
GALWAY DOWNS (CUP 2303R1)

NOISE AND VIBRATION ANALYSIS

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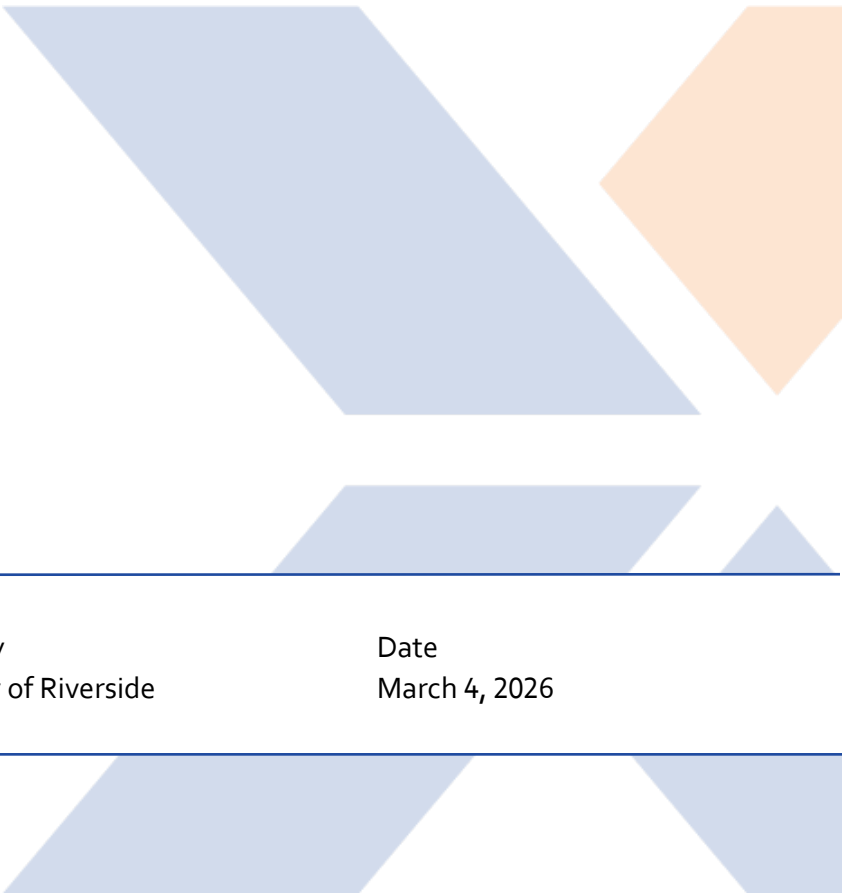
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LIST OF ABBREVIATED TERMS

(1)	Reference
ANSI	American National Standards Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CUP	Conditional Use Permit
CZ	Change of Zone
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FVA	French Valley Airport
INCE	Institute of Noise Control Engineering
Leq	Equivalent continuous (average) sound level
Lmax	Maximum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Galway Downs (CUP 2303R1)
RMS	Root-mean-square
s.f.	square-foot
SWAP	Southwest Area Plan
VdB	Vibration Decibels
WC	Wine Country

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Galway Downs (CUP 2303R1) (Project) in the County of Riverside. The Project is a multi-faceted equestrian facility that operates as a traditional equestrian facility most of the time but also hosts a variety of other activities on the weekends. This noise study has been prepared to satisfy applicable County of Riverside noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise and Vibration Analysis are summarized below based on the significance criteria in Section 4 of this report, consistent with Appendix G of the CEQA Guidelines. (1) Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	6	Less Than Significant	-
Operational Noise	8	Less Than Significant	-
Project Construction Noise	9	Less Than Significant	-
Construction Vibration	9	Less Than Significant	-

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1 INTRODUCTION

This Noise and Vibration Analysis has been completed to determine the noise impacts associated with the development of the proposed Galway Downs (CUP 2303R1) ("Project"). This noise and vibration analysis briefly describes the Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for noise analysis, evaluates the future exterior noise environment, potential off-site traffic noise impacts, the Project-related long-term stationary-source operational noise, and Project-related short-term construction noise and vibration impacts.

1.1 SITE LOCATION

Galway Downs is an existing events facility located at 38801 Los Corralitos Road within the Southwest Area Plan (SWAP) in the County of Riverside, as shown in Exhibit 1-1. The Project site is situated approximately 0.3 miles east of State Route 79 (SR 79) and approximately 6 miles east of Interstate 15 (I-15). More specifically, the Project site comprises two parcels of land, Assessor's Parcel Numbers (APNs) 927-160-001 and 927-160-002, located at 38801 Los Corralitos Road, Temecula, CA 92592. The Project site is bounded to the west and south by Los Corralitos Road; to the east by Pauba Road; and to the north by Los Caballos Road.

1.2 PROJECT DESCRIPTION

The existing facility encompasses approximately 241.6 acres and operates as a traditional equestrian facility most of the time but also hosts a variety of other activities primarily on the weekends. Galway Downs includes a variety of physical features including but not limited to horse racetrack and equestrian facilities; polo fields; lodging facilities; restaurants; retail space; trailer park with club house; grooms quarter; barn structures; office space; and horse corrals. The existing facility operates under four (4) approved Conditional Use Permits (CUPs), including CUP 001127, CUP 00966, CUP 01615, and CUP 02303.

The Project Applicant (SFT Realty Galway Downs, LLC) is seeking approval of Revision No. 1 to CUP 02303 (CUP 2303R1), a Change of Zone (CZ 22000010), and Exception No. 9 to Riverside County Noise Ordinance No. 847 (hereafter "proposed Project" or "Project"). The primary use of the site would continue to be equestrian related. The proposed Project would generally allow the Project Applicant to 1) make physical and operational modifications on the property to elevate the caliber of equestrian events that can be hosted on the site; 2) permit a portion of the site to host non-equestrian sporting events (primarily on the weekends); and 3) designate areas of the site where exterior sound amplification can occur between 8 a.m. and 10 p.m., without need to seek a separate permission for every event that includes sound amplification audible for a distance greater than 200 feet from the source. The proposed Project CUP 2303R1 site plan is shown on Exhibit 1-2.

EXHIBIT 1-1: PROJECT LOCATION



New structures and uses that would be constructed, installed, or permitted on the site pursuant to proposed CUP 02303R1 include a new restroom building, an awards/ceremony area, a grand pavilion tent, an office trailer, a metal solar structure that was placed over an existing arena to support rooftop solar panels (hereafter called “metal solar structure”), and additional area for equestrian RV park use. Existing structures that would be permitted with the Project include an existing 1,513 square foot (s.f.) barn/storage building, an existing 624 s.f. storage building, an existing 1,560 s.f. polo field metal storage building, and an existing 360 s.f. manufactured storage structure¹. Additionally, areas are proposed where up to 36 park model lodging units could be placed in the future and where 18 additional employee modular housing units could be placed in the future; the design of these areas would be subject to future County review and approvals.

Exception No. 9 to Riverside County Noise Ordinance No. 847 is sought by the Project Applicant pursuant to Section 7.a.3 of Ordinance No. 847. Exception No. 9 would allow for sound amplifying equipment to operate on certain portions of the property between 8 a.m. and 10 p.m. without the need to seek separate permission for every event that includes sound amplification. CZ 22000010 is sought by the Project Applicant to amend Article XIVd (Wine Country Zones [WC]) of Riverside County Ordinance No. 348 to allow for operational enhancements at the site, which specifically would modify the definitions of certain use types; modify the list of conditionally permitted uses within the WC-E zone; slightly modify the General Standards applicable to the WC zone to expressly prohibit parking on public streets during special occasion events; modify the development standards for Class II equestrian establishments; and add new development standards for Lodging Facilities, Wine Country Equestrian Park Model Lodging, and Equestrian Recreation Vehicle Parks.

To ensure compliance with noise level limits under County of Riverside Noise Ordinance No. 847, the Project includes a noise exception area for amplified noise sources as a Project Design Measure.

Project Design Measure N-1: Events with amplified sound occurring within the boundaries of the Exception No. 9 Zone on Exhibit 1-3 between the hours of 8:00 a.m. and 10:00 p.m. would not require special permission. Any use of amplified equipment outside the Exception No. 9 Zone shown on Exhibit 1-3 would continue to require permission from the County of Riverside.

¹ For conservative analytical purposes, 12,065 square feet of non-residential uses (model lodging units and employee modular housing) was included in this analysis, resulting in a total building area that exceeds the square footage described in the Project Description.

EXHIBIT 1-2: CUP 2303R1 SITE PLAN

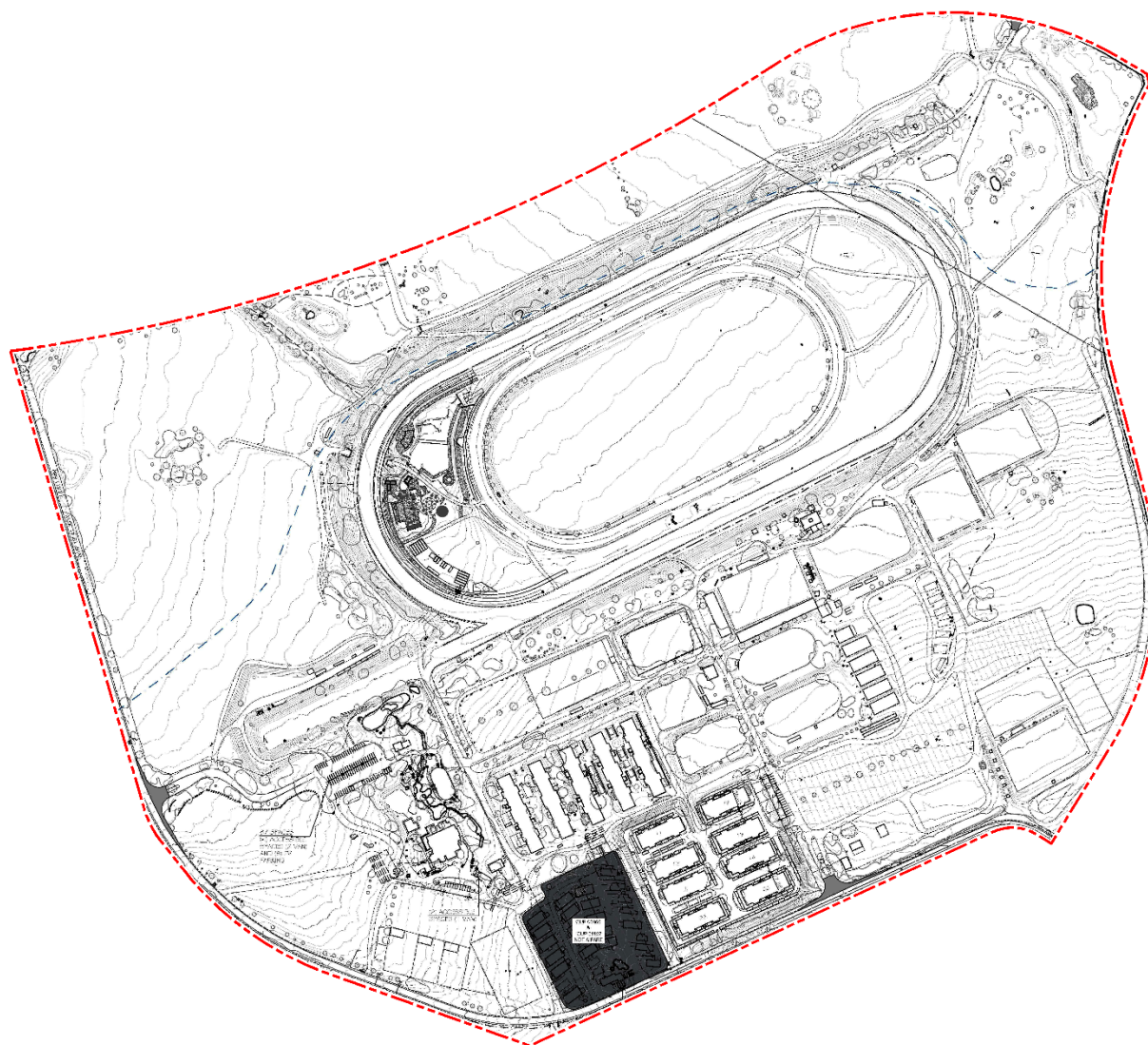


EXHIBIT 1-3: EXCEPTION No. 9 ZONE



LEGEND:

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2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Exhibit 2-1 presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Common Indoor Activities	A-Weighted Sound Level (dBA)	Subjective Loudness	Effects of Noise
Threshold of pain	—	140	—	—
Near jet engine	—	130 to 120	Intolerable or deafening	Hearing loss
Jet fly-over at 300 meters (1,000 feet)	Rock band	110	Intolerable or deafening	Hearing loss
Loud auto horn	—	100	Very noisy	—
Gas lawn mower at 1 meter (3 feet)	—	90	Very noisy	—
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour)	Food blender at 1 meter (3 feet)	80	Very noisy	—
Noisy urban area, daytime	Vacuum cleaner at 3 meters (10 feet)	70	Loud	Speech interference
Heavy traffic at 90 meters (300 feet)	Normal speech at 1 meter (3 feet)	60	Loud	Speech interference
Quiet urban daytime	Large business office	50	Moderate	—
Quiet urban nighttime	Theater, large conference room (background)	40	Moderate	Sleep disturbance
Quiet suburban nighttime	Library	30	Faint	—
Quiet rural nighttime	Bedroom at night, concert hall (background)	20	Very faint	No effect
—	Broadcast/recording studio	10	Very faint	No effect
Lowest threshold of human hearing	Lowest threshold of human hearing	0	Very faint	No effect

Source: Environmental Protection Agency Office of Noise Abatement and Control, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately

1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are typically based on average noise levels over time, rather than instantaneous measurements. The most commonly used metric is the equivalent continuous sound level (L_{eq}). Rather than being measured directly, L_{eq} is calculated from A-weighted sound pressure levels (dBA) recorded over a specified period. The L_{eq} represents the constant sound level that, over a given time, would contain the same acoustic energy as the actual fluctuating sound levels. As such, it is widely used to describe average environmental noise exposure. Importantly, while sound pressure levels (e.g., L_{eq}) express the intensity of sound at a specific location and are affected by distance and environmental conditions, sound power levels (L_w) are intrinsic properties of the sound source itself. Unlike sound pressure, sound power is independent of distance and unaffected by obstacles, air absorption, or weather conditions. In contrast, sound pressure levels decrease with distance due to factors such as geometric spreading, absorption by air and surfaces, intervening barriers or obstacles, and meteorological conditions (e.g., wind, humidity).

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time but rather represents the total sound exposure. The County of Riverside relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 Shielding

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide, and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.

2.6 LAND USE COMPATIBILITY WITH NOISE

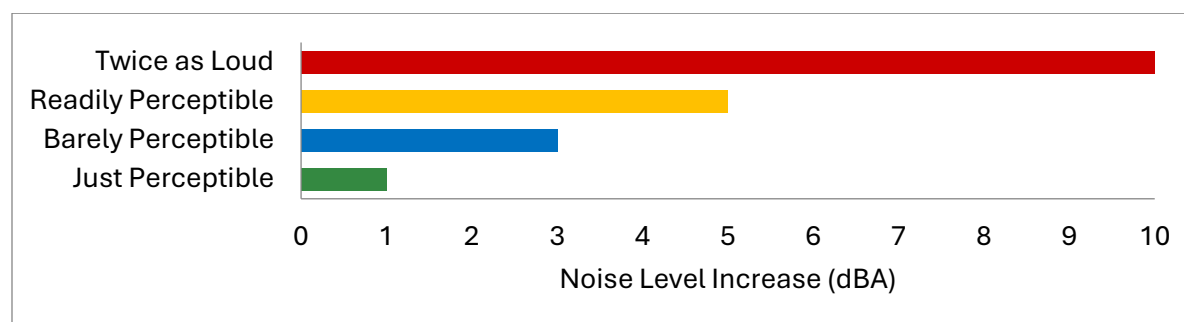
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-2. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

EXHIBIT 2-2: NOISE LEVEL INCREASE PERCEPTION



2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations

include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem, and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure, and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (8). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structures reduce vibration levels due to the coupling of the building to the soil.

There are several methods used to quantify vibration levels. Peak Particle Velocity (PPV) is defined as the maximum instantaneous peak of a vibration signal and is most commonly used to evaluate the impact of vibration on buildings (9) (8). However, PPV is not always suitable for assessing human response (e.g., annoyance), as the human body does not respond instantly to vibration signals. Instead, it responds to the average amplitude, more accurately represented by the Root Mean Square (RMS) value of the vibration (8).

RMS is defined as the square root of the average of the squared signal amplitude and is commonly used to evaluate human exposure to vibration. RMS and PPV are mathematically related—RMS is typically about 70% of the PPV for certain waveforms (10) (11). However, deriving RMS from PPV requires knowing the full waveform or making assumptions (e.g., sinusoidal or steady-state signals). Without this information, converting PPV to RMS introduces uncertainty and provides limited insight, especially in cases involving transient or impact vibrations (12).

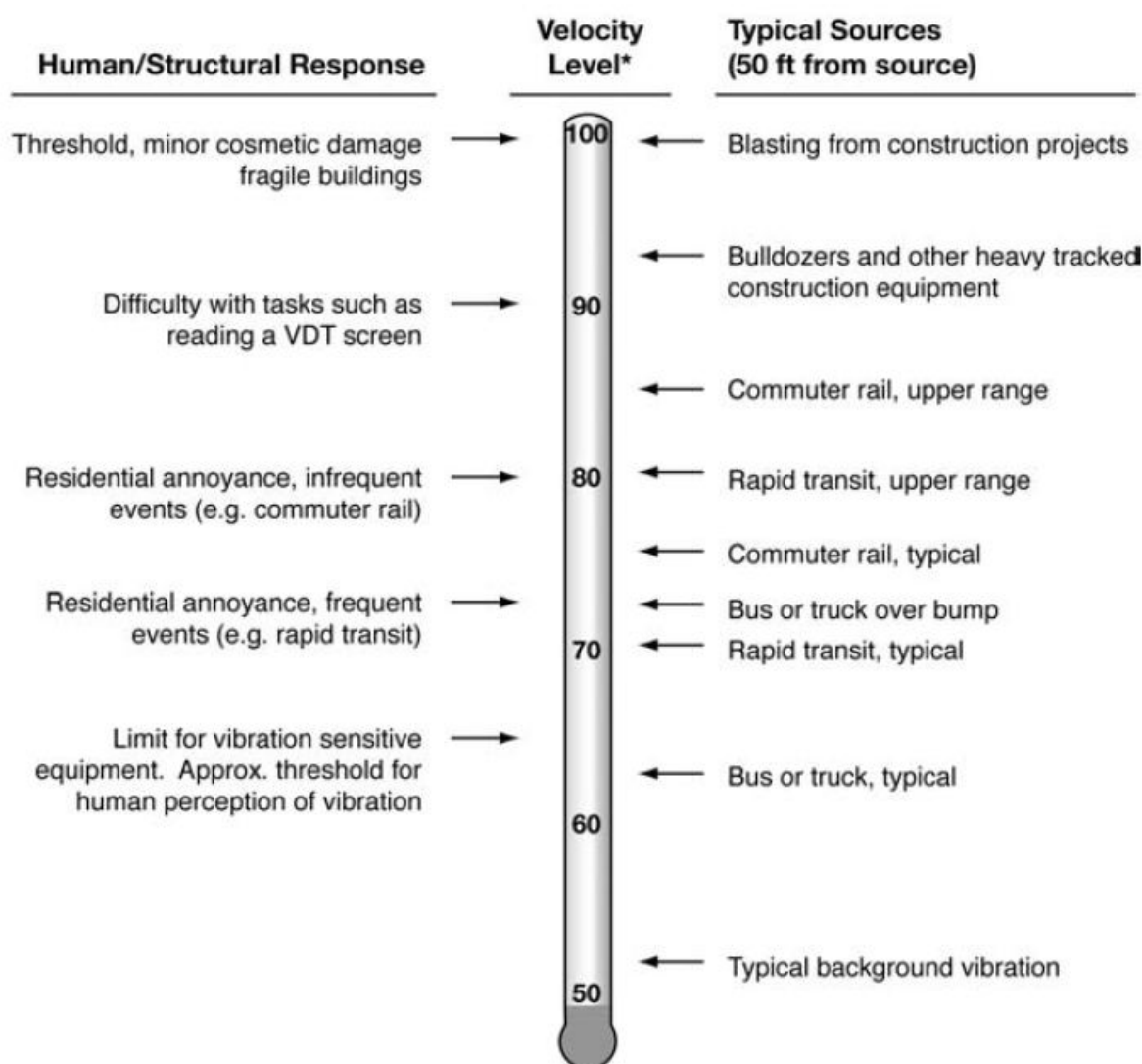
This distinction is important because human annoyance to vibration is often triggered by abrupt, intermittent events, rather than sustained energy levels. Construction-related vibrations are typically impulsive and broadband, in contrast to the continuous, tonal vibrations associated with transit systems. The FTA's RMS-based criteria were developed with train activity in mind and are not well-suited for construction vibration, where perception is driven by factors like suddenness, impact, and repetition (8). In essence, RMS tends to average out short-duration, high-intensity events—the very events that people find most disturbing. Therefore, for construction activities, PPV-based thresholds, such as those recommended by Caltrans, are more appropriate for assessing potential human annoyance and structural impact (11).

