model Name	PURY-P72TKMU-A	PURY-P96TKMU-A	PURY-P120TKMU-A	PURY-P144TKMU-A

Heat Recovery R2-Series (K) - 460 V



Type(BTU/h)	72K	96K	120K	144K
Model Name	PURY-P72YKMU-A	PURY-P96YKMU-A	PURY-P120YKMU-A	PURY-P144YKMU-A



Type(BTU/h)	168K	192K	216K
Model Name	PURY-P168TSKMU-A	PURY-P192TSKMU-A	PURY-P216TSKMU-A



Type(BTU/h)	144K	168K	192K
Model Name	PURY-P144YSKMU-A	PURY-P168YSKMU-A	PURY-P192YSKMU-A



Type(BTU/h)	240K	264K	288K
Model Name	PURY-P240TSKMU-A	PURY-P264TSKMU-A	PURY-P288TSKMU-A

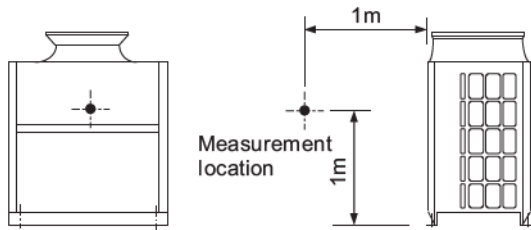


Type(BTU/h)	216K
Model Name	PURY-P216YSKMU-A

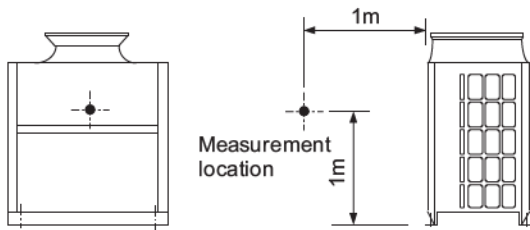


Type(BTU/h)	240K	264K	288K
Model Name	PURY-P240YSKMU-A	PURY-P264YSKMU-A	PURY-P288YSKMU-A

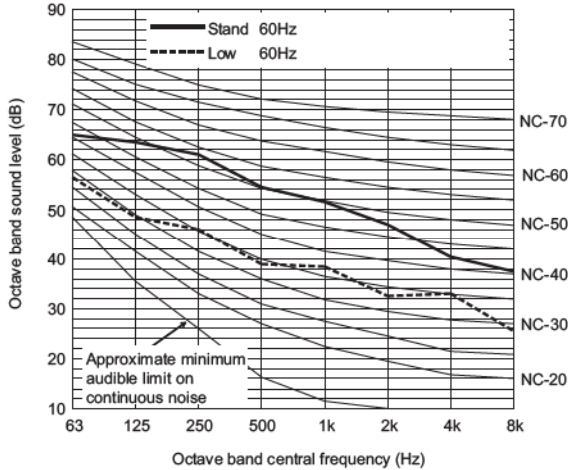
Measurement condition
PURY-P72TKMU/YKMU



Measurement condition
PURY-P96TKMU/YKMU



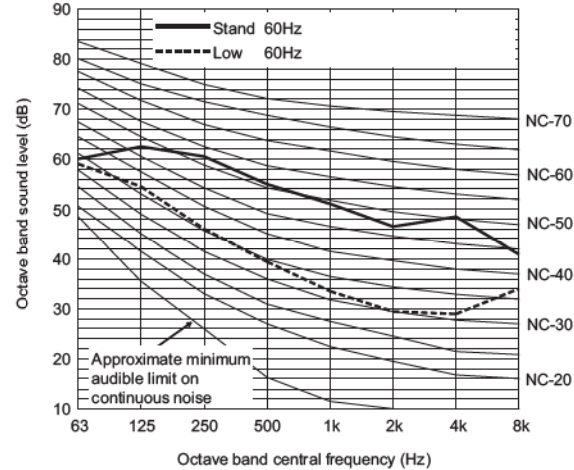
Sound level of PURY-P72T/YKMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.0	63.5	61.0	54.5	51.5	47.0	40.5	37.5	58.0
Low noise mode	60Hz	56.5	48.5	46.0	39.0	38.5	32.5	33.0	25.5	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PURY-P96T/YKMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	60.0	62.5	60.5	55.0	51.0	46.5	48.5	41.0	58.0
Low noise mode	60Hz	59.0	54.5	46.0	39.5	33.5	29.5	29.0	34.0	44.0