While not universally accepted, vibration decibel notation (VdB) is another RMS-based vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits (8). Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels.

As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-

borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-3 illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-3: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



* RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.

3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (13) The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 COUNTY OF RIVERSIDE GENERAL PLAN

The County of Riverside has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of the County of Riverside from excessive exposure to noise. (14) The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect County of Riverside residents from excessive noise, the Noise Element contains the following policies related to the Project:

- N 1.1 *Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.*
- N 1.3 *Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:*
 - *Schools*
 - *Hospitals*
 - *Rest Homes*
 - *Long Term Care Facilities*
 - *Mental Care Facilities*
 - *Residential Uses*
 - *Libraries*
 - *Passive Recreation Uses*

- *Places of Worship*

- N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.*
- N 4.1 Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:*
 - 45 dBA 10-minute L_{eq} between 10:00 p.m. and 7:00 a.m.;*
 - 65 dBA 10-minute L_{eq} between 7:00 a.m. and 10:00 p.m.*
- N 13.1 Minimize the impacts of construction noise on adjacent uses within acceptable standards.*
- N 13.2 Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.*
- N 13.3 Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the [County] for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:*
 - i. Temporary noise attenuation fences;*
 - ii. Preferential location and equipment; and*
 - iii. Use of current noise suppression technology and equipment.*
- N 14.1 Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.*
- N 16.3 Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches/second over a range of 1 to 100 Hz.*

To ensure noise-sensitive land uses are protected from high levels of noise (N 1.1), Table N-1 of the Noise Element identifies guidelines to evaluate proposed developments based on exterior and interior noise level limits for land uses and requires a noise analysis to determine needed mitigation measures if necessary. The Noise Element identifies residential use as a noise-sensitive land use (N 1.3) and discourages new development in areas with transportation-related levels of 65 dBA CNEL or greater existing ambient noise levels. To prevent and mitigate noise impacts for its residents (N 1.5), County of Riverside requires exterior noise attenuation measures for sensitive land use exposed to transportation related noise levels higher than 65 dBA CNEL. In addition, the County of Riverside had adopted an interior noise level limit of 45 dBA CNEL (N 14.1). Policy N 4.1 of the Noise Element sets a stationary-source exterior noise limit to not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. To prevent high levels of construction noise from impacting noise-sensitive land uses, policies N 13.1 through 13.3 identify construction noise mitigation requirements for new development located near existing noise-sensitive land uses. (14)

3.2.1 Land Use Compatibility Guidelines

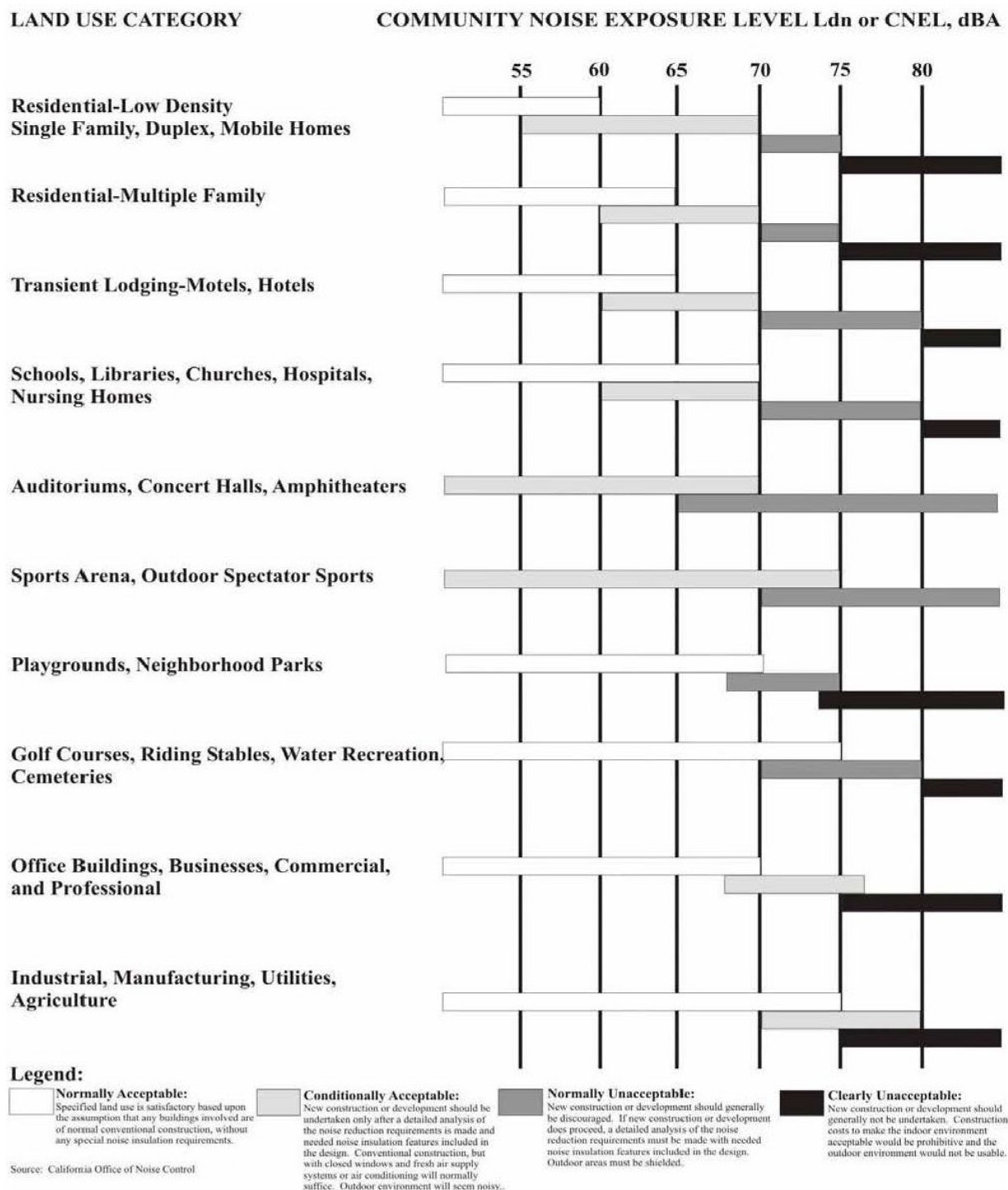
The noise criteria identified in the County of Riverside Noise Element (Table N-1) are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-1, provides the County with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Land Use Compatibility for Community Noise Exposure* matrix describes categories of compatibility and not specific noise standards. Outdoor Spectator Sports are considered *conditionally acceptable* with unmitigated exterior noise levels of less than 75 dBA CNEL based on the land use compatibility criteria shown on Exhibit 3-1. The proposed Riding Stables are considered *normally acceptable* with unmitigated exterior noise levels of less than 75 dBA CNEL. Noise sensitive low density residential designated land uses in the Project study area are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL, and *conditionally acceptable* with exterior noise levels of up to 70 dBA CNEL. (14)

3.3.2 County of Riverside Stationary Noise Standards

The County of Riverside has set stationary-source hourly average L_{eq} exterior noise limits to control equestrian activity, special occasion activity, award ceremony activity, wine country lodging, employee housing, parking lot vehicle movements, sports field activity, and announcement/music speakers associated with the development of the Project. The County considers noise generated using motor vehicles to be a stationary noise source when operated on private property, such as at a loading dock or maintenance bay. These facility-related noises, as projected to any portion of any surrounding property containing a *habitable dwelling, hospital, school, library, or nursing home*, must not exceed the following worst-case noise levels.

Policy N 4.1 of the County of Riverside General Plan Noise Element sets a stationary-source average L_{eq} exterior noise limit not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. (14) The County of Riverside County Code Section 9.52.040 *General sound level standards* (included in Appendix 3.1) summarizing Ordinance No. 847 *Regulating Noise* identifies lower, more restrictive exterior noise level standards, which for the purpose of this report, are used to evaluate potential Project-related operational noise level limits instead of the higher General Plan exterior noise level standards previously identified. The County of Riverside County Code identifies residential exterior noise level limits of 55 dBA L_{eq} during the daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m., commercial exterior noise level limits of 65 dBA L_{eq} during the daytime hours, and 55 dBA L_{eq} during the noise-sensitive nighttime hours, and public facility exterior noise level limits of 65 dBA L_{eq} during the daytime hours, and 45 dBA L_{eq} during the noise-sensitive nighttime hours. (15).

EXHIBIT 3-1: LAND USE COMPATIBILITY FOR COMMUNITY NOISE EXPOSURE



Source: County of Riverside General Plan Noise Element, Table N-1.

Based on several discussions with the County of Riverside Department of Environmental Health (DEH), Office of Industrial Hygiene (OIH), it is important to recognize that the County of Riverside County Code noise level standards, incorrectly identify maximum noise level (L_{max}) standards that should instead reflect the average L_{eq} noise levels. Moreover, the County of Riverside DEH OIH's April 15th, 2015, Requirements for determining and mitigating, non-transportation noise source impacts to residential properties also identifies operational (stationary-source) noise level limits using the L_{eq} metric, consistent with the direction of the County of Riverside General Plan guidelines and standards provided in the Noise Element. Therefore, this report has been prepared consistent with the direction of the County of Riverside DEH OIH guidelines and standards using the average L_{eq} noise level metric for stationary-source (operational) noise level evaluation.

3.3 CONSTRUCTION NOISE STANDARDS

The County of Riverside does not establish quantitative construction noise standards; instead, the County has established limits to the hours of construction activities. Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]) indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (15) Neither the County's General Plan nor the County Code establishes numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes.

Previously approved County of Riverside noise impact analysis reports prepared by Urban Crossroads, Inc. relied on a less restrictive 85 dBA L_{eq} construction noise level threshold adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). (16) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (16)

To prevent long periods of exposure to high noise levels, the Occupational Safety and Health Administration (OSHA) requires hearing protection to be provided by employers in workplaces where the noise levels may endanger the hearing of their employees, such as construction equipment operators. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (17) The noise analysis prepared by Urban Crossroads, Inc. does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels for short durations, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (18) Therefore, Urban Crossroads, Inc. continues to evaluate other agencies' construction noise level limits to find a more appropriate threshold for assessing environmental impacts.

According to Caltrans guidance, which is often cited as reference in CEQA documents, construction noise impacts shall not exceed 86 dBA L_{max} at 50 feet from the job site activities between the hours of 9:00 p.m. to 6:00 a.m. (19) Equipment and operations are usually at or less than that level, except for blasting, pile drivers (impact or vibratory), hoe rams, pavement breakers for crack-and-seat operations, and other impact equipment. (2) The Caltrans guidance also suggests that detailed discussions of typical construction equipment noise levels are probably not necessary unless the project involves unusually sensitive receptors or nighttime work or if the project is controversial. (2) Since this limitation is only associated with nighttime activities and does not address the noise level at the point of concern, e.g., a residence, Caltrans's construction criteria were similarly not considered as the appropriate threshold for environmental review.

Further research indicated that the U.S. Department of Transportation guidance for construction published by the Federal Transit Administration (FTA) is appropriate and based on well-documented studies of the effects of construction noise. According to the FTA *Transit Noise and Vibration Impact Assessment Manual*, local noise ordinances are typically not very useful in evaluating construction noise impacts. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. (8 p. 172) Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessments. The FTA identifies two types of construction noise assessment criteria: general and detailed. For general construction noise assessments, the analysis is limited to the two noisiest pieces of equipment with an hourly daytime exterior noise level threshold for residential land use of 90 dBA $L_{eq(1hr)}$. (8 p. 179) However, for long-term construction projects that would expose sensitive receivers to noise for extended periods of time, the FTA considers a daytime 8-hour average exterior construction noise level of 80 dBA $L_{eq(8hr)}$. The absolute FTA thresholds are intended to account for reasonable expectations regarding construction noise during the daytime hours and are intended to protect human health.

Therefore, to evaluate whether the Project will generate potentially significant short-term noise levels at nearby noise-sensitive residential receiver locations, a daytime exterior construction noise level of 80 dBA L_{eq} is used as a reasonable threshold to assess construction noise level impacts based on the FTA's detailed analysis of construction noise criteria. (8 p. 179)

3.4 CONSTRUCTION VIBRATION STANDARDS

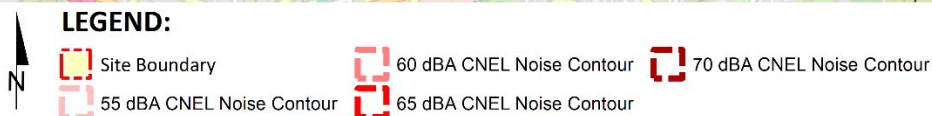
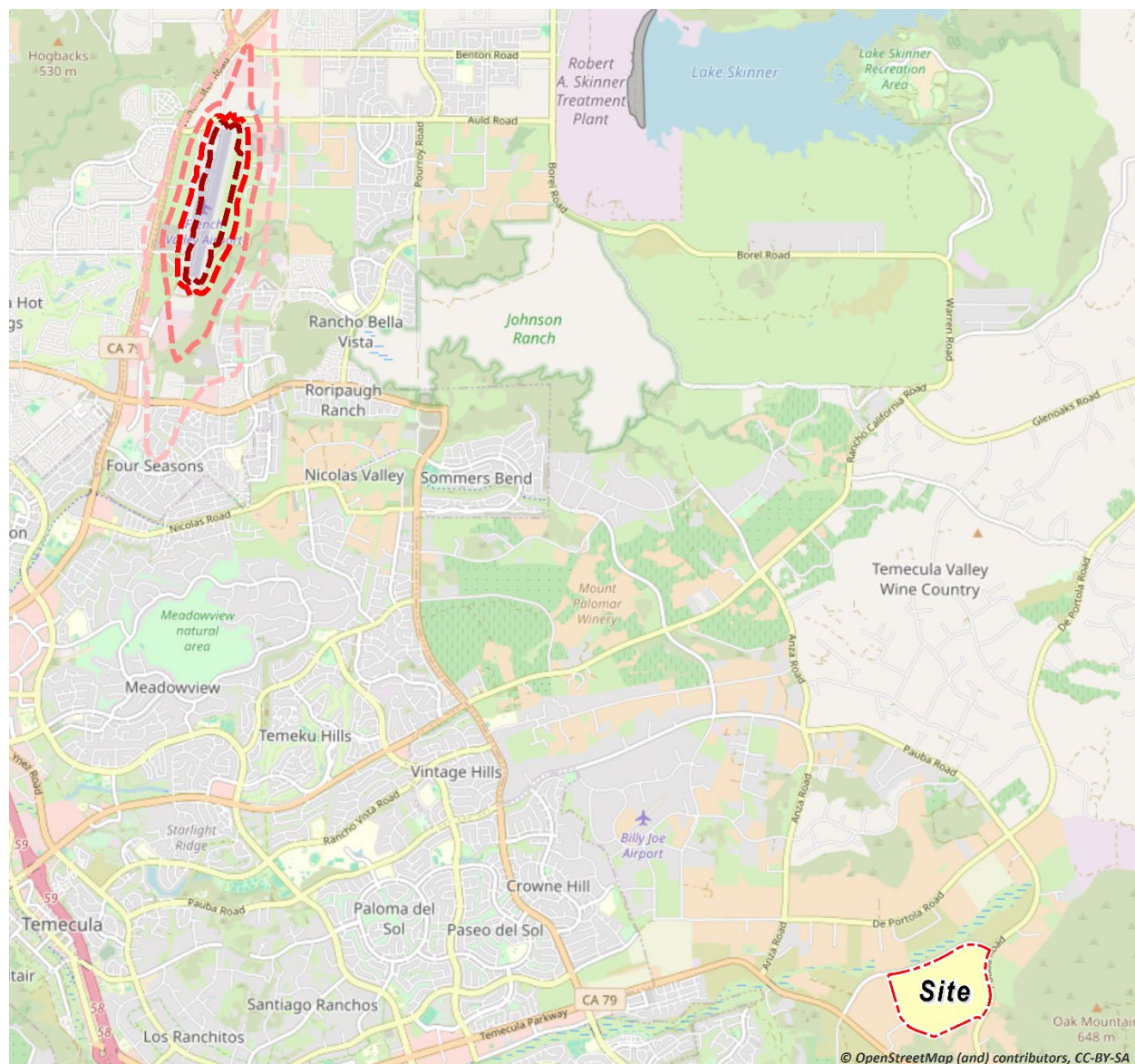
Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment, such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (8) To analyze vibration impacts originating from the operation and construction of the Project, vibration-generating activities are appropriately evaluated against standards established under the Municipal Code if such standards exist.

However, the County of Riverside does not identify specific construction vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (11 p. 38) Table 19, vibration damage is used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise-sensitive buildings adjacent to the Project site can best be described as “older residential structures” with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec) vibration impacts due to the Project construction at nearby sensitive receiver locations.

3.5 FRENCH VALLEY AIRPORT LAND USE COMPATIBILITY

The closest airport to the Project site is the French Valley Airport (FVA), located approximately 7.4 miles northwest of the Project site. Therefore, the *Riverside County Airport Land Use Compatibility Plan, French Valley Airport*, future noise level contour boundaries are used in this noise study to determine the land use compatibility of the Project. (20) Exhibit 3-2 shows the future FVA noise level contours in relation to the Project site, and indicates that the Project site falls well outside the airport’s noise level contour boundaries.

EXHIBIT 3-2: FRENCH VALLEY AIRPORT NOISE CONTOURS



4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- 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?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- 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?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (21) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called ambient environment. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

4.1.1 Noise Sensitive Receivers (Substantial Permanent Noise Increase)

The Federal Interagency Committee on Noise (FICON) (22) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes that there is no single noise increase that renders a noise impact significant, based on a 2008 California Court of Appeals ruling on *Gray v. County of Madera*. (21) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the without-project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance.

The FICON guidance provides an established source of criteria to assess the impacts of a substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or readily perceptible, 3 dBA or barely perceptible, and 1.5 dBA, depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increase and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (23 p. 2_48).

4.1.2 Construction Noise (Substantial Temporary Noise Increase)

To control the noise-generating construction activities, the temporary noise level increases over the existing ambient conditions must be considered under CEQA Significance Threshold A. Although noise ordinances vary across jurisdictions, many cities and counties in California, including Los Angeles, San Diego, and San Francisco, set construction noise limits between 75 and 80 dBA L_{eq} and typically restrict construction activities to the daytime hours. In contrast, everyday operational noise regulations are more stringent because they apply to continuous, long-term noise sources that can significantly impact the quality of life. As a result, many jurisdictions including the County of Riverside establish daytime residential noise limits around 55 dBA L_{eq} . This suggests that 20 to 30 dBA increase over the daytime noise limit can be reasonably tolerated without significant adverse effects. This is also illustrated in the adoption of many CEQA documents statewide that use an 80 dBA L_{eq} limit for assessing construction impacts while using everyday noise level limits of local noise ordinances in assessing on-site operational impacts.

While this analysis relies on the 20 dBA L_{eq} *substantial* noise increase threshold, it is important to recognize that some jurisdictions within the State, including the City of Los Angeles, no longer maintain any daytime noise increase thresholds. The City of Los Angeles found the 10 dBA daytime construction noise increase thresholds previously employed in the City of Los Angeles to be overly conservative, especially in the context of impacts on public health that often results in significant impact determination, even for routine construction activities that are expected to occur in an urban environment. (24 p. 7) Based on these findings, the updated City of Los Angeles CEQA Thresholds Guide identifies a 5 dBA nighttime construction noise increase threshold but no longer maintains a numerical threshold above ambient noise levels for daytime construction activities. Therefore, if the Project-related construction noise levels generate a temporary noise level increase over the existing daytime ambient noise levels of 20 dBA L_{eq} or more, then the Project construction noise increases will be considered a *significant* impact.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.4, vibration impacts originating from the construction of the Project, vibration-generating activities are appropriately evaluated using standards established by the Caltrans *Transportation and Construction Vibration Guidance Manual*, Table 19. Caltrans' vibration thresholds for building damage are used in this noise study to assess potential operational and temporary construction-related impacts at adjacent building locations. A maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec) is used to describe the nearest residential buildings adjacent to the Project site.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or airstrips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest major airport is the French Valley Airport (FVA), located over 7.4 miles northwest of the Project site. As shown in Exhibit 3-2, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered less than significant, and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Operational	Noise-Sensitive	Residential Exterior Noise Level ¹ If ambient is < 60 dBA Leq ² If ambient is 60 - 65 dBA Leq ² If ambient is > 65 dBA Leq ²	55 dBA Leq ≥ 5 dBA Leq Project increase ≥ 3 dBA Leq Project increase ≥ 1.5 dBA Leq Project increase	45 dBA Leq
Construction	Noise-Sensitive	Exterior Noise Level Threshold ³ Exterior Noise Level Increase ⁴ Vibration Level Threshold ⁵	80 dBA Leq 20 dBA Leq 0.3 PPV (in/sec)	

¹ County of Riverside General Plan Municipal Code, Section 9.52.040.

² FICON, 1992.

³ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

⁴ Reasonable daytime increase that can be tolerated without significant adverse effects.

⁵ Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area at the nearest noise-sensitive receivers. Exhibit 5-1 provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, long-term noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, April 16, 2025. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (25)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing equivalent hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (8)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise-sensitive areas and are used to estimate the future noise level impacts.

EXHIBIT 5-1: NOISE MEASUREMENT LOCATIONS



LEGEND:

Site Boundary ▲ Measurement Locations

Collecting noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise increase due to the Project's contribution to the ambient noise levels. This approach is necessary to calculate the temporary or permanent increase in ambient noise levels as required by the CEQA Guidelines Environmental Checklist.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the equivalent or the hourly energy average sound levels (Leq) to describe the existing ambient conditions. Table 5-1 provides the (energy average) noise levels used to describe the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time-varying signal over a given sample period. The daytime and nighttime equivalent noise levels represent the average of all hourly noise levels observed during these time periods, expressed as a single number.

TABLE 5-1: AMBIENT NOISE LEVEL MEASUREMENTS

Location ¹	Description	Energy Average Noise Level (dBA Leq) ²		CNEL
		Daytime	Nighttime	
L1	Located southwest of the site near the residence at 44130 Maggie Weed Ln.	47.0	53.7	59.6
L2	Located southeast of the site near the building at 43240 Los Corralitos Rd.	59.0	51.5	60.3
L3	Located east of the site near the 1968 Cellars Winery and Distillery	58.0	51.8	60.0
L4	Located north of the site near the residence at 35879 Belle Chaine Loop	49.4	42.3	51.4
L5	Located northwest of the site near the residence at 43453 Avenida Felicita	60.3	54.6	62.9

¹ See Exhibit 5-A for the noise level measurement locations.

² Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the equivalent noise levels used to describe the daytime and nighttime ambient conditions for each of the measurements. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods.

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6 OFF-SITE TRAFFIC NOISE ANALYSIS

By far, the largest single source of community noise is the flow of traffic on major roadways. Motor vehicle noise is generated by engine vibrations, the interaction between tires and the road, and the exhaust system. Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas and at the Project site. According to the *Galway Downs (CUP 2303R1) Traffic Analysis*, the Project is not anticipated to generate additional two-way trip ends per day as compared to the uses evaluated for the 2023 baseline conditions. (26) The traffic analysis states *that no greater volume of daily or peak hour traffic would be generated under CUP 2303R1 than is occurring under existing conditions or has occurred under historic baseline average conditions.*

Based on a comparison to the baseline traffic data, the development of the proposed Project is not anticipated to result in a net increase in average daily trips. Therefore, the off-site traffic noise levels generated by the Project are considered *less than significant* and no further analysis is required.

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7 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following receiver locations, as shown on Exhibit 7-1, were identified as representative locations for analysis. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

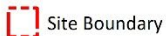
To describe the potential off-site Project noise levels, eight receiver locations in the vicinity of the Project site were identified. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the Project boundary to each receiver location.

- R1: Location R1 represents the existing residence at 43540 Avenida Felicita, approximately 1,215 feet northwest of the Project site. Receiver R1 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing residence at 35328 De Portola Road, approximately 1,254 feet northwest of the Project site. Receiver R2 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing residence at 35536 Belle Chaine Loop, approximately 1,470 feet northwest of the Project site. Receiver R3 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing residence at 35897 Belle Chaine Loop, approximately 1,146 feet northwest of the Project site. Receiver R4 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing residence at 36435 Mustang Circle, approximately 429 feet east of the Project site. Receiver R5 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

EXHIBIT 7-1: RECEIVER LOCATIONS



LEGEND:



Site Boundary



Receiver Locations



Distance from receiver to Project site boundary (in feet)

- R6: Location R6 represents the existing residence at 38831 Pauba Road, approximately 187 feet south of the Project site. Receiver R6 is placed in the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing residence at 44130 Maggie Weed Lane, approximately 466 feet southwest of the Project site. Receiver R7 is placed in the private outdoor living area (backyard) nearest the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R8: Location R8 represents the existing residence at 24020 Lawson Road, approximately 914 feet west of the Project site. Receiver R8 is placed in the private outdoor living area (backyard) nearest the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

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8 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 7, resulting from the operation of the Project on weekdays or weekends. To conservatively describe the potential worst-case noise environment, Exhibit 8-1 presents the 59 individual noise sources used to assess operational noise levels.

8.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical weekday and weekend activities at the Project site. The on-site Project-related noise sources are expected to include: equestrian activity, special occasion activity, award ceremony activity, wine country lodging, employee housing, parking lot vehicle movements, sports field activity, and announcement/music speakers.

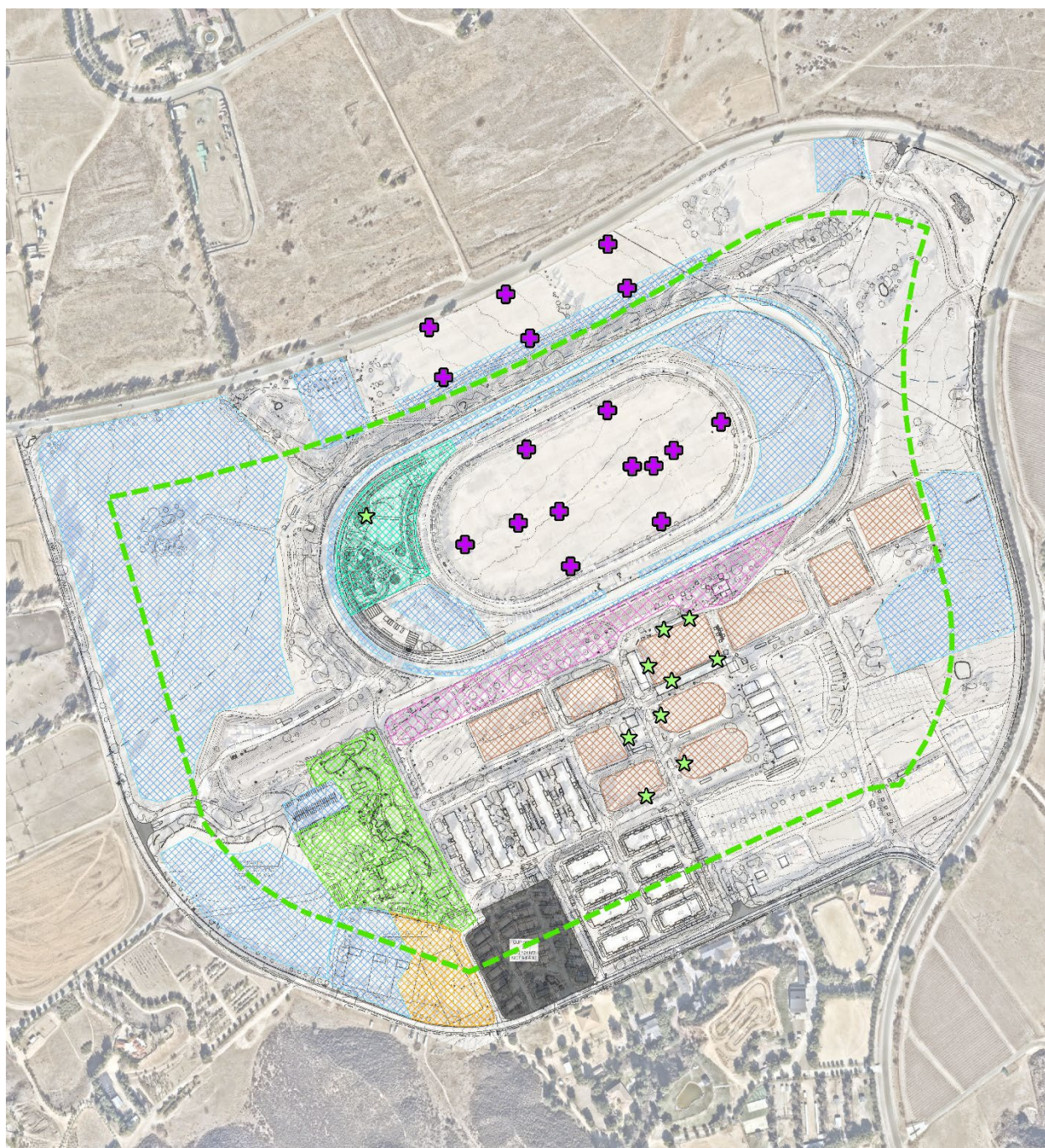
8.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown in Table 8-1 used to estimate the Project's operational noise impacts. It is important to note that the following projected noise levels assume the reasonable worst-case noise environment, where all noise source activities are operating simultaneously. This scenario assumes all activities occur simultaneously including active equestrian uses with amplified announcements and music, a special occasion, a sporting event, and an awards ceremony with all parking lots shown in Exhibit 9-1 in use.

8.2.1 Measurement Procedures

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (25)

EXHIBIT 8-1: OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

- | | | |
|---|---|--|
|  Exception No. 9 Zone |  Equestrian Activity |  Award/Ceremoy Activity |
|  Outdoor Activity Area |  Parking Lot Vehicle Movements |  Wine County Lodging Activities |
|  Announcement Speaker |  Speacial Occasions Activity |  Employee Housing Activities |

TABLE 8-1: REFERENCE NOISE LEVEL MEASUREMENTS

Reference Noise Source ¹	Noise Source Height (Feet)	Min./ Hour ¹		Reference Noise Level (dBA L _{eq}) @ 50 Feet	Sound Power Level (dBA) ²
		Day	Night		
Equestrian Activity	5'	60	0	66.4	98.0
Special Occasion Activity	5'	60	60	71.6	103.2
Award Ceremony Activity	5'	60	0	70.7	102.3
Wine Country Lodging	5'	45	30	44.4	76.0
Employee Housing	5'	45	30	44.4	76.0
Parking Lot Vehicle Movements	5'	60	60	49.5	81.1
Sports Field Activity	5'	60	0	69.8	101.4
Announcement/Music Speakers	8'	60	0	66.4	98.0

¹ Source Level Measured by Urban Crossroads, Inc.

² Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.

"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

³ Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

8.2.2 Equestrian Activity

The reference equestrian activities are intended to describe the typical operational noise source levels associated with the Project. This includes dozens of spectators watching riders and talking, tractors sweeping the arena, announcements during events introducing participants, coaches calling out instructions and encouragement, maintenance crews driving by in golf carts, and background operations of other arenas. At a uniform reference distance of 50 feet, Urban Crossroads collected a reference noise level of 66.4 dBA L_{eq}. The equestrian activity noise level measurement represents multiple contests and was taken over a three-hour period, near the edge of the arena, approximately 100 feet from the center of the activity. Equestrian activities and events are expected to take place throughout the daytime hours with no nighttime activity anticipated.

8.2.3 Special Occasion Activity

The special occasion activity reference noise level measurement was collected over a period of 1 hour and 30 minutes and represents a large wedding event with approximately 250 people in attendance, talking in raised voices, and recorded music playing in the background. At a reference distance of 50 feet, Urban Crossroads measured a noise level of 71.6 dBA L_{eq} at 50 feet. Based on current operations, special occasion activities are expected to take place throughout the daytime and nighttime hours within the designated special events area.

8.2.4 Award Ceremony Activity

To describe the noise levels associated with an awards ceremony activity, Urban Crossroads collected a reference noise level measurement of an equestrian awards ceremony. The awards ceremony activity noise levels include several announcements and recognitions for all participants, followed by the announcement of the top three contestants, accompanied by louder celebration music and cheers for each successive winner until the first-place award. The measured reference

noise level at the uniform 50-foot reference distance is 70.7 dBA L_{eq} for the awards ceremony activity. Award ceremony activities and events could take place throughout the daytime hours but are not included as a nighttime activity.

8.2.5 Wine Country Lodging Activity

The primary noise source associated with the Wine Country lodging would be the associated mechanical air conditioning units. The reference noise level represents a Carrier Model 24SCA4, 1.5 to 5-ton air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 44.4 dBA L_{eq} . For modeling purposes, it is assumed that there will be a total of 36 air conditioners within the wine country lodging area. Based on the typical operating conditions, the air conditioning units are estimated to operate for an average of 45 minutes per hour during the daytime hours and 30 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements. For this noise analysis, the air conditioning units are expected to be ground-mounted adjacent to the Project buildings.

8.2.6 Employee Housing Activity

Similar to the Wine Country lodging, the primary noise source associated with the employee housing would be the associated mechanical air conditioning units. The reference noise level represents a Carrier Model 24SCA4, 1.5 to 5-ton air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 44.4 dBA L_{eq} . For modeling, it is assumed there would be a total of 18 air conditioners within the employee housing area. Based on the typical operating conditions, the air conditioning units are estimated to operate for an average of 45 minutes per hour during the daytime hours and 30 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements. For this noise analysis, the air conditioning units are expected to be ground-mounted adjacent to the Project buildings.

8.2.7 Parking Lot Vehicle Movements

To describe the on-site parking lot activity, a long-term reference noise level measurement was collected in the center of activity within the parking lot of a local rural community fair in San Diego County. The parking lot noise levels are mainly due to cars pulling in and out of parking spaces in combination with car doors opening and closing. At 50 feet from the center of activity, the parking lot produced a reference noise level of 49.5 dBA L_{eq} . Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime. Except for the employee parking area and the special event parking, no nighttime activity is anticipated in the other identified parking areas.

8.2.8 Sport Field Activity

To describe the sports field activity, a reference noise level measurement was collected at a park with four active soccer games being played with large groups of parents along both sides of each field. The noise levels at the soccer games were dominated by parents and coaches shouting encouragement or instructions, punctuated by loud whistle blasts from the referee. Background noise included people talking to each other and to players along the sidelines, as well as conversations on cell phones, and sounds from other nearby games. At 50 feet from the center of activity, the soccer game produced a reference noise level of 69.8 dBA L_{eq} . Activities such as sports

field activities are expected to take place during the full hour (60 minutes) throughout the daytime hours. No nighttime activity is anticipated.

8.2.9 Announcement/Music Speakers

To describe the Announcement/Music Speakers that are used at each of the areas, a reference noise level measurement was collected at the edge of the main arena at Galway Downs during an equestrian event in April 2025. The speakers are used to announce riders and other information, such as when the next event will occur, and then music is played over the speakers between events. At 50 feet from the center of activity, the parking lot produced a reference noise level of 66.4 dBA L_{eq} . The speakers are expected to be active throughout the daytime. The speakers would not be used during nighttime hours.

8.3 CADNA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels. Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source.

Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. This approach ensures a reasonable approximation in environments where both hard and soft surfaces exist, aligning with typical real-world conditions. Appendix 8.1 includes the detailed noise dBA L_{eq} model inputs used to estimate the Project operational noise levels presented in this section.

8.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the Project operations that include equestrian activity, special occasion activity, award ceremony activity, wine country lodging, employee housing, parking lot vehicle movements, sports field activity, and announcement/music speakers, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 8-2 shows the Project operational noise levels during the daytime hours of

7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 42.4 to 49.3 dBA L_{eq} .

TABLE 8-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source ¹	Operational Noise Levels by Receiver Location (dBA L_{eq})							
	R1	R2	R3	R4	R5	R6	R7	R8
Equestrian Activity	31.8	32.5	33.9	35.0	40.8	43.0	36.8	34.4
Special Occasion Activity	30.8	30.9	30.9	30.1	31.7	40.2	40.6	36.3
Award Ceremony Activity	32.3	33.3	34.3	33.4	31.0	34.1	34.1	33.8
Wine Country Lodging	13.1	13.8	15.1	15.8	18.7	21.1	17.8	15.7
Employee Housing	9.1	9.1	9.1	8.5	11.8	23.7	20.7	14.8
Parking Lot Vehicle Movements	20.2	21.1	22.7	23.8	24.6	24.6	26.0	22.8
Sports Field Activity	39.9	41.4	44.0	45.7	42.9	43.1	40.8	40.1
Announcement/Music Speakers	34.6	35.4	36.6	37.1	41.2	45.0	38.8	36.8
Total (All Noise Sources)	42.4	43.5	45.6	46.9	46.8	49.3	45.9	43.9

¹ See Exhibit 8-1 for the noise source locations. CadnaA noise model calculations are included in Appendix 8.1.

Table 8-3 shows the Project operational noise levels during the nighttime hours from 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the existing off-site receiver locations are expected to range from 29.9 to 39.8 dBA L_{eq} . The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 8-1. Appendix 8.1 includes the detailed noise model inputs.

8.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against the County of Riverside exterior noise level standards at nearby receiver locations. Table 8-4 shows that the operational noise levels associated with the Project will not exceed the County of Riverside daytime and nighttime exterior noise level standards at the existing nearby noise-sensitive receiver locations. Therefore, the mitigated operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 8-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source ¹	Operational Noise Levels by Receiver Location (dBA L _{eq})							
	R1	R2	R3	R4	R5	R6	R7	R8
Equestrian Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Special Occasion Activity	29.8	29.9	29.9	29.1	30.8	39.2	39.7	35.3
Award Ceremony Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wine Country Lodging	10.3	11.1	12.3	13.0	15.9	18.4	15.1	13.0
Employee Housing	6.3	6.3	6.3	5.8	9.1	21.0	18.0	12.0
Parking Lot Vehicle Movements	8.9	8.9	8.6	7.6	9.1	17.9	20.2	15.0
Sports Field Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Announcement/Music Speakers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (All Noise Sources)	29.9	30.0	30.0	29.3	31.0	39.3	39.8	35.4

¹ See Exhibit 8-1 for the noise source locations. CadnaA noise model calculations are included in Appendix 8.1.