When Low noise mode is set, the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Model	Actual Volume (CFM)	Total External SP (in. wg)	Drive Type	Fan Speed (RPM)	Max Fan Speed (Selected) RPM	Max Fan Speed (Mech.) RPM	Drive Loss (%)	Operating Power (hp)	Motor Size NEMA (hp)	Inlet Sound Power								Total		
										62.5 Hz	125 Hz	250	500	1000	2000	4000	8000	LwA	dBA (at 5 feet)	Sones
CUBE-300XP-VGD	3,650	2.5	Belt	1311	1397	1691	4.6	2.48	3	81	85	82	80	76	73	67	63	82	71	18.7

APPENDIX D

Cadna Analysis Data and Results

Eilar Associates, Inc.

210 South Juniper Street, Suite 100

Escondido, California 92025-4230

Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	1
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
North		R1	28.2	28.2	0.0	0.0		x	Total	1.52	r	346.29	254.81	226.01
South		R2	41.5	41.5	0.0	0.0		x	Total	1.52	r	349.18	138.02	239.03
East		R3	34.4	34.4	0.0	0.0		x	Total	1.52	r	403.68	160.07	252.45
West		R4	25.7	25.7	0.0	0.0		x	Total	1.52	r	199.46	174.03	221.29

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)				dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
AC 1		1	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	352.43	198.99	242.32
AC 1		2	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	352.53	191.32	242.32
AC 1		3	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	340.35	199.52	242.32
AC 1		4	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	340.77	191.43	242.32
AC 1		5	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	325.48	199.20	242.32
AC 1		6	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	325.33	190.80	242.32
AC 1		7	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	314.77	187.91	242.32
AC 1		8	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	309.36	195.21	242.32
AC 1		9	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	298.65	178.93	242.32
AC 1		10	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	306.52	175.88	242.32
AC 1		11	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	313.35	159.81	238.97
AC 1		12	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	312.93	152.67	238.97
AC 1		13	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	322.49	160.34	238.97
AC 1		14	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	322.39	152.98	238.97
AC 1		15	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	331.00	160.55	238.97
AC 1		16	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	330.79	153.09	238.97
AC 1		17	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	340.77	160.34	238.97
AC 1		18	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	341.08	153.19	238.97
AC 1		19	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	352.11	159.81	238.97
AC 1		20	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	353.06	153.61	238.97
KEF		21	81.8	81.8	81.8	Lw	SPL2		0.0	0.0	0.0							0.0		(none)	241.40	a	299.34	157.97	241.40

Buildings

Name	M.	ID	RB	Residents	Absorption	Height
						Begin
						(m)
	+		x	0	0.37	
	+		x	0	0.37	

Geometry - Buildings

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates			
						Begin	x	y	z	Ground
						(m)	(m)	(m)	(m)	(m)
	+		x	0	0.37		313.79	202.55	240.49	227.08
							300.96	194.48	240.49	227.08
							290.77	166.17	240.49	227.08
							290.64	150.29	240.49	227.08
							307.53	150.42	240.49	227.08
							307.44	165.77	240.49	227.08
							315.51	185.22	240.49	227.08
							318.07	186.68	240.49	227.08
							360.14	186.53	240.49	227.08
							360.32	190.01	240.49	227.08
							359.70	202.42	240.49	227.08
							322.39	202.29	240.49	227.08
							316.96	202.29	240.49	227.08
	+		x	0	0.37		307.49	166.01	237.14	227.08
							307.91	143.11	237.14	227.08
							344.78	143.11	237.14	227.08
							344.88	147.32	237.14	227.08
							361.38	147.32	237.14	227.08
							360.64	186.71	237.14	227.08
							349.61	186.39	237.14	227.08
							349.61	166.01	237.14	227.08