TABLE 8-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Project Operational Noise Levels (dBA L _{eq}) ²		Noise Level Standards (dBA L _{eq}) ³		Noise Level Standards Exceeded? ⁴	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	42.4	29.9	55.0	45.0	No	No
R2	43.5	30.0	55.0	45.0	No	No
R3	45.6	30.0	55.0	45.0	No	No
R4	46.9	29.3	55.0	45.0	No	No
R5	46.8	31.0	55.0	45.0	No	No
R6	49.3	39.3	55.0	45.0	No	No
R7	45.9	39.8	55.0	45.0	No	No
R8	43.9	35.4	55.0	45.0	No	No

¹ See Exhibit 7-1 for the receiver locations.

² Proposed Project unmitigated operational noise levels as shown in Tables 8-2 and 8-3.

³ Exterior noise level standards, as shown in Table 4-1.

⁴ Do the estimated Project operational noise source activities exceed the noise level standards?

"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

8.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations that may be potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \dots 10^{SPLn/10}]$$

where “SPL1,” “SPL2,” etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented in Tables 8-5 and 8-6, respectively. As indicated in Table 8-5, the Project will generate daytime operational noise increases ranging from 0.1 to 2.5 dBA L_{eq} at the nearest receiver locations. Table 8-6 shows that the Project will generate nighttime operational noise increases ranging from 0.1 to 0.3 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases would not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, Project-related operational noise level increases at the sensitive receiver locations will be *less than significant*.

TABLE 8-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	42.4	L5	60.3	60.4	0.1	5.0	No
R2	43.5	L5	60.3	60.4	0.1	5.0	No
R3	45.6	L4	49.4	50.9	1.5	5.0	No
R4	46.9	L4	49.4	51.3	1.9	5.0	No
R5	46.8	L3	58.0	58.3	0.3	5.0	No
R6	49.3	L2	59.0	59.4	0.4	5.0	No
R7	45.9	L1	47.0	49.5	2.5	5.0	No
R8	43.9	L1	47.0	48.7	1.7	5.0	No

¹ See Exhibit 7-1 for the receiver locations.

² Total Project daytime operational noise levels as shown in Table 8-2.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

⁴ Observed daytime ambient noise levels as shown in Table 5-1.

⁵ Represents the combined ambient conditions plus the Project activities.

⁶ The noise level increase expected with the addition of the proposed Project activities.

⁷ Significance increase criteria as shown in Table 4-1.

TABLE 8-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	29.9	L5	54.6	54.6	0.0	5.0	No
R2	30.0	L5	54.6	54.6	0.0	5.0	No
R3	30.0	L4	42.3	42.6	0.3	5.0	No
R4	29.3	L4	42.3	42.5	0.2	5.0	No
R5	31.0	L3	51.8	51.8	0.0	5.0	No
R6	39.3	L2	51.0	51.3	0.3	5.0	No
R7	39.8	L1	53.7	53.9	0.2	5.0	No
R8	35.4	L1	53.7	53.8	0.1	5.0	No

¹ See Exhibit 7-A for the receiver locations.

² Total Project nighttime operational noise levels as shown in Table 8-3.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

⁴ Observed nighttime ambient noise levels as shown in Table 5-1.

⁵ Represents the combined ambient conditions plus the Project activities.

⁶ The noise level increase expected with the addition of the proposed Project activities.

⁷ Significance increase criteria as shown in Table 4-1.

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9 CONSTRUCTION IMPACTS

Areas that would be physically disturbed with implementation of the Project are depicted on Exhibit 9-1, which shows the on-site construction noise source activity in relation to the nearest sensitive receiver locations previously described in Section 7. As shown, off-site disturbances associated with the Project would be limited to the construction of the off-site sewer connection between the Project site and De Portola Road, and physical disturbances associated with the paving of driveway access points into the Project site and the installation of dedicated acceleration and deceleration lanes at each driveway location along Los Caballos Road (two paved driveways) and Los Corralitos Road (two paved driveways).

New physical disturbances on site would occur due to the construction of the new special occasion area, construction of the proposed wine country equestrian park model lodging area to the immediate south of the existing horse racetrack, and installation of new sewer lines throughout the property. As shown in Exhibit 9-1, physical disturbances associated with the proposed Project on-site construction would include approximately 94.49 acres, as well as an additional 4.10 acres off site. It should be noted that the 94.49 acres of physical impacts shown on Exhibit 9-1 conservatively includes any portions of the Project site that could be affected by the Project, including the Project frontages along Los Caballos Road, Los Corralitos Road, and Pauba Road; the proposed reconfigured driveway access locations; all areas on site that could serve as potential parking areas; all areas where new buildings and improvements are proposed; and all areas where minor improvements are proposed to meet ADA requirements.

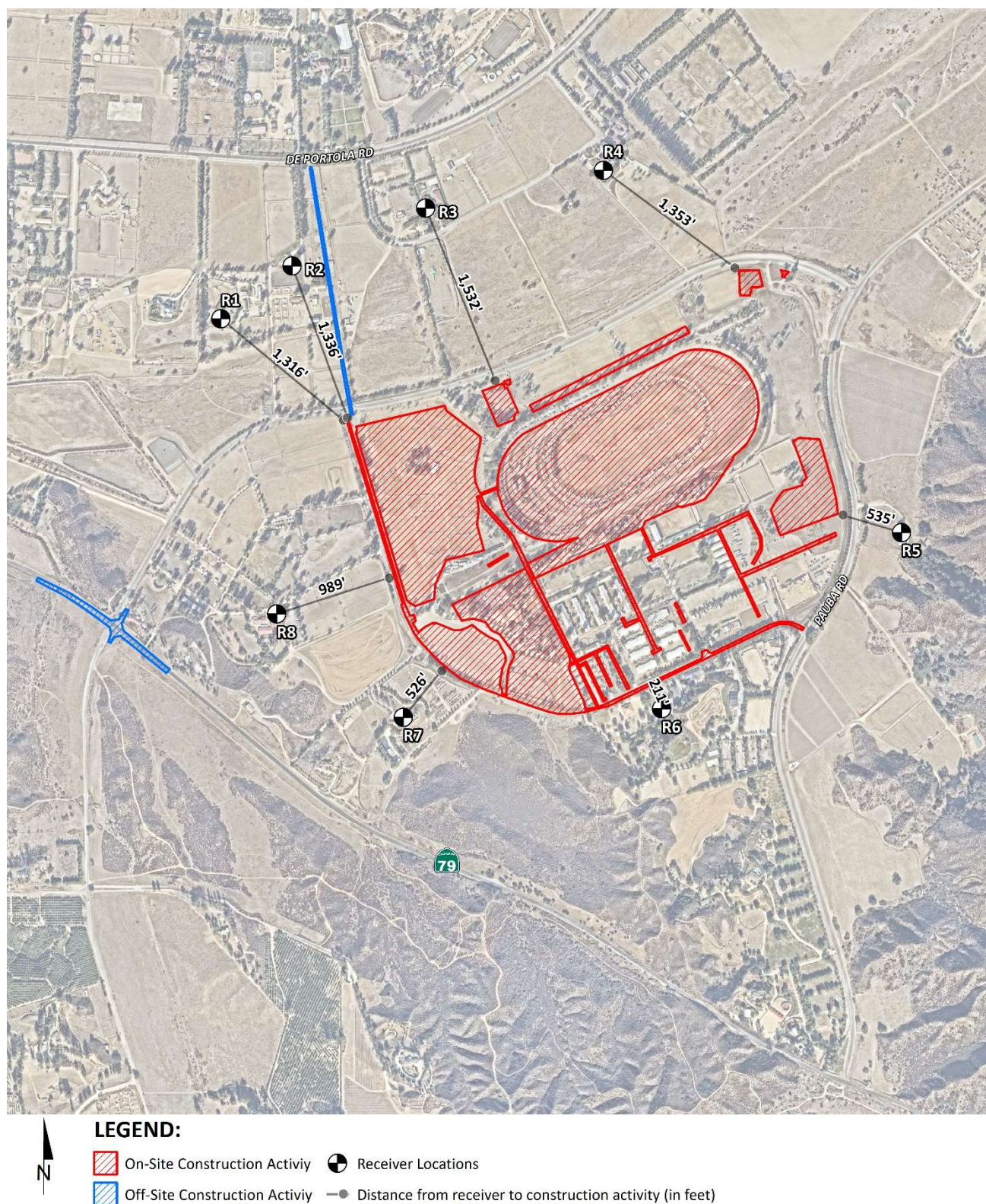
According to Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (15)

9.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognize that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Removal of Existing Structures
- Fine Grading
- Site Development
- Paving

EXHIBIT 9-1: CONSTRUCTION NOISE SOURCE LOCATIONS



9.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (27) The RCNM equipment database provides a comprehensive list of the noise-generating characteristics of specific types of construction equipment. In addition, the database provides an usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. According to the EPA, FTA, and FHWA, the overall construction noise level is governed primarily by the noisiest pieces of equipment. The quieter pieces do not affect the overall level, but they do reduce the magnitude of the fluctuations in the noise level. Therefore, a rough estimate of the noise level needs only include the noisiest pieces of equipment expected at the site. (28) (8) (29) Consistent with FHWA and FTA guidance for detailed construction noise assessment, Table 9-1 presents the combined noise levels for the loudest construction activities expected for each stage, assuming all equipment operates simultaneously.

TABLE 9-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})	Composite Reference Noise Level (dBA L _{eq}) ²	Reference Power Level (dBA L _w) ³
Removal of Existing Structures	Front End Loader	75	78.2	109.9
	Backhoe	74		
	Flat Bed Truck	70		
Fine Grading	Scraper	80	85.1	116.8
	Grader	81		
	Tractor	80		
Site Development	Crane	73	81.1	112.8
	Tractor	80		
	Welder/Torch	70		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		

¹ FHWA Road Construction Noise Model.

² Represents the combined noise level for all equipment assuming they operate at the same time.

³ Sound power level represents the total amount of acoustic energy (noise level) produced by a sound source independent of distance or surroundings.

9.3 CONSTRUCTION NOISE ANALYSIS

Construction projects involve various stages, and activities frequently shift from one location to another. For example, during site preparation and grading, noise-generating activities may concentrate in an area for a short period to remove an obstruction, while the majority of the grading involves the equipment moving back and forth in a predictable pattern throughout the site; building construction and foundation work generally concentrate near the building footprint, while paving generally involves a predictable pattern of movement throughout the site. Therefore, construction activities are best evaluated as multiple moving point sources within the construction area since the speed and power of the equipment vary, and the equipment constantly changes position in terms of its distance and direction relative to the receivers. (8) (30)

On-site Construction

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts by phase at the nearby sensitive receiver locations were completed. To account for the dynamic nature of construction activities, the CadnaA construction noise analysis evaluates the noise source activities as multiple moving point sources, or construction crews, within the limits of construction. Construction impacts are based on the loudest activity and the highest noise level calculated at each receiver location. As shown in Table 9-2, the construction noise levels are expected to range from 55.4 to 67.6 dBA L_{eq} at the nearby receiver locations. Appendix 9.1 includes the detailed CadnaA construction noise model inputs.

TABLE 9-2: ON-SITE CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})				
	Removal of Existing Structures	Fine Grading	Site Development	Paving	Highest Levels ²
R1	48.5	55.4	51.4	48.1	55.4
R2	49.5	56.4	52.4	49.1	56.4
R3	51.1	58.0	54.0	50.7	58.0
R4	52.1	59.0	55.0	51.7	59.0
R5	54.7	61.6	57.6	54.3	61.6
R6	60.7	67.6	63.6	60.3	67.6
R7	53.1	60.0	56.0	52.7	60.0
R8	50.9	57.8	53.8	50.5	57.8

¹ Construction noise source and receiver locations are shown in Exhibit 9-1.

² Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 9.1.

9.4 ON-SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at the nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities, as shown in Table 9-3. Therefore, the noise impacts due to the Project construction noise are considered *less than significant* at all receiver locations.

TABLE 9-3: ON-SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	55.4	80	No
R2	56.4	80	No
R3	58.0	80	No
R4	59.0	80	No
R5	61.6	80	No
R6	67.6	80	No
R7	60.0	80	No
R8	57.8	80	No

¹ Construction noise source and receiver locations are shown on Exhibit 9-1.

² Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.

³ Construction noise level thresholds as shown on Table 4-1.

⁴ Do the estimated Project construction noise levels exceed the construction noise level threshold?

9.5 TEMPORARY ON-SITE CONSTRUCTION NOISE INCREASES

To describe the temporary Project construction noise contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing ambient noise levels measurements at the nearest off-site receiver locations. The difference between the combined Project-construction and ambient noise levels is used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when the Project construction-source noise is added to the ambient daytime conditions are presented in Table 9-4. As outlined in Section 4.1.2, a reasonable 20 dBA increase over the daytime noise limit can be tolerated without significant adverse effects.

As indicated in Table 9-4, the Project will contribute to construction noise increases ranging from 1.2 to 13.2 dBA L_{eq} during the daytime hours at the nearest receiver locations. The construction noise analysis shows that the nearest receiver locations will not exceed the temporary 20 dBA L_{eq} noise level increase significance threshold during Project construction activities. Therefore, the temporary construction noise increase analysis shows that the noise impacts due to daytime Project construction noise are considered *less than significant*.

TABLE 9-4: ON-SITE DAYTIME CONSTRUCTION NOISE INCREASES

Receiver Location ¹	Typical Project Construction Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	55.4	L5	60.3	61.5	1.2	20	No
R2	56.4	L5	60.3	61.8	1.5	20	No
R3	58.0	L4	49.4	58.5	9.1	20	No
R4	59.0	L4	49.4	59.4	10.0	20	No
R5	61.6	L3	58.0	63.2	5.2	20	No
R6	67.6	L2	59.0	68.1	9.1	20	No
R7	60.0	L1	47.0	60.2	13.2	20	No
R8	57.8	L1	47.0	58.1	11.1	20	No

¹ Construction noise source and receiver locations are shown on Exhibit 9-1.

² Typical Project daytime construction noise levels as shown on Table 9-3.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

⁴ Observed daytime ambient noise levels as shown on Table 5-1.

⁵ Represents the combined ambient conditions plus the Project construction activities.

⁶ The noise level increase expected with the addition of the proposed Project construction activities.

⁷ Reasonable daytime increase that can be tolerated without significant adverse effects.

9.6 ON-SITE CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized in Table 9-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by Caltrans. To describe the vibration impacts, Caltrans provides the following equation: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.1}$

TABLE 9-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source level of construction equipment provided on Table 9-5 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 9-6 presents the expected Project-related vibration levels at the

nearby receiver locations. At distances ranging from 211 to 1,532 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.00 to 0.01 PPV in/sec. Based on the maximum acceptable continuous vibration threshold of 0.3 in/sec PPV, typical construction-related vibration from the Project would remain below building damage thresholds at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

TABLE 9-6: ON-SITE CONSTRUCTION VIBRATION LEVELS

Location ¹	Distance to Const. Activity (Feet) ²	Typical Construction Vibration Levels PPV (in/sec) ³						Thresholds PPV (in/sec) ⁴	Thresholds Exceeded? ⁵
		Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	1,316'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R2	1,336'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R3	1,532'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R4	1,353'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R5	535'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R6	211'	0.00	0.00	0.00	0.00	0.01	0.01	0.3	No
R7	526'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No
R8	989'	0.00	0.00	0.00	0.00	0.00	0.00	0.3	No

¹ Construction noise source and receiver locations are shown in Exhibit 9-1.

² Distance from receiver building facade to Project construction boundary (Project site boundary).

³ Based on the Vibration Source Levels of Construction Equipment (Table 9-5).

⁴ Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.

⁵ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

9.7 OFF-SITE CONSTRUCTION

Off-site disturbances associated with Project-related construction activities would be limited to the construction of the off-site sewer connection between the Project site and De Portola Road; physical disturbances associated with the paving of driveway access points into the Project site and the installation of dedicated acceleration and deceleration lanes at each driveway location along Los Caballos Road (two paved driveways) and Los Corralitos Road (two paved driveways); the installation of an eastbound left turn lane at the intersection of Los Caballos Road at SR-79; and the extension of the eastbound left turn lane to include 545 feet of storage at the intersection of Anza Road and SR-79.

The activities typically would involve the removal of roadway surfaces, curbs, and gutters, laying of road base, pipes, backfilling, compaction, and paving activities. These activities would generate noise levels similar to site preparation, i.e., 81.1 dBA L_{eq} at 50 feet. The nearest receiver to off-site construction activity is located approximately 90 feet northeast of the intersection of SR-79 and Los Caballos Road, where the Project Applicant would install an eastbound left-turn lane. At a distance of 90 feet, the highest construction noise levels would be approximately 76 dBA L_{eq} , which is less than the 80 dBA L_{eq} threshold. The Project's remaining off-site construction activities, including the installation of the off-site sewer line between the northwest corner of the Project site and De Portola

Road, would occur at a farther distance to sensitive receptors than the 90-foot distance sited above, and therefore would be exposed to construction-related noise levels less than 76 dBA L_{eq} . Therefore, off-site construction noise impacts would be considered less than significant.

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10 REFERENCES

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11 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Galway Downs (CUP 2303R1) Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.

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Education

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993
Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

Professional Registrations

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

Professional Affiliations

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

Professional Certifications

Certified Acoustical Consultant – County of San Diego • March, 2018
Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

COUNTY OF RIVERSIDE CODE

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ORDINANCE NO. 847
(AS AMENDED THROUGH 847.1)
AN ORDINANCE OF THE COUNTY OF RIVERSIDE AMENDING
ORDINANCE NO. 847 REGULATING NOISE

The Board of Supervisors of the County of Riverside Ordains as Follows:

Section 1. INTENT. At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of Riverside County residents and degrade their quality of life. Pursuant to its police power, the Board of Supervisors hereby declares that noise shall be regulated in the manner described herein. This ordinance is intended to establish countywide standards regulating noise. This ordinance is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act and no such thresholds are hereby established.

Section 2. EXEMPTIONS. Sound emanating from the following sources is exempt from the provisions of this ordinance:

- a. Facilities owned or operated by or for a governmental agency.
- b. Capital improvement projects of a governmental agency.
- c. The maintenance or repair of public properties.
- d. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.
- e. Public or private schools and school-sponsored activities
- f. Agricultural operations on land designated Agriculture in the Riverside County General Plan, or land zoned A-1 (Light Agriculture), A-P (Light Agriculture With Poultry), A-2 (Heavy Agriculture), A-D (Agriculture-Dairy) or C/V (Citrus/Vineyard), provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used during such operations, whether stationary or mobile.
- g. Wind Energy Conversion Systems (WECS), provided such systems comply with the WECS noise provisions of Riverside County Ordinance No. 348.
- h. Private construction projects located one-quarter (1/4) of a mile or more from an inhabited dwelling.
- i. Private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:
 1. Construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and
 2. Construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

- j. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of 7 a.m. and 8 p.m.
- k. Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems
- l. Heating and air conditioning equipment.
- m. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare.
- n. The discharge of firearms consistent with all state laws.

Section 3. DEFINITIONS. As used in this ordinance, the following terms shall have the following meanings:

- a. Audio Equipment. A television, stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.
- b. Decibel (dB). A unit for measuring the relative amplitude of a sound equal approximately to the smallest difference normally detectable by the human ear, the range of which includes approximately one hundred thirty (130) decibels on a scale beginning with zero decibels for the faintest detectable sound. Decibels are measured with a sound level meter using different methodologies as defined below:
 - 1. A-weighting (dBA) means the standard A-weighted frequency response of a sound level meter, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear for moderate sounds.
 - 2. Maximum Sound level (L_{max}) means the maximum sound level measured on a sound level meter.
- c. Governmental Agency. The United States, the State of California, Riverside County, any city within Riverside County, any special district within Riverside County or any combination of these agencies.
- d. Land Use Permit. A discretionary permit issued by Riverside County pursuant to Riverside County Ordinance No. 348.
- e. Motor Vehicle. A vehicle that is self-propelled.
- f. Motor Vehicle Sound System. A stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.
- g. Noise. Any loud, discordant or disagreeable sound.
- h. Occupied Property. Property upon which is located a residence, business or industrial or manufacturing use.
- i. Off-Highway Vehicle. A motor vehicle designed to travel over any terrain.
- j. Public Property. Property owned by a governmental agency or held open to the public, including, but not limited to, parks, streets, sidewalks, and alleys.

- k. Public or Private School. An institution conducting academic instruction at the preschool, elementary school, junior high school, high school, or college level.
- l. Sensitive Receptor. A land use that is identified as sensitive to noise in the Noise Element of the Riverside County General Plan, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.
- m. Sound Level Meter. An instrument meeting the standards of the American National Standards Institute for Type 1 or Type 2 sound level meters or an instrument that provides equivalent data.
- n. Sound Amplifying Equipment. A loudspeaker, microphone, megaphone or other similar device.

Section 4. GENERAL SOUND LEVEL STANDARDS. No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1.

**TABLE 1
SOUND LEVEL STANDARDS (Db L_{max})**

GENERAL PLAN FOUNDATION COMPONENT	GENERAL PLAN LAND USE DESIGNATION	GENERAL PLAN LAND USE DESIGNATION NAME	DENSITY	MAXIMUM DECIBEL LEVEL	
				7am- 10pm	10pm- 7am
Community Development	EDR	Estate Density ~~Residential~~	2 AC	55	45
	VLDR	Very Low density ~~Residential~~	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	MDR	Medium Density ~~Residential~~	2--5	55	45
	MHDR	Medium High Density ~~Residential~~	5--8	55	45
	HDR	High Density Residential	8--14	55	45
	VHDR	Very High Density ~~Residential~~	14-20	55	45
	H'TDR	Highest Density ~~Residential~~	20+	55	45
	CR	Retail Commercial		65	55
	CO	Office Commercial		65	55
	CT	Tourist Commercial		65	55
	CC	Community Center		65	55
	LI	Light Industrial		75	55
	HI	Heavy Industrial		75	75
	BP	Business Park		65	45
	PF	Public Facility		65	45
	SP	Specific Plan-Residential		55	45
		Specific Plan- ~~Commercial~~		65	55
		Specific Plan-Light ~~Industrial~~		75	55
		Specific Plan-Heavy ~~Industrial~~		75	75
Rural Community	EDR	Estate Density ~~Residential~~	2 ac	55	45
	VLDR	Very Low Density ~~Residential~~	1 ac	55	45
	LDR	Low Density Residential	1/2 ac	55	45
Rural	RR	Rural Residential	5 ac	45	45
	RM	Rural Mountainous	10 ac	45	45
	RD	Rural Desert	10 ac	45	45
Agriculture	AG	Agriculture	10 AC	45	45
Open Space	C	Conservation		45	45
	CH	Conservation Habitat		45	45
	REC	Recreation		45	45
	RUR	Rural	20 AC	45	45
	W	Watershed		45	45
	MR	Mineral Resources		75	45

Section 5. SOUND LEVEL MEASUREMENT METHODOLOGY. Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section 8. of this ordinance. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be re-verified. Sound level meters and calibration equipment shall be certified annually.

Section 6. SPECIAL SOUND SOURCES STANDARDS. The general sound level standards set forth in Section 4. of this ordinance apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitute separate violations of this ordinance.

- a. Motor Vehicles.
 1. Off-Highway Vehicles.
 - i. No person shall operate an off-highway vehicle unless it is equipped with a USDA qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.
 - ii. No person shall operate an off-highway vehicle unless the noise emitted by the vehicle is not more than 96 dBA if the vehicle was manufactured on or after January 1, 1986 or is not more than 101 dBA if the vehicle was manufactured before January 1, 1986. For purposes of this subsection, emitted noise shall be measured at a distance of twenty (20) inches from the vehicle tailpipe using test procedures established by the Society of Automotive Engineers under Standard J-1287.
 2. Sound Systems. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of 10:00 p.m. and 8:00 a.m., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than one hundred (100) feet from the vehicle.
- b. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of 10:00 p.m. and 8:00 a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools

or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment.

- c. Audio Equipment. No person shall operate any audio equipment, whether portable or not, between the hours of 10:00 p.m. and 8:00 a.m. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than one hundred (100) feet from the equipment.
- d. Sound Amplifying Equipment and Live Music. No person shall install, use or operate sound amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control.
 - 1. Sound amplifying equipment or live music is prohibited between the hours of 10:00 p.m. and 8:00 a.m.
 - 2. Sound emanating from sound amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than two hundred (200) feet from the equipment or music.

Section 7. EXCEPTIONS. Exceptions may be requested from the standards set forth in Sections 4. or 6. of this ordinance and may be characterized as construction-related, single event or continuous events exceptions.

- a. Application and Processing.
 - 1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the Director of Building and Safety on forms provided by the Building and Safety Department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 2. Single Event Exceptions. An application for a single event exception shall be made to and considered by the Planning Director on forms provided by the Planning Department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 3. Continuous Events Exceptions. An application for a continuous events exception shall be made to the Planning Director on forms provided by the Planning Department and shall be accompanied by the appropriate filing fee. Upon receipt of an application for a continuous events exception, the Planning Director shall set the matter for public hearing before the Planning Commission, notice of which shall be given as provided in Section 18.26.c. of Riverside County Ordinance No. 348. Notwithstanding the above, an application for a

continuous events exception that is associated with an application for a land use permit shall be processed concurrently with the land use permit in the same manner that the land use permit is required to be processed.

- b. Requirements for Approval. The appropriate decision making body or officer shall not approve an exception application unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. In determining whether activities are detrimental to the health, safety or general welfare of the community, the appropriate decision making body or officer shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If an exception application is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.
- c. Appeals. The Director of Building and Safety's decision on an application for a construction-related exception is considered final. The Planning Director's decision on an application for a single event exception is considered final. After making a decision on an application for a continuous events exception, the appropriate decision making body or officer shall mail notice of the decision to the applicant. Within ten (10) calendar days after the mailing of such notice, the applicant or an interested person may appeal the decision to the Board of Supervisors. Upon receipt of an appeal and payment of the appropriate appeal fee, the Clerk of the Board shall set the matter for hearing not less than five (5) days nor more than thirty (30) days thereafter and shall give written notice of the hearing in the same manner as notice of the hearing was given by the appropriate hearing officer or body. The Board of Supervisors shall render its decision within thirty (30) days after the appeal hearing is closed.
- d. Effect of a Pending Continuous Events Exception Application. For a period of one hundred and eighty (180) days from the effective date of this ordinance, no person creating any sound prohibited by this ordinance shall be considered in violation of this ordinance if the sound is related to a use that is operating pursuant to an approved land use permit, if an application for a continuous events exception has been filed to sanction the sound and if a decision on the application is pending.

Section 8. ENFORCEMENT. The Riverside County Sheriff and Code Enforcement shall have the primary responsibility for enforcing this ordinance; provided, however, the Sheriff and Code Enforcement may be assisted by the Public Health Department. Violations shall be prosecuted as described in Section 10. of this ordinance, but nothing in this ordinance shall prevent the Sheriff, Code Enforcement or the Department of Public Health from engaging in efforts to obtain voluntary compliance by means of warnings, notices, or educational programs.

Section 9. DUTY TO COOPERATE. No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section 8. of this ordinance when they are engaged in the process of enforcing the provisions of this ordinance. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this ordinance.

Section 10. VIOLATIONS AND PENALTIES. Any person who violates any provision of this ordinance once or twice within a one hundred and eighty (180) day period shall be guilty of an infraction. Any person who violates any provision of this ordinance more than twice within a one hundred and eighty (180) day period shall be guilty of a misdemeanor. Each day a violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such. Penalties shall not exceed the following amounts.

- a. For the first violation within a one hundred and eighty (180) day period the minimum mandatory fine shall be five hundred dollars (\$500).
- b. For the second violation within a one hundred and eighty (180) day period the minimum mandatory fine shall be seven hundred and fifty dollars (\$750).
- c. For any further violations within a one hundred and eighty (180) day period the minimum mandatory fine shall be one thousand dollars (\$1,000) or imprisonment in the County jail for a period not exceeding six (6) months, or both.

Section 11. SEVERABILITY. If any provision of this ordinance, or the application thereof to any person or circumstance, is held invalid, such invalidity shall not affect the remainder of the ordinance or the application of such provision(s) to other persons or circumstances.

Section 12. SAVINGS CLAUSE. The adoption of this ordinance shall not in any manner affect the prosecution of ordinance violations, which violations were committed prior to the effective date of this ordinance, nor be construed as a waiver of any permit, license, penalty or penal provisions applicable to such violations. The provisions of this ordinance, insofar as they are substantially the same as ordinance provisions previously adopted by Riverside County relating to the same subject matter, shall be construed as restatements and continuations, and not as new enactments.

Section 13. EFFECTIVE DATE. This ordinance shall take effect 30 days after its adoption.

Adopted: 847 Item 3.19 of 04/04/2006 (Eff: 05/04/2006)

Amended: 847.1 Item 3.4 of 06/19/2007 (Eff: 07/19/2007)

APPENDIX 5.1:

STUDY AREA PHOTOS

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15352 - Galway Downs

15352_L1_B_East

33, 29' 0.120000"117, 2' 18.670000"



15352_L1_B_North

33, 29' 0.120000"117, 2' 18.650000"



15352_L1_B_South

33, 29' 0.000000"117, 2' 18.780000"



15352_L1_B_West

33, 29' 0.070000"117, 2' 18.670000"



15352 - Galway Downs

15352_L2_C_East

33, 29' 7.250000"117, 1' 33.440000"



15352_L2_C_North

33, 29' 0.060000"117, 2' 18.290000"



15352_L2_C_South

33, 29' 7.280000"117, 1' 33.440000"



15352_L2_C_West

33, 29' 7.250000"117, 1' 33.490000"



15352 - Galway Downs

15352_L3_D_East

33, 29' 43.230000"117, 2' 2.170000"



15352_L3_D_North

33, 29' 7.280000"117, 1' 33.490000"



15352_L3_D_South

33, 29' 19.470000"117, 1' 30.750000"



15352_L3_D_West

33, 29' 19.360000"117, 1' 30.500000"



15352 - Galway Downs

15352_L4_U_East
33, 29' 42.750000"117, 1' 59.010000"



15352_L4_U_North



15352_L4_U_South
33, 29' 42.780000"117, 1' 59.010000"



15352_L4_U_West
33, 29' 42.810000"117, 1' 59.010000"



15352 - Galway Downs

15352_L5_V_East

33, 29' 19.870000"117, 2' 31.750000"



15352_L5_V_North

33, 29' 19.800000"117, 2' 31.720000"



15352_L5_V_South

33, 29' 19.860000"117, 2' 31.750000"



15352_L5_V_West

33, 29' 19.860000"117, 2' 31.800000"



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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

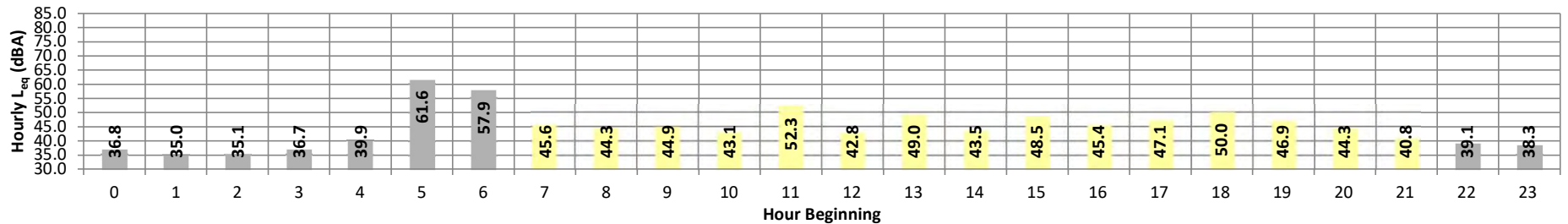
Date: Wednesday, April 16, 2025
Project: Galway Downs

Location: L1 - Located southwest of the site near the residence at 44130
Source: Maggie Weed Ln.

Meter: Piccolo II

JN: 15352
Analyst: N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
Night	0	36.8	44.7	32.1	44.3	43.4	42.3	41.6	36.1	34.5	32.7	32.5	32.2	36.8	10.0	46.8
	1	35.0	39.9	32.2	39.6	39.2	38.1	37.5	35.7	34.2	32.7	32.4	32.3	35.0	10.0	45.0
	2	35.1	42.0	31.3	41.6	41.0	39.4	38.6	35.6	33.7	31.7	31.6	31.3	35.1	10.0	45.1
	3	36.7	43.4	32.2	43.1	42.5	41.0	40.1	37.4	35.1	32.8	32.5	32.2	36.7	10.0	46.7
	4	39.9	50.3	33.1	50.0	49.4	47.1	45.0	37.8	35.8	33.9	33.6	33.2	39.9	10.0	49.9
	5	61.6	69.0	50.9	68.0	67.5	66.6	65.8	62.9	59.0	56.0	55.0	52.7	61.6	10.0	71.6
	6	57.9	66.6	46.4	65.5	65.0	63.0	61.7	58.2	56.0	52.2	51.0	47.9	57.9	10.0	67.9
Day	7	45.6	53.9	39.1	53.1	52.5	51.4	50.7	45.7	42.5	40.3	39.8	39.3	45.6	0.0	45.6
	8	44.3	51.2	40.1	50.3	49.5	48.0	47.0	44.9	43.4	41.3	40.8	40.3	44.3	0.0	44.3
	9	44.9	52.5	40.8	51.6	50.7	48.9	47.6	45.0	43.7	41.9	41.4	41.0	44.9	0.0	44.9
	10	43.1	49.0	39.8	48.4	47.6	46.0	45.3	43.6	42.3	40.6	40.3	39.9	43.1	0.0	43.1
	11	52.3	62.2	38.5	60.4	59.3	57.8	56.9	53.1	49.1	43.0	41.7	39.1	52.3	0.0	52.3
	12	42.8	50.5	37.6	49.7	49.0	47.5	46.5	43.2	41.1	38.7	38.3	37.8	42.8	0.0	42.8
	13	49.0	59.8	38.9	59.5	59.0	56.5	53.6	47.8	43.4	39.9	39.4	39.1	49.0	0.0	49.0
	14	43.5	51.8	39.4	51.0	50.0	47.8	46.4	43.5	42.0	40.2	39.9	39.5	43.5	0.0	43.5
	15	48.5	54.7	40.5	54.3	54.0	53.2	52.8	50.2	46.1	41.7	41.3	40.8	48.5	0.0	48.5
	16	45.4	53.0	39.3	52.4	51.9	50.6	49.5	46.0	43.3	40.3	39.9	39.5	45.4	0.0	45.4
	17	47.1	55.5	40.1	54.8	54.2	52.6	51.6	47.6	44.3	41.4	40.9	40.3	47.1	0.0	47.1
	18	50.0	59.4	43.4	58.1	57.2	55.2	54.0	50.5	47.5	44.7	44.2	43.5	50.0	0.0	50.0
	19	46.9	55.6	41.9	54.5	53.6	51.4	50.4	46.8	45.3	43.1	42.7	42.2	46.9	5.0	51.9
	20	44.3	52.1	38.9	51.6	50.8	48.5	47.4	44.9	42.9	39.9	39.6	39.0	44.3	5.0	49.3
21	40.8	45.6	37.8	45.1	44.6	43.5	42.9	41.4	40.3	38.6	38.3	37.9	40.8	5.0	45.8	
Night	22	39.1	46.5	34.8	45.9	45.2	44.2	43.1	39.1	37.3	35.5	35.2	34.9	39.1	10.0	49.1
	23	38.3	43.0	35.6	42.6	42.1	40.9	40.4	38.9	37.7	36.2	36.0	35.7	38.3	10.0	48.3
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	40.8	45.6	37.6	45.1	44.6	43.5	42.9	41.4	40.3	38.6	38.3	37.8	59.6	47.0	53.7
	Max	52.3	62.2	43.4	60.4	59.3	57.8	56.9	53.1	49.1	44.7	44.2	43.5			
Energy Average		47.0	Average:		53.0	52.3	50.6	49.5	46.3	43.8	41.0	40.6	39.9			
Night	Min	35.0	39.9	31.3	39.6	39.2	38.1	37.5	35.6	33.7	31.7	31.6	31.3			
	Max	61.6	69.0	50.9	68.0	67.5	66.6	65.8	62.9	59.0	56.0	55.0	52.7			
Energy Average		53.7	Average:		49.0	48.4	46.9	46.0	42.4	40.4	38.2	37.7	36.9			

24-Hour Noise Level Measurement Summary

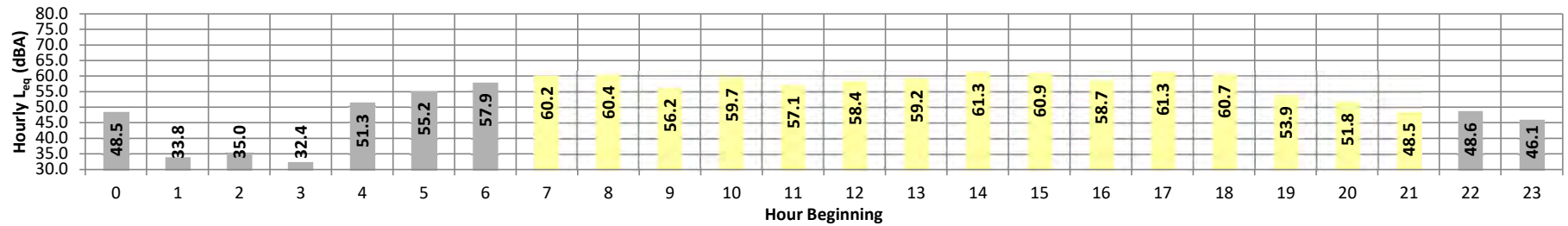
Date: Wednesday, April 16, 2025
Project: Galway Downs

Location: L2 - Located southeast of the site near the building at 43240
Source: Los Corralitos Rd.

Meter: Piccolo II

JN: 15352
Analyst: N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
Night	0	48.5	60.2	31.8	60.1	59.7	57.5	53.7	43.5	37.1	32.8	32.3	32.0	48.5	10.0	58.5
	1	33.8	37.6	30.9	37.1	36.7	36.1	35.7	34.5	33.5	31.8	31.5	31.1	33.8	10.0	43.8
	2	35.0	41.4	30.6	41.1	40.8	39.8	38.4	36.0	33.4	31.6	31.2	30.8	35.0	10.0	45.0
	3	32.4	39.0	30.2	38.3	37.2	35.1	34.1	32.7	31.7	30.6	30.4	30.2	32.4	10.0	42.4
	4	51.3	63.4	31.5	63.2	62.7	59.5	55.8	47.7	40.9	32.4	32.0	31.6	51.3	10.0	61.3
	5	55.2	66.6	37.0	66.0	65.6	63.2	60.2	53.2	47.7	38.6	37.9	37.3	55.2	10.0	65.2
	6	57.9	69.5	41.3	69.2	68.7	65.9	63.2	54.8	49.0	43.3	42.6	41.7	57.9	10.0	67.9
Day	7	60.2	71.4	45.8	71.0	70.6	68.1	65.5	57.8	52.5	47.5	46.7	46.0	60.2	0.0	60.2
	8	60.4	70.8	42.4	70.4	69.9	67.9	65.6	59.8	55.4	44.9	44.0	42.6	60.4	0.0	60.4
	9	56.2	67.5	43.8	67.3	66.9	64.2	61.4	53.3	49.0	45.1	44.6	44.0	56.2	0.0	56.2
	10	59.7	71.6	41.7	71.3	70.6	68.0	64.9	56.6	49.2	42.9	42.4	41.8	59.7	0.0	59.7
	11	57.1	69.0	41.7	68.6	68.0	65.0	62.4	53.5	48.7	43.6	42.8	42.0	57.1	0.0	57.1
	12	58.4	70.3	41.1	70.0	69.5	67.0	63.8	54.7	48.0	42.5	42.0	41.3	58.4	0.0	58.4
	13	59.2	70.3	43.2	70.0	69.5	67.1	64.9	57.0	50.6	44.9	44.1	43.4	59.2	0.0	59.2
	14	61.3	72.8	47.4	72.5	71.8	68.8	66.3	58.7	54.9	50.9	49.5	47.8	61.3	0.0	61.3
	15	60.9	71.1	48.9	70.8	70.4	67.9	65.1	59.9	57.6	52.7	51.2	49.3	60.9	0.0	60.9
	16	58.7	70.7	41.6	70.3	69.8	66.8	63.8	55.1	49.7	43.4	42.7	41.8	58.7	0.0	58.7
	17	61.3	71.0	48.3	70.7	70.3	67.8	65.5	60.7	58.1	53.0	51.7	48.9	61.3	0.0	61.3
	18	60.7	70.0	49.8	69.6	69.0	66.5	64.5	60.7	58.4	53.0	51.6	50.1	60.7	0.0	60.7
	19	53.9	65.6	39.1	65.3	65.0	62.3	58.6	50.2	45.4	40.5	39.9	39.3	53.9	5.0	58.9
	20	51.8	63.0	37.5	62.7	62.4	59.9	57.1	48.7	43.5	38.6	38.2	37.6	51.8	5.0	56.8
	21	48.5	59.5	35.3	59.2	58.9	56.8	53.8	46.4	40.6	36.3	35.9	35.5	48.5	5.0	53.5
	Night	22	48.6	61.7	33.0	61.3	60.5	57.0	53.3	39.8	36.0	34.0	33.6	33.1	48.6	10.0
23		46.1	57.4	33.1	57.2	56.9	54.6	50.9	43.0	36.4	34.2	33.8	33.3	46.1	10.0	56.1
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	Leq (dBA)		
Day	Min	48.5	59.5	35.3	59.2	58.9	56.8	53.8	46.4	40.6	36.3	35.9	35.5	24-Hour CNEL	Daytime (7am-10pm)	Nighttime (10pm-7am)
	Max	61.3	72.8	49.8	72.5	71.8	68.8	66.3	60.7	58.4	53.0	51.7	50.1			
Energy Average		59.0	Average:		68.7	68.2	65.6	62.9	55.6	50.8	45.3	44.5	43.4			
Night	Min	32.4	37.6	30.2	37.1	36.7	35.1	34.1	32.7	31.7	30.6	30.4	30.2	60.3	59.0	51.5
	Max	57.9	69.5	41.3	69.2	68.7	65.9	63.2	54.8	49.0	43.3	42.6	41.7			
Energy Average		51.5	Average:		54.8	54.3	52.1	49.5	42.8	38.4	34.4	33.9	33.5			

24-Hour Noise Level Measurement Summary

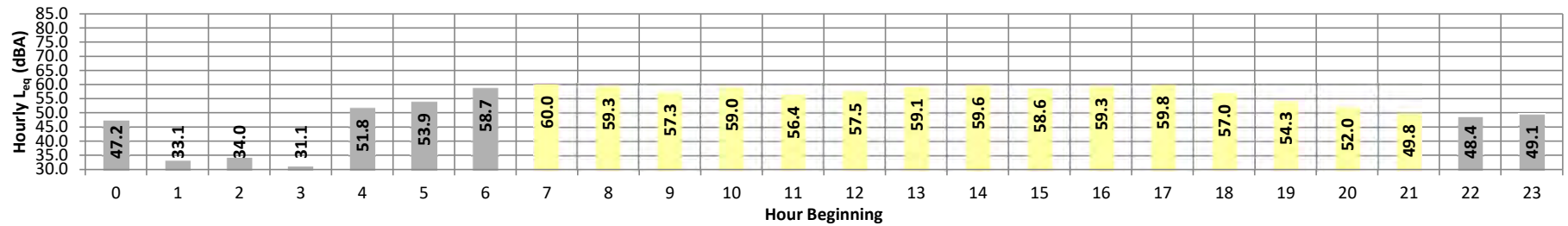
Date: Wednesday, April 16, 2025
Project: Galway Downs

Location: L3 - Located east of the site near the 1968 Cellars Winery and
Source: Distillery

Meter: Piccolo II

JN: 12880
Analyst: N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	47.2	61.6	30.6	60.8	59.6	54.6	50.0	39.4	34.0	31.2	30.9	30.7	47.2	10.0	57.2	
	1	33.1	38.2	30.4	37.9	37.5	36.3	35.6	33.9	32.3	30.7	30.6	30.4	33.1	10.0	43.1	
	2	34.0	45.4	30.1	44.0	42.1	38.1	35.4	33.2	32.0	30.6	30.4	30.2	34.0	10.0	44.0	
	3	31.1	34.9	29.8	34.2	33.7	32.8	32.4	31.4	30.7	30.0	29.9	29.8	31.1	10.0	41.1	
	4	51.8	64.3	30.2	64.1	63.5	60.2	56.7	45.4	36.9	30.6	30.5	30.3	51.8	10.0	61.8	
	5	53.9	65.9	35.0	65.6	65.2	62.3	59.5	48.5	39.5	36.1	35.8	35.3	53.9	10.0	63.9	
	6	58.7	69.7	41.9	69.5	69.1	66.6	64.6	56.1	49.8	43.3	42.8	42.2	58.7	10.0	68.7	
Day	7	60.0	71.8	40.3	71.5	70.9	67.9	65.5	56.9	50.4	42.1	41.3	40.5	60.0	0.0	60.0	
	8	59.3	70.6	41.9	70.3	69.8	67.3	65.0	56.5	49.2	43.2	42.7	42.1	59.3	0.0	59.3	
	9	57.3	68.9	42.8	68.6	67.8	65.1	62.6	54.6	48.7	44.2	43.6	43.1	57.3	0.0	57.3	
	10	59.0	71.0	43.1	70.8	70.1	66.9	64.1	55.8	48.3	44.2	43.7	43.3	59.0	0.0	59.0	
	11	56.4	68.2	41.4	67.9	67.4	64.7	62.0	52.4	45.6	42.3	41.9	41.5	56.4	0.0	56.4	
	12	57.5	69.5	40.3	69.3	68.6	65.8	63.0	53.1	46.5	42.2	41.4	40.6	57.5	0.0	57.5	
	13	59.1	71.1	44.2	70.7	69.9	66.9	64.3	55.9	49.9	45.6	45.1	44.4	59.1	0.0	59.1	
	14	59.6	71.3	43.2	71.1	70.6	68.2	65.4	54.5	47.8	44.5	44.0	43.4	59.6	0.0	59.6	
	15	58.6	70.1	43.5	69.9	69.3	66.7	64.0	55.0	49.4	44.8	44.3	43.7	58.6	0.0	58.6	
	16	59.3	70.8	42.8	70.5	69.9	67.3	65.1	56.5	49.5	44.2	43.7	43.1	59.3	0.0	59.3	
	17	59.8	70.7	46.6	70.5	69.9	67.3	65.3	57.7	52.4	48.5	47.7	46.9	59.8	0.0	59.8	
18	57.0	68.9	41.5	68.6	68.0	65.2	62.6	52.8	46.9	42.7	42.3	41.7	57.0	0.0	57.0		
	19	54.3	66.1	37.9	65.9	65.4	63.0	59.9	49.0	43.0	38.9	38.5	38.0	54.3	5.0	59.3	
	20	52.0	62.7	39.4	62.5	62.1	59.9	57.9	49.9	44.7	40.4	40.0	39.6	52.0	5.0	57.0	
	21	49.8	62.5	37.2	62.2	61.5	58.0	54.5	44.3	40.6	38.3	37.8	37.4	49.8	5.0	54.8	
Night	22	48.4	61.6	34.3	61.2	60.4	56.6	52.8	41.2	37.5	35.1	34.8	34.4	48.4	10.0	58.4	
	23	49.1	61.9	35.0	61.6	61.0	57.6	53.7	43.0	38.3	36.1	35.7	35.2	49.1	10.0	59.1	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL	Leq (dBA)		
Day	Min	49.8	62.5	37.2	62.2	61.5	58.0	54.5	44.3	40.6	38.3	37.8	37.4		Daytime (7am-10pm)	Nighttime (10pm-7am)	
	Max	60.0	71.8	46.6	71.5	70.9	68.2	65.5	57.7	52.4	48.5	47.7	46.9				
Energy Average		58.0	Average:		68.7	68.1	65.3	62.7	53.7	47.5	43.1	42.5	41.9		60.0	58.0	51.8
Night	Min	31.1	34.9	29.8	34.2	33.7	32.8	32.4	31.4	30.7	30.0	29.9	29.8				
	Max	58.7	69.7	41.9	69.5	69.1	66.6	64.6	56.1	49.8	43.3	42.8	42.2				
Energy Average		51.8	Average:		55.4	54.7	51.7	49.0	41.3	36.8	33.8	33.5	33.2				

24-Hour Noise Level Measurement Summary

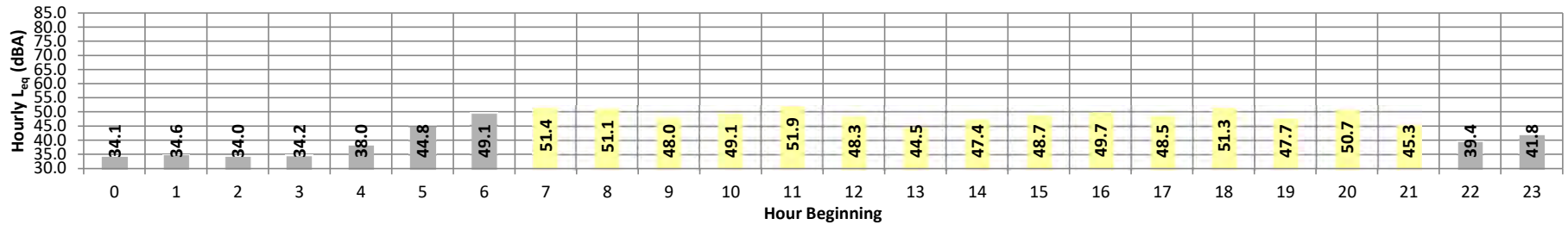
Date: Wednesday, April 16, 2025
Project: Galway Downs

Location: L4 - Located north of the site near the residence at 35879 Belle
Source: Chainé Loop

Meter: Piccolo II

JN: 15352
Analyst: N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	34.1	38.6	31.7	38.2	37.8	36.8	36.3	34.6	33.4	32.2	32.0	31.8	34.1	10.0	44.1	
	1	34.6	40.3	31.5	39.9	39.4	38.2	37.4	35.2	33.4	31.9	31.7	31.6	34.6	10.0	44.6	
	2	34.0	39.2	31.2	38.8	38.4	37.4	36.8	34.9	32.8	31.4	31.3	31.2	34.0	10.0	44.0	
	3	34.2	40.8	31.2	40.0	39.4	38.1	37.2	34.8	32.8	31.5	31.4	31.3	34.2	10.0	44.2	
	4	38.0	46.1	32.4	45.5	44.9	43.3	42.3	38.8	35.4	33.0	32.7	32.4	38.0	10.0	48.0	
	5	44.8	50.6	38.1	49.9	49.4	48.4	47.7	45.8	43.9	40.8	39.8	38.7	44.8	10.0	54.8	
	6	49.1	60.1	41.2	59.8	58.9	55.3	52.1	47.7	45.9	43.0	42.4	41.6	49.1	10.0	59.1	
Day	7	51.4	63.9	40.2	63.6	62.7	59.5	55.4	46.2	44.2	41.2	40.8	40.3	51.4	0.0	51.4	
	8	51.1	63.9	39.7	63.4	62.4	58.4	54.8	47.2	44.2	40.9	40.3	39.8	51.1	0.0	51.1	
	9	48.0	56.4	43.1	56.0	55.4	53.1	51.1	47.8	46.2	44.2	43.7	43.2	48.0	0.0	48.0	
	10	49.1	53.3	45.7	52.9	52.5	51.8	51.3	49.9	48.7	46.6	46.2	45.8	49.1	0.0	49.1	
	11	51.9	60.7	45.7	60.3	59.9	57.6	55.8	51.6	49.5	46.9	46.4	45.9	51.9	0.0	51.9	
	12	48.3	58.7	39.8	58.3	57.8	55.6	53.5	46.5	43.5	40.7	40.3	39.9	48.3	0.0	48.3	
	13	44.5	49.2	40.5	49.0	48.7	48.0	47.3	45.3	43.7	41.5	41.1	40.7	44.5	0.0	44.5	
	14	47.4	56.8	41.4	56.4	55.6	52.7	50.7	47.1	45.0	42.6	42.1	41.6	47.4	0.0	47.4	
	15	48.7	56.1	42.1	55.8	55.2	53.1	51.7	49.3	47.3	43.9	43.4	42.3	48.7	0.0	48.7	
	16	49.7	61.9	40.5	61.4	60.6	56.8	53.0	46.8	44.8	41.8	41.2	40.6	49.7	0.0	49.7	
	17	48.5	55.1	41.8	54.6	54.0	53.1	52.4	49.8	46.8	43.3	42.6	42.0	48.5	0.0	48.5	
18	51.3	59.7	43.9	58.4	57.5	56.1	55.3	52.3	49.4	45.4	44.8	44.1	51.3	0.0	51.3		
	19	47.7	52.5	42.3	52.3	52.1	51.5	51.0	49.0	46.7	43.4	42.9	42.4	47.7	5.0	52.7	
	20	50.7	62.6	39.4	62.3	61.6	58.3	54.8	48.3	44.9	40.6	40.0	39.5	50.7	5.0	55.7	
	21	45.3	55.2	37.7	55.1	54.9	52.2	49.5	43.9	41.5	38.7	38.3	37.8	45.3	5.0	50.3	
Night	22	39.4	45.6	34.8	45.2	44.8	43.8	43.0	40.1	38.1	35.6	35.2	34.9	39.4	10.0	49.4	
	23	41.8	47.0	36.5	46.8	46.5	45.7	45.0	42.8	40.8	37.7	37.0	36.6	41.8	10.0	51.8	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL	Leq (dBA)		
Day	Min	44.5	49.2	37.7	49.0	48.7	48.0	47.3	43.9	41.5	38.7	38.3	37.8		Daytime (7am-10pm)	Nighttime (10pm-7am)	
	Max	51.9	63.9	45.7	63.6	62.7	59.5	55.8	52.3	49.5	46.9	46.4	45.9				
Energy Average		49.4	Average:		57.3	56.7	54.5	52.5	48.1	45.8	42.8	42.3	41.7		51.4	49.4	42.3
Night	Min	34.0	38.6	31.2	38.2	37.8	36.8	36.3	34.6	32.8	31.4	31.3	31.2				
	Max	49.1	60.1	41.2	59.8	58.9	55.3	52.1	47.7	45.9	43.0	42.4	41.6				
Energy Average		42.3	Average:		44.9	44.4	43.0	42.0	39.4	37.4	35.2	34.8	34.4				

24-Hour Noise Level Measurement Summary

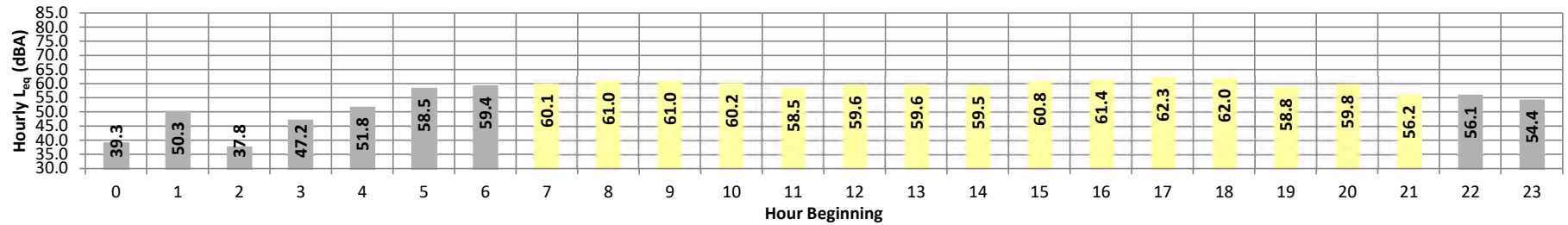
Date: Wednesday, April 16, 2025
Project: Galway Downs

Location: L5 - Located northwest of the site near the residence at 43453
Source: Avenida Felicita

Meter: Piccolo II

JN: 12880
Analyst: N. Johnson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}	
Night	0	39.3	47.3	34.6	47.0	46.6	45.3	43.8	38.8	36.9	35.1	34.9	34.7	39.3	10.0	49.3	
	1	50.3	63.7	34.5	63.3	62.3	58.2	54.0	44.0	37.3	35.0	34.8	34.6	50.3	10.0	60.3	
	2	37.8	44.0	35.1	43.6	42.8	40.9	40.2	38.1	36.8	35.6	35.4	35.2	37.8	10.0	47.8	
	3	47.2	59.7	35.2	59.4	58.8	55.3	51.6	41.3	38.0	35.9	35.6	35.3	47.2	10.0	57.2	
	4	51.8	63.9	36.4	63.7	63.2	60.0	56.8	48.0	42.0	37.4	36.9	36.5	51.8	10.0	61.8	
	5	58.5	70.6	38.9	70.3	69.8	66.6	63.9	54.7	47.3	40.1	39.6	39.1	58.5	10.0	68.5	
Day	6	59.4	71.2	42.4	70.9	70.1	66.9	64.5	57.4	50.1	44.4	43.6	42.6	59.4	10.0	69.4	
	7	60.1	71.7	41.7	71.4	70.8	68.2	65.9	56.7	49.2	43.0	42.4	41.9	60.1	0.0	60.1	
	8	61.0	73.4	42.7	73.0	72.0	68.5	66.2	57.4	51.2	44.4	43.6	43.0	61.0	0.0	61.0	
	9	61.0	72.7	42.7	72.4	71.7	68.7	66.4	58.5	51.7	44.0	43.5	42.9	61.0	0.0	61.0	
	10	60.2	72.9	41.1	72.4	71.5	68.1	65.3	55.8	49.1	42.4	41.7	41.2	60.2	0.0	60.2	
	11	58.5	70.6	40.8	70.2	69.5	66.4	63.9	54.9	48.4	42.0	41.6	41.0	58.5	0.0	58.5	
	12	59.6	71.8	40.6	71.5	70.7	67.4	65.0	56.0	49.0	41.9	41.4	40.8	59.6	0.0	59.6	
	13	59.6	71.6	41.3	71.2	70.5	67.5	65.2	56.3	49.3	42.6	42.0	41.4	59.6	0.0	59.6	
	14	59.5	70.8	42.0	70.5	69.9	67.6	65.6	56.8	50.5	43.5	42.8	42.1	59.5	0.0	59.5	
	15	60.8	71.5	44.9	71.2	70.5	68.1	66.1	59.4	55.1	46.7	45.8	45.0	60.8	0.0	60.8	
	16	61.4	72.7	41.9	72.3	71.7	69.0	67.0	59.4	52.7	43.9	42.8	42.1	61.4	0.0	61.4	
17	62.3	74.5	43.7	74.0	72.8	69.6	67.4	60.2	53.3	45.3	44.6	43.8	62.3	0.0	62.3		
Night	18	62.0	73.2	45.1	72.9	72.1	69.4	67.3	60.7	53.8	46.6	45.9	45.3	62.0	0.0	62.0	
	19	58.8	70.4	43.9	70.1	69.4	66.6	64.1	56.3	50.4	45.5	44.9	44.1	58.8	5.0	63.8	
	20	59.8	74.3	41.5	73.4	71.6	66.8	63.3	54.8	48.4	42.6	42.1	41.6	59.8	5.0	64.8	
	21	56.2	68.0	39.8	67.7	67.0	63.9	61.3	54.0	46.8	41.3	40.6	39.9	56.2	5.0	61.2	
	22	56.1	67.8	37.9	67.5	66.9	64.3	61.7	52.9	45.2	38.9	38.4	38.0	56.1	10.0	66.1	
	23	54.4	66.8	36.8	66.3	65.5	62.5	60.0	50.3	43.8	37.7	37.3	36.9	54.4	10.0	64.4	
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL	Leq (dBA)		
Day	Min	56.2	68.0	39.8	67.7	67.0	63.9	61.3	54.0	46.8	41.3	40.6	39.9		Daytime (7am-10pm)	Nighttime (10pm-7am)	
	Max	62.3	74.5	45.1	74.0	72.8	69.6	67.4	60.7	55.1	46.7	45.9	45.3				
Energy Average		60.3	Average:		71.6	70.8	67.7	65.3	57.1	50.6	43.7	43.0	42.4		62.9	60.3	54.6
Night	Min	37.8	44.0	34.5	43.6	42.8	40.9	40.2	38.1	36.8	35.0	34.8	34.6				
	Max	59.4	71.2	42.4	70.9	70.1	66.9	64.5	57.4	50.1	44.4	43.6	42.6				
Energy Average		54.6	Average:		61.3	60.7	57.8	55.2	47.3	41.9	37.8	37.4	37.0				

APPENDIX 8.1:

CADNAA OPERATIONAL NOISE CALCULATIONS

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15352 - Galway Downs

CadnaA Noise Prediction Model: 15352-04_Operation.cna

Date: 23.09.25

Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (ft)	6561.70
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (ft)	3280.80
Min. Length of Section (ft)	3.30
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	328.08
Search Radius Rcvr	328.08
Max. Distance Source - Rcvr	3280.84 3280.84
Min. Distance Rcvr - Reflector	3.28 3.28
Min. Distance Source - Reflector	0.33
Industrial (ISO 9613 (1996))	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (°F)	50
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (mph)	6.7
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	42.4	29.9	40.9	0.0	0.0	0.0		x	Total	5.00	r 6320283.97	2123539.57	5.00
R2		R2	43.5	30.0	41.8	0.0	0.0	0.0		x	Total	5.00	r 6320854.29	2123962.57	5.00
R3		R3	45.6	30.0	43.4	0.0	0.0	0.0		x	Total	5.00	r 6321925.11	2124426.02	5.00
R4		R4	46.9	29.2	44.4	0.0	0.0	0.0		x	Total	5.00	r 6323352.23	2124729.14	5.00
R5		R5	46.8	31.0	44.6	0.0	0.0	0.0		x	Total	5.00	r 6325743.69	2121825.59	5.00
R6		R6	49.3	39.4	48.8	0.0	0.0	0.0		x	Total	5.00	r 6323819.26	2120413.91	5.00
R7		R7	45.9	39.8	47.4	0.0	0.0	0.0		x	Total	5.00	r 6321746.72	2120345.69	5.00
R8		R8	43.9	35.4	44.1	0.0	0.0	0.0		x	Total	5.00	r 6320730.30	2121174.10	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
SPEAKER01		SPEAKER01	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323792.09	2121840.28	8.00
SPEAKER02		SPEAKER02	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323887.58	2121780.60	8.00
SPEAKER03		SPEAKER03	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6324072.04	2121867.41	8.00
SPEAKER04		SPEAKER04	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323854.89	2121987.24	8.00
SPEAKER05		SPEAKER05	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323959.06	2122032.38	8.00
SPEAKER06		SPEAKER06	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323843.38	2121640.44	8.00
SPEAKER07		SPEAKER07	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323938.57	2121446.04	8.00
SPEAKER08		SPEAKER08	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323783.88	2121313.08	8.00
SPEAKER09		SPEAKER09	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6323712.83	2121549.46	8.00
SPEAKER10		SPEAKER10	98.0	98.0	98.0	Lw	98		900.00	0.00	0.00	8.00	r 6322648.71	2122447.55	8.00
OUTDOOR01		OUTDOOR01	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r 6323429.64	2122464.34	5.00
OUTDOOR02		OUTDOOR02	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r 6323263.67	2122416.92	5.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates				
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z	
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)	
OUTDOOR03		OUTDOOR03	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323048.30	2122329.98	5.00
OUTDOOR04		OUTDOOR04	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323297.26	2122715.27	5.00
OUTDOOR05		OUTDOOR05	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323625.25	2122873.34	5.00
OUTDOOR06		OUTDOOR06	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323726.02	2122646.12	5.00
OUTDOOR07		OUTDOOR07	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323812.96	2122648.09	5.00
OUTDOOR08		OUTDOOR08	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323893.97	2122711.32	5.00
OUTDOOR09		OUTDOOR09	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6324085.63	2122825.92	5.00
OUTDOOR10		OUTDOOR10	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6322961.01	2123006.87	5.00
OUTDOOR11		OUTDOOR11	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323310.96	2123165.13	5.00
OUTDOOR12		OUTDOOR12	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323705.49	2123367.97	5.00
OUTDOOR13		OUTDOOR13	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6322903.05	2123209.71	5.00
OUTDOOR14		OUTDOOR14	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323212.89	2123343.45	5.00
OUTDOOR15		OUTDOOR15	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323627.48	2123546.29	5.00
OUTDOOR16		OUTDOOR16	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323476.36	2122242.14	5.00
OUTDOOR17		OUTDOOR17	101.4	101.4	101.4	Lw	101.4		900.00	0.00	0.00	5.00	r	6323843.96	2122422.85	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number	Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(min)	Day	Evening	Night	(ft)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(min)	
EMP1*55		EMPL1	88.6	88.6	88.6	48.1	48.1	48.1	Lw	88.6		675.00	0.00	270.00	3
WINE*55		WINE1	91.6	91.6	91.6	48.2	48.2	48.2	Lw	91.6		675.00	0.00	270.00	3
AWARDS		AWARDS1	102.3	102.3	102.3	60.3	60.3	60.3	Lw	102.3		900.00	0.00	0.00	8
SPECIAL1		SPECIAL1	103.2	103.2	103.2	58.7	58.7	58.7	Lw	103.2		900.00	0.00	540.00	8
PARK01		PARK01	81.1	81.1	81.1	37.8	37.8	37.8	Lw	81.1		900.00	0.00	0.00	5
PARK02		PARK02	81.1	81.1	81.1	46.3	46.3	46.3	Lw	81.1		900.00	0.00	540.00	5
PARK03		PARK03	81.1	81.1	81.1	31.0	31.0	31.0	Lw	81.1		900.00	0.00	0.00	5
PARK04		PARK04	81.1	81.1	81.1	43.0	43.0	43.0	Lw	81.1		900.00	0.00	0.00	5
PARK05		PARK05	81.1	81.1	81.1	41.7	41.7	41.7	Lw	81.1		900.00	0.00	0.00	5
PARK06		PARK06	81.1	81.1	81.1	37.3	37.3	37.3	Lw	81.1		900.00	0.00	0.00	5
PARK07		PARK07	81.1	81.1	81.1	36.9	36.9	36.9	Lw	81.1		900.00	0.00	0.00	5
PARK08		PARK08	81.1	81.1	81.1	44.2	44.2	44.2	Lw	81.1		900.00	0.00	0.00	5
PARK09		PARK09	81.1	81.1	81.1	49.9	49.9	49.9	Lw	81.1		900.00	0.00	0.00	5
PARK10		PARK10	81.1	81.1	81.1	48.9	48.9	48.9	Lw	81.1		900.00	0.00	0.00	5
PARK11		PARK11	81.1	81.1	81.1	46.1	46.1	46.1	Lw	81.1		900.00	0.00	0.00	5
PARK12		PARK12	81.1	81.1	81.1	48.3	48.3	48.3	Lw	81.1		900.00	0.00	0.00	5
PARK13		PARK13	81.1	81.1	81.1	52.4	52.4	52.4	Lw	81.1		900.00	0.00	0.00	5
PARK14		PARK14	81.1	81.1	81.1	49.6	49.6	49.6	Lw	81.1		900.00	0.00	0.00	5
PARK15		PARK15	81.1	81.1	81.1	45.8	45.8	45.8	Lw	81.1		900.00	0.00	0.00	5
PARK16		PARK16	81.1	81.1	81.1	46.8	46.8	46.8	Lw	81.1		900.00	0.00	0.00	5
PARK17		PARK17	81.1	81.1	81.1	45.7	45.7	45.7	Lw	81.1		900.00	0.00	0.00	5
PARK18		PARK18	81.1	81.1	81.1	41.3	41.3	41.3	Lw	81.1		900.00	0.00	540.00	5
EQUES01		EQUES01	98.0	98.0	98.0	61.8	61.8	61.8	Lw	98		900.00	0.00	0.00	5
EQUES02		EQUES02	98.0	98.0	98.0	62.5	62.5	62.5	Lw	98		900.00	0.00	0.00	5
EQUES03		EQUES03	98.0	98.0	98.0	60.8	60.8	60.8	Lw	98		900.00	0.00	0.00	5
EQUES04		EQUES04	98.0	98.0	98.0	61.1	61.1	61.1	Lw	98		900.00	0.00	0.00	5
EQUES05		EQUES05	98.0	98.0	98.0	63.3	63.3	63.3	Lw	98		900.00	0.00	0.00	5
EQUES06		EQUES06	98.0	98.0	98.0	64.8	64.8	64.8	Lw	98		900.00	0.00	0.00	5
EQUES07		EQUES07	98.0	98.0	98.0	63.4	63.4	63.4	Lw	98		900.00	0.00	0.00	5
EQUES08		EQUES08	98.0	98.0	98.0	61.3	61.3	61.3	Lw	98		900.00	0.00	0.00	5
EQUES09		EQUES09	98.0	98.0	98.0	62.7	62.7	62.7	Lw	98		900.00	0.00	0.00	5
EQUES10		EQUES10	98.0	98.0	98.0	62.6	62.6	62.6	Lw	98		900.00	0.00	0.00	5

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
EMP1*55	EMPL1	3.00	a	6322735.58	2120842.99	3.00	0.00
				6322874.11	2120809.21	3.00	0.00
				6322933.29	2120794.77	3.00	0.00
				6323030.95	2120760.05	3.00	0.00
				6323026.61	2120738.35	3.00	0.00
				6323032.69	2120720.12	3.00	0.00
				6323159.42	2120441.47	3.00	0.00
				6323167.23	2120418.04	3.00	0.00
				6323166.37	2120400.67	3.00	0.00
				6323158.55	2120390.26	3.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6323120.36	2120384.18	3.00	0.00
				6323074.35	2120380.71	3.00	0.00
				6323017.93	2120379.84	3.00	0.00
				6322949.35	2120386.79	3.00	0.00
				6322896.40	2120393.73	3.00	0.00
				6322826.96	2120413.69	3.00	0.00
				6322767.93	2120547.38	3.00	0.00
				6322831.30	2120654.15	3.00	0.00
WINE*55	WINE1	3.00	a	6324385.74	2122441.59	3.00	0.00
				6324321.31	2122329.06	3.00	0.00
				6324272.70	2122313.43	3.00	0.00
				6324293.54	2122292.60	3.00	0.00
				6324147.70	2122122.46	3.00	0.00
				6324109.51	2122099.89	3.00	0.00
				6324071.31	2122082.53	3.00	0.00
				6324031.38	2122077.32	3.00	0.00
				6323963.68	2122051.28	3.00	0.00
				6323946.31	2122058.23	3.00	0.00
				6323916.80	2122082.53	3.00	0.00
				6323885.55	2122084.27	3.00	0.00
				6323855.17	2122073.85	3.00	0.00
				6323686.77	2121979.23	3.00	0.00
				6323660.72	2121939.30	3.00	0.00
				6323654.65	2121922.81	3.00	0.00
				6323639.02	2121911.52	3.00	0.00
				6322794.40	2121518.30	3.00	0.00
				6322779.65	2121517.43	3.00	0.00
				6322765.76	2121521.77	3.00	0.00
				6322756.21	2121529.58	3.00	0.00
				6322725.83	2121597.29	3.00	0.00
				6322731.90	2121617.25	3.00	0.00
				6322742.32	2121632.01	3.00	0.00
				6322764.02	2121644.16	3.00	0.00
				6323652.22	2122079.60	3.00	0.00
AWARDS	AWARDS1	8.00	a	6323009.82	2122715.69	8.00	0.00
				6322945.15	2122646.98	8.00	0.00
				6322882.50	2122562.10	8.00	0.00
				6322852.19	2122477.22	8.00	0.00
				6322848.15	2122368.09	8.00	0.00
				6322870.38	2122295.34	8.00	0.00
				6322906.76	2122212.48	8.00	0.00
				6322585.43	2122042.72	8.00	0.00
				6322534.91	2122149.83	8.00	0.00
				6322526.82	2122210.46	8.00	0.00
				6322526.82	2122307.46	8.00	0.00
				6322545.01	2122386.28	8.00	0.00
				6322575.32	2122469.14	8.00	0.00
				6322642.01	2122556.03	8.00	0.00
				6322769.33	2122651.02	8.00	0.00
				6322987.59	2122752.06	8.00	0.00
SPECIAL1	SPECIAL1	8.00	a	6322681.56	2121578.19	8.00	0.00
				6323093.88	2120807.79	8.00	0.00
				6323030.95	2120760.05	8.00	0.00
				6322972.36	2120779.58	8.00	0.00
				6322933.29	2120794.77	8.00	0.00
				6322666.37	2120859.88	8.00	0.00
				6322544.52	2120852.88	8.00	0.00
				6322455.98	2120985.69	8.00	0.00
				6322356.08	2121155.84	8.00	0.00
				6322583.85	2121268.06	8.00	0.00
				6322512.20	2121386.30	8.00	0.00
				6322445.10	2121350.44	8.00	0.00
				6322403.78	2121445.81	8.00	0.00
PARK01	PARK01	5.00	a	6322544.52	2120852.88	5.00	0.00
				6322518.48	2120777.35	5.00	0.00
				6322500.25	2120696.63	5.00	0.00
				6322489.83	2120644.54	5.00	0.00
				6322492.43	2120571.63	5.00	0.00
				6322448.16	2120582.04	5.00	0.00
				6322380.45	2120605.48	5.00	0.00
				6322260.66	2120657.56	5.00	0.00
				6322174.73	2120696.63	5.00	0.00
				6322094.00	2120748.71	5.00	0.00
				6322047.12	2120792.98	5.00	0.00
				6321987.23	2120837.25	5.00	0.00
				6321945.56	2120894.54	5.00	0.00
				6321893.48	2120946.63	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6321823.16	2121050.79	5.00	0.00
				6321815.35	2121079.44	5.00	0.00
				6321935.14	2121147.15	5.00	0.00
				6322075.77	2121076.83	5.00	0.00
				6322130.45	2121076.83	5.00	0.00
				6322166.91	2121084.65	5.00	0.00
				6322252.85	2121121.10	5.00	0.00
				6322336.18	2121056.00	5.00	0.00
				6322455.98	2120985.69	5.00	0.00
PARK02	PARK02	5.00	a	6322310.41	2121278.48	5.00	0.00
				6322512.20	2121386.30	5.00	0.00
				6322583.85	2121268.06	5.00	0.00
				6322356.08	2121155.84	5.00	0.00
PARK03	PARK03	5.00	a	6321952.88	2121450.59	5.00	0.00
				6321940.75	2121335.40	5.00	0.00
				6321811.42	2121286.90	5.00	0.00
				6321734.27	2121305.11	5.00	0.00
				6321317.60	2122687.92	5.00	0.00
				6321333.23	2122740.00	5.00	0.00
				6321377.50	2122779.06	5.00	0.00
				6321536.35	2122812.92	5.00	0.00
				6322025.94	2122917.08	5.00	0.00
				6322072.81	2122932.71	5.00	0.00
				6322326.97	2122646.60	5.00	0.00
				6322280.10	2122394.00	5.00	0.00
				6322274.21	2122353.94	5.00	0.00
				6322302.50	2122042.72	5.00	0.00
				6322301.20	2121965.71	5.00	0.00
				6322296.00	2121924.04	5.00	0.00
				6322355.04	2121727.46	5.00	0.00
				6322286.33	2121709.27	5.00	0.00
				6322197.41	2121687.04	5.00	0.00
				6322124.66	2121674.91	5.00	0.00
				6322064.03	2121658.75	5.00	0.00
				6322037.76	2121652.68	5.00	0.00
PARK04	PARK04	5.00	a	6322346.25	2123016.04	5.00	0.00
				6322551.98	2123086.36	5.00	0.00
				6322666.56	2122823.33	5.00	0.00
				6322627.50	2122779.06	5.00	0.00
				6322473.85	2122716.56	5.00	0.00
PARK05	PARK05	5.00	a	6322762.91	2122906.67	5.00	0.00
				6324041.56	2123531.67	5.00	0.00
				6324070.21	2123469.17	5.00	0.00
				6322786.35	2122849.38	5.00	0.00
PARK06	PARK06	5.00	a	6324900.94	2122586.36	5.00	0.00
				6324992.08	2122628.02	5.00	0.00
				6325132.71	2122617.61	5.00	0.00
				6325182.19	2122466.56	5.00	0.00
				6325221.25	2122318.13	5.00	0.00
				6325255.10	2122164.48	5.00	0.00
				6325278.54	2121982.19	5.00	0.00
				6324794.16	2121810.31	5.00	0.00
				6324713.44	2122034.27	5.00	0.00
				6324742.08	2122091.56	5.00	0.00
				6324820.21	2122185.31	5.00	0.00
				6325010.31	2122279.06	5.00	0.00
PARK07	PARK07	5.00	a	6323833.23	2123148.86	5.00	0.00
				6323825.41	2123174.90	5.00	0.00
				6324046.77	2123268.65	5.00	0.00
				6324137.91	2123279.06	5.00	0.00
				6324216.04	2123271.25	5.00	0.00
				6324317.60	2123237.40	5.00	0.00
				6324393.12	2123190.52	5.00	0.00
				6324450.41	2123143.65	5.00	0.00
				6324505.10	2123086.36	5.00	0.00
				6324541.56	2123010.83	5.00	0.00
				6324567.60	2122932.71	5.00	0.00
				6324572.81	2122854.58	5.00	0.00
				6324557.19	2122776.46	5.00	0.00
				6324544.16	2122703.54	5.00	0.00
				6324499.89	2122641.04	5.00	0.00
				6324463.44	2122586.36	5.00	0.00
				6324140.52	2122435.31	5.00	0.00
				6324153.54	2122487.40	5.00	0.00
				6324213.44	2122575.94	5.00	0.00
				6324236.87	2122646.25	5.00	0.00
				6324247.29	2122724.38	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6324231.66	2122789.48	5.00	0.00
				6324229.06	2122846.77	5.00	0.00
				6324190.00	2122917.08	5.00	0.00
				6324143.12	2122990.00	5.00	0.00
				6324093.64	2123042.08	5.00	0.00
				6324020.73	2123073.33	5.00	0.00
				6323953.02	2123115.00	5.00	0.00
PARK08	PARK08	5.00	a	6322906.14	2122169.69	5.00	0.00
				6323072.81	2122078.54	5.00	0.00
				6323148.33	2121966.56	5.00	0.00
				6323025.94	2121904.06	5.00	0.00
				6322747.29	2122081.15	5.00	0.00
PARK09	PARK09	5.00	a	6323205.62	2121953.54	5.00	0.00
				6323606.66	2122148.86	5.00	0.00
				6323619.69	2122120.21	5.00	0.00
				6323221.25	2121924.90	5.00	0.00
PARK10	PARK10	5.00	a	6323749.89	2122219.17	5.00	0.00
				6324325.41	2122499.12	5.00	0.00
				6324335.83	2122476.98	5.00	0.00
				6323762.91	2122190.52	5.00	0.00
PARK11	PARK11	5.00	a	6322801.11	2121850.45	5.00	0.00
				6322837.57	2121838.73	5.00	0.00
				6322888.35	2121821.80	5.00	0.00
				6322962.57	2121817.89	5.00	0.00
				6323027.67	2121820.50	5.00	0.00
				6323097.98	2121834.82	5.00	0.00
				6323172.20	2121864.77	5.00	0.00
				6323583.66	2122065.29	5.00	0.00
				6324375.33	2122461.12	5.00	0.00
				6324385.74	2122441.59	5.00	0.00
				6323746.42	2122126.49	5.00	0.00
				6323181.32	2121845.24	5.00	0.00
				6323097.98	2121816.59	5.00	0.00
				6323028.97	2121799.67	5.00	0.00
				6322962.57	2121798.36	5.00	0.00
				6322883.14	2121804.87	5.00	0.00
				6322825.85	2121819.20	5.00	0.00
				6322794.60	2121832.22	5.00	0.00
PARK12	PARK12	5.00	a	6322752.93	2121875.19	5.00	0.00
				6322741.21	2121855.66	5.00	0.00
				6322678.71	2121892.11	5.00	0.00
				6322635.74	2121927.27	5.00	0.00
				6322591.47	2121980.66	5.00	0.00
				6322556.32	2122032.74	5.00	0.00
				6322525.07	2122084.82	5.00	0.00
				6322501.63	2122156.44	5.00	0.00
				6322487.31	2122235.86	5.00	0.00
				6322491.21	2122306.18	5.00	0.00
				6322505.54	2122399.93	5.00	0.00
				6322534.18	2122472.84	5.00	0.00
				6322575.85	2122554.87	5.00	0.00
				6322640.95	2122617.37	5.00	0.00
				6322655.28	2122604.35	5.00	0.00
				6322613.61	2122557.48	5.00	0.00
				6322571.94	2122501.49	5.00	0.00
				6322532.88	2122414.25	5.00	0.00
				6322512.05	2122300.97	5.00	0.00
				6322523.77	2122160.34	5.00	0.00
				6322560.22	2122063.99	5.00	0.00
				6322621.42	2121979.35	5.00	0.00
				6322683.92	2121916.85	5.00	0.00
PARK13	PARK13	5.00	a	6322992.58	2122757.02	5.00	0.00
				6323265.08	2122890.81	5.00	0.00
				6323277.24	2122869.98	5.00	0.00
				6323006.47	2122732.72	5.00	0.00
PARK14	PARK14	5.00	a	6323289.39	2122902.96	5.00	0.00
				6323825.41	2123174.90	5.00	0.00
				6323833.23	2123148.86	5.00	0.00
				6323298.07	2122880.39	5.00	0.00
PARK15	PARK15	5.00	a	6322640.95	2122617.37	5.00	0.00
				6322662.65	2122646.02	5.00	0.00
				6322693.90	2122665.12	5.00	0.00
				6322732.10	2122691.16	5.00	0.00
				6322794.60	2122718.94	5.00	0.00
				6323980.36	2123307.48	5.00	0.00
				6324030.71	2123324.84	5.00	0.00
				6324074.11	2123335.26	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6324120.99	2123340.46	5.00	0.00
				6324122.72	2123317.89	5.00	0.00
				6324082.79	2123312.69	5.00	0.00
				6324032.45	2123304.01	5.00	0.00
				6323994.25	2123290.12	5.00	0.00
				6322805.02	2122699.84	5.00	0.00
				6322747.72	2122670.33	5.00	0.00
				6322709.53	2122649.49	5.00	0.00
				6322681.75	2122628.66	5.00	0.00
				6322655.28	2122604.35	5.00	0.00
PARK16	PARK16	5.00	a	6324159.18	2123340.46	5.00	0.00
				6324207.79	2123335.26	5.00	0.00
				6324285.92	2123317.89	5.00	0.00
				6324355.36	2123291.85	5.00	0.00
				6324433.49	2123244.98	5.00	0.00
				6324506.40	2123179.01	5.00	0.00
				6324570.64	2123093.94	5.00	0.00
				6324610.57	2123019.28	5.00	0.00
				6324629.67	2122918.59	5.00	0.00
				6324634.88	2122809.21	5.00	0.00
				6324612.31	2122703.31	5.00	0.00
				6324570.64	2122616.51	5.00	0.00
				6324511.61	2122533.17	5.00	0.00
				6324447.38	2122475.88	5.00	0.00
				6324385.74	2122441.59	5.00	0.00
				6324375.33	2122461.12	5.00	0.00
				6324436.96	2122503.66	5.00	0.00
				6324492.52	2122557.48	5.00	0.00
				6324551.54	2122633.87	5.00	0.00
				6324588.00	2122708.52	5.00	0.00
				6324608.83	2122812.69	5.00	0.00
				6324607.10	2122915.12	5.00	0.00
				6324586.27	2123012.34	5.00	0.00
				6324551.54	2123081.78	5.00	0.00
				6324485.57	2123170.33	5.00	0.00
				6324419.60	2123229.35	5.00	0.00
				6324346.68	2123274.49	5.00	0.00
				6324277.24	2123300.53	5.00	0.00
				6324211.27	2123312.69	5.00	0.00
				6324159.18	2123316.16	5.00	0.00
PARK17	PARK17	5.00	a	6324463.29	2123970.17	5.00	0.00
				6324653.18	2123976.68	5.00	0.00
				6324691.16	2123812.83	5.00	0.00
				6324667.28	2123823.68	5.00	0.00
				6324633.65	2123831.28	5.00	0.00
				6324596.75	2123810.66	5.00	0.00
				6324558.78	2123766.17	5.00	0.00
				6324476.31	2123757.49	5.00	0.00
PARK18	PARK18	5.00	a	6322544.52	2120852.88	5.00	0.00
				6322666.37	2120859.88	5.00	0.00
				6322735.58	2120842.99	5.00	0.00
				6322831.30	2120654.15	5.00	0.00
				6322767.93	2120547.38	5.00	0.00
				6322826.96	2120413.69	5.00	0.00
				6322510.12	2120545.73	5.00	0.00
				6322492.43	2120571.63	5.00	0.00
				6322489.83	2120644.54	5.00	0.00
EQUES01	EQUES01	5.00	a	6324850.03	2122578.85	5.00	0.00
				6324932.50	2122422.60	5.00	0.00
				6324695.95	2122309.75	5.00	0.00
				6324624.34	2122470.34	5.00	0.00
EQUES02	EQUES02	5.00	a	6324609.15	2122340.57	5.00	0.00
				6324704.63	2122169.13	5.00	0.00
				6324528.85	2122080.15	5.00	0.00
				6324442.05	2122264.61	5.00	0.00
EQUES03	EQUES03	5.00	a	6324356.54	2122218.17	5.00	0.00
				6324434.67	2122068.43	5.00	0.00
				6324135.19	2121903.50	5.00	0.00
				6324072.25	2122057.58	5.00	0.00
				6324161.23	2122098.81	5.00	0.00
				6324206.80	2122142.22	5.00	0.00
				6324243.70	2122170.43	5.00	0.00
EQUES04	EQUES04	5.00	a	6324016.27	2122047.60	5.00	0.00
				6324085.71	2121889.18	5.00	0.00
				6323818.78	2121761.14	5.00	0.00
				6323749.34	2121917.39	5.00	0.00
				6323760.19	2121936.92	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
EQUES05	EQUES05	5.00	a	6323656.46	2121838.83	5.00	0.00
				6323684.67	2121708.62	5.00	0.00
				6323491.53	2121619.65	5.00	0.00
				6323422.08	2121743.35	5.00	0.00
EQUES06	EQUES06	5.00	a	6323624.34	2121596.64	5.00	0.00
				6323706.80	2121472.95	5.00	0.00
				6323546.21	2121414.35	5.00	0.00
				6323491.96	2121533.71	5.00	0.00
				6323498.47	2121544.56	5.00	0.00
EQUES07	EQUES07	5.00	a	6323593.52	2121372.69	5.00	0.00
				6323808.37	2121463.83	5.00	0.00
				6323860.45	2121346.64	5.00	0.00
				6323632.58	2121248.99	5.00	0.00
EQUES08	EQUES08	5.00	a	6323133.89	2121453.42	5.00	0.00
				6323064.44	2121605.33	5.00	0.00
				6323340.05	2121729.02	5.00	0.00
				6323407.32	2121579.28	5.00	0.00
EQUES09	EQUES09	5.00	a	6324080.50	2121640.05	5.00	0.00
				6323917.74	2121568.43	5.00	0.00
				6323874.34	2121577.11	5.00	0.00
				6323839.62	2121596.64	5.00	0.00
				6323830.94	2121629.20	5.00	0.00
				6323837.45	2121670.43	5.00	0.00
				6323854.81	2121694.30	5.00	0.00
				6324006.72	2121765.92	5.00	0.00
				6324039.27	2121770.26	5.00	0.00
				6324076.16	2121759.41	5.00	0.00
				6324095.69	2121739.87	5.00	0.00
				6324104.37	2121716.00	5.00	0.00
				6324104.37	2121685.62	5.00	0.00
				6324093.52	2121663.92	5.00	0.00
EQUES10	EQUES10	5.00	a	6324099.16	2121583.62	5.00	0.00
				6324136.06	2121585.79	5.00	0.00
				6324168.61	2121574.94	5.00	0.00
				6324188.14	2121551.07	5.00	0.00
				6324194.65	2121514.18	5.00	0.00
				6324185.97	2121481.63	5.00	0.00
				6324166.44	2121459.93	5.00	0.00
				6324025.38	2121399.16	5.00	0.00
				6323995.00	2121386.14	5.00	0.00
				6323973.30	2121381.80	5.00	0.00
				6323942.91	2121392.65	5.00	0.00
				6323921.21	2121410.01	5.00	0.00
				6323912.53	2121433.88	5.00	0.00
				6323912.53	2121462.10	5.00	0.00
				6323923.38	2121490.31	5.00	0.00
				6323934.23	2121512.01	5.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph))

Sound Level Spectra

Name				ID	Type	Oktave Spectrum (dB)											Source		
						Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin		

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height		Coordinates					Dist	LSlope
	Begin	End	x	y	z	Ground		(ft)	(%)
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			

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APPENDIX 9.1:

CONSTRUCTION NOISE CALCULATIONS

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15352 - Galway Downs

CadnaA Noise Prediction Model: 15352-03_OnSiteConstruction.cna

Date: 18.12.25

Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (ft)	6561.70
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (ft)	3280.80
Min. Length of Section (ft)	3.30
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	328.08
Search Radius Rcvr	328.08
Max. Distance Source - Rcvr	3280.84 3280.84
Min. Distance Rcvr - Reflector	3.28 3.28
Min. Distance Source - Reflector	0.33
Industrial (ISO 9613 (1996))	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (°F)	50
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (mph)	6.7
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)
R1		R1	55.4	-44.6	52.4	0.0	0.0	0.0		x	Total	5.00	r 6320283.97	2123539.57	5.00
R2		R2	56.4	-43.6	53.4	0.0	0.0	0.0		x	Total	5.00	r 6320854.29	2123962.57	5.00
R3		R3	58.0	-42.0	55.0	0.0	0.0	0.0		x	Total	5.00	r 6321925.11	2124426.02	5.00
R4		R4	59.0	-41.0	56.0	0.0	0.0	0.0		x	Total	5.00	r 6323352.23	2124729.14	5.00
R5		R5	61.6	-38.4	58.6	0.0	0.0	0.0		x	Total	5.00	r 6325743.69	2121825.59	5.00
R6		R6	67.6	-32.4	64.6	0.0	0.0	0.0		x	Total	5.00	r 6323819.26	2120413.91	5.00
R7		R7	60.0	-40.0	57.0	0.0	0.0	0.0		x	Total	5.00	r 6321700.09	2120266.32	5.00
R8		R8	57.8	-42.2	54.8	0.0	0.0	0.0		x	Total	5.00	r 6320730.30	2121174.10	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Quantity			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Work Crews			Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	Daytime	Evening	Nighttime	(min)	(min)	(min)		
CA01		CA01	116.8	16.8	16.8	94.6	-5.4	-5.4	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA02		CA02	116.8	16.8	16.8	82.5	-17.5	-17.5	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA03		CA03	116.8	16.8	16.8	77.8	-22.2	-22.2	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA04		CA04	116.8	16.8	16.8	95.6	-4.4	-4.4	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA05		CA05	116.8	16.8	16.8	79.6	-20.4	-20.4	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA06		CA06	116.8	16.8	16.8	62.0	-38.0	-38.0	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA07		CA07	116.8	16.8	16.8	67.9	-32.1	-32.1	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA08		CA08	116.8	16.8	16.8	73.5	-26.5	-26.5	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA09		CA09	116.8	16.8	16.8	81.2	-18.8	-18.8	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA10		CA10	116.8	16.8	16.8	78.9	-21.1	-21.1	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA11		CA11	116.8	16.8	16.8	78.8	-21.2	-21.2	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA12		CA12	116.8	16.8	16.8	92.2	-7.8	-7.8	PWL-Pt	116.8		1.0	0.0	0.0				8	r

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Quantity			Operating Time			Height (ft)	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Work Crews			Day	Special	Night		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	Daytime	Evening	Nighttime	(min)	(min)	(min)		
CA13		CA13	116.8	16.8	16.8	82.8	-17.2	-17.2	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA14		CA14	116.8	16.8	16.8	98.1	-1.9	-1.9	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA15		CA15	116.8	16.8	16.8	93.4	-6.6	-6.6	PWL-Pt	116.8		1.0	0.0	0.0				8	r
CA16		CA16	116.8	16.8	16.8	93.6	-6.4	-6.4	PWL-Pt	116.8		1.0	0.0	0.0				8	r

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
CA01	CA01	8.00	r	6324771.89	2123926.76	8.00	0.00
				6324837.87	2123913.74	8.00	0.00
				6324822.24	2123898.11	8.00	0.00
				6324809.22	2123885.96	8.00	0.00
				6324808.35	2123872.07	8.00	0.00
				6324784.05	2123874.68	8.00	0.00
				6324784.91	2123905.93	8.00	0.00
				6324780.57	2123913.74	8.00	0.00
CA02	CA02	8.00	r	6324596.55	2123928.50	8.00	0.00
				6324628.66	2123800.89	8.00	0.00
				6324590.47	2123792.21	8.00	0.00
				6324535.78	2123791.34	8.00	0.00
				6324535.78	2123748.81	8.00	0.00
				6324525.37	2123749.68	8.00	0.00
				6324525.37	2123725.37	8.00	0.00
				6324446.37	2123725.37	8.00	0.00
CA03	CA03	8.00	r	6324438.56	2123923.29	8.00	0.00
				6324007.14	2123477.92	8.00	0.00
				6324040.12	2123427.57	8.00	0.00
				6322788.39	2122792.15	8.00	0.00
				6322760.61	2122847.71	8.00	0.00
				6322599.15	2123056.04	8.00	0.00
				6322602.62	2123016.11	8.00	0.00
				6322583.53	2123005.70	8.00	0.00
CA04	CA04	8.00	r	6322552.28	2123036.95	8.00	0.00
				6322578.32	2122984.86	8.00	0.00
				6322664.88	2122792.85	8.00	0.00
				6322647.17	2122783.99	8.00	0.00
				6322641.44	2122772.01	8.00	0.00
				6322634.15	2122753.79	8.00	0.00
				6322636.23	2122731.39	8.00	0.00
				6322500.30	2122677.74	8.00	0.00
CA05	CA05	8.00	r	6322379.98	2122960.56	8.00	0.00
				6322545.09	2123022.54	8.00	0.00
				6322562.69	2122981.39	8.00	0.00
				6322078.24	2122842.34	8.00	0.00
				6322089.96	2122803.28	8.00	0.00
				6322362.09	2122594.94	8.00	0.00
				6322363.40	2122551.98	8.00	0.00
				6322317.82	2122333.23	8.00	0.00
CA06	CA06	8.00	r	6322315.22	2122295.47	8.00	0.00
				6322321.73	2122247.29	8.00	0.00
				6322326.94	2122218.64	8.00	0.00
				6322362.09	2122141.82	8.00	0.00
				6322501.42	2122193.90	8.00	0.00
				6322500.11	2122257.70	8.00	0.00
				6322517.04	2122354.06	8.00	0.00
				6322549.59	2122432.18	8.00	0.00
				6322587.35	2122494.68	8.00	0.00
				6322653.76	2122570.20	8.00	0.00
				6322704.54	2122615.78	8.00	0.00
				6322741.00	2122634.01	8.00	0.00
				6323975.37	2123268.12	8.00	0.00
				6324027.46	2123283.75	8.00	0.00
				6324071.73	2123291.56	8.00	0.00
				6324129.02	2123292.86	8.00	0.00
				6324201.94	2123287.65	8.00	0.00
				6324277.46	2123270.73	8.00	0.00
				6324366.00	2123229.06	8.00	0.00
				6324446.73	2123170.47	8.00	0.00
				6324502.72	2123107.97	8.00	0.00
				6324548.29	2123025.93	8.00	0.00
				6324580.84	2122951.72	8.00	0.00
				6324593.86	2122864.48	8.00	0.00
				6324595.17	2122799.37	8.00	0.00
				6324563.92	2122647.03	8.00	0.00
				6324493.60	2122527.24	8.00	0.00
				6324390.74	2122437.39	8.00	0.00
				6324388.14	2122413.95	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6324263.14	2122223.85	8.00	0.00
				6324164.18	2122094.94	8.00	0.00
				6324074.33	2122054.58	8.00	0.00
				6324043.08	2122051.98	8.00	0.00
				6323980.58	2122028.54	8.00	0.00
				6323950.64	2122036.35	8.00	0.00
				6323686.31	2121916.56	8.00	0.00
				6323661.57	2121860.57	8.00	0.00
				6323384.23	2121731.66	8.00	0.00
				6322812.95	2121466.31	8.00	0.00
				6322756.77	2121594.89	8.00	0.00
				6323143.34	2121785.05	8.00	0.00
				6323104.28	2121777.24	8.00	0.00
				6323045.69	2121757.70	8.00	0.00
				6322959.75	2121755.10	8.00	0.00
				6322890.74	2121761.61	8.00	0.00
				6322795.69	2121782.44	8.00	0.00
				6322733.19	2121812.39	8.00	0.00
				6322671.99	2121855.36	8.00	0.00
				6322618.60	2121910.05	8.00	0.00
				6322580.84	2121955.62	8.00	0.00
				6322544.39	2122019.42	8.00	0.00
				6322524.85	2122080.62	8.00	0.00
				6322506.62	2122131.40	8.00	0.00
				6322502.72	2122178.28	8.00	0.00
				6322373.81	2122126.19	8.00	0.00
				6322336.05	2122115.78	8.00	0.00
				6322349.07	2122005.10	8.00	0.00
				6322336.05	2121887.91	8.00	0.00
				6322393.34	2121684.79	8.00	0.00
				6322087.35	2121605.36	8.00	0.00
				6322001.42	2121408.75	8.00	0.00
				6321993.60	2121291.56	8.00	0.00
				6321841.26	2121236.87	8.00	0.00
				6321802.20	2121256.40	8.00	0.00
				6321772.25	2121285.05	8.00	0.00
				6321366.00	2122618.38	8.00	0.00
				6321372.51	2122658.75	8.00	0.00
				6321366.00	2122674.37	8.00	0.00
CA07	CA07	8.00	r	6321311.31	2122706.92	8.00	0.00
				6321752.72	2121268.12	8.00	0.00
				6321799.59	2121161.35	8.00	0.00
				6321832.15	2121165.26	8.00	0.00
				6321843.86	2121118.38	8.00	0.00
				6321821.73	2121098.85	8.00	0.00
				6321864.70	2121025.93	8.00	0.00
				6321895.95	2121051.98	8.00	0.00
				6321920.69	2121070.20	8.00	0.00
				6321958.45	2121091.04	8.00	0.00
				6321979.28	2121101.45	8.00