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.25	-26.24	234.68
						307.61	112.75	234.68
						310.44	114.61	234.68
						326.81	134.31	234.68
						340.29	142.19	234.68
770				234.68		363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						307.22	141.36	231.64
760				231.64		342.99	204.67	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						280.59	142.82	228.59
						299.15	142.28	228.59
						301.47	149.78	228.59
750				228.59		318.09	204.37	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						412.93	221.01	228.59
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						263.23	145.76	225.54
						249.42	168.15	225.54
						252.26	177.82	225.54
						266.93	212.82	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00
745				227.08		252.42	169.99	227.08
						265.43	144.65	227.08
						298.93	144.48	227.08
						300.76	150.15	227.08
						317.43	203.16	227.08
						314.60	213.66	227.08
						303.10	211.49	227.08
						289.26	205.49	227.08
						273.09	209.49	227.08
						267.59	211.32	227.08

S190415 - Apollo Sr Care - HVAC

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						252.26	170.32	227.08
756				230.43		318.08	204.20	230.43
						301.54	149.81	230.43
						307.45	149.65	230.43
						307.04	142.64	230.43
						345.88	142.48	230.43
						345.88	146.39	230.43
						362.80	146.56	230.43
						360.16	203.79	230.43
						318.14	204.14	230.43

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
PURY-P72	SPL1	Lw (c)			76.0	74.5	72.0	65.5	62.5	58.0	51.5	48.5	68.8	79.5	Mfr
EF	SPL2	Lw			81.0	85.0	82.0	80.0	76.0	73.0	67.0	63.0	81.8	88.9	Mfr

Eilar Associates, Inc.

210 South Juniper Street, Suite 100

Escondido, California 92025-4230

Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	66.4	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	74.8	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M. ID	Result. PWL			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
		Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm. dB(A)	Day dB(A)	Evening dB(A)	Night dB(A)	R	Area (m²)	Day (min)	Special (min)	Night (min)	(dB)	(Hz)		(m)		X (m)	Y (m)	Z (m)
backhoe		98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	275.95	183.82	226.51
excavator		108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	276.45	184.24	226.54
dump truck		110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	276.43	183.76	226.56
dozer		105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	276.24	183.32	226.56
water truck		109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	276.80	183.67	226.60
backhoe		98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	327.28	158.87	234.45
excavator		108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	327.69	159.05	234.50
dump truck		110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	327.72	158.57	234.55
dozer		105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	328.05	158.71	234.59
water truck		109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	327.41	158.24	234.52
backhoe		98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.00	194.28	232.30
excavator		108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.42	194.58	232.33
dump truck		110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.25	194.03	232.34
dozer		105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.50	194.24	232.36
water truck		109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.63	193.87	232.39
backhoe		98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	344.96	215.80	230.25
excavator		108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	345.61	215.97	230.12
dump truck		110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	345.43	215.50	230.24
dozer		105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	345.46	215.01	230.34
water truck		109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	345.99	215.24	230.21

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

S190415 - Apollo Sr Care - Grading

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

Eilar Associates, Inc.

210 South Juniper Street, Suite 100

Escondido, California 92025-4230

Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	65.0	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	43.9	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	255.17	149.96	226.13

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

S190415 - Apollo Sr Care - Road Improvements

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

S190415 - Apollo Sr Care - Road Improvements

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

S190415 - Apollo Sr Care - Road Improvements

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

Eilar Associates, Inc.

210 South Juniper Street, Suite 100

Escondido, California 92025-4230

Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	55.1	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	67.8	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction	Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area	Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)	(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
conc mixer			106.1	106.1	106.1	Lw	CS6		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	327.28	158.87	234.45
conc pump			106.1	106.1	106.1	Lw	CS7		0.0	0.0	0.0			12.00	0.00	0.00	0.0		(none)	1.52	r	327.41	158.24	234.52
conc mixer			106.1	106.1	106.1	Lw	CS6		0.0	0.0	0.0			24.00	0.00	0.00	0.0		(none)	1.52	r	329.25	194.03	232.34
conc pump			106.1	106.1	106.1	Lw	CS7		0.0	0.0	0.0			12.00	0.00	0.00	0.0		(none)	1.52	r	329.63	193.87	232.39

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

Eilar Associates, Inc.

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Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rcvr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	74.6	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	56.5	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)				dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	255.33	149.59	226.17
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	255.00	149.92	226.13
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	275.95	183.82	226.51
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	276.45	184.24	226.54
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	344.96	215.80	230.25
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	345.61	215.97	230.12

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

S190415 - Apollo Sr Care - Paving

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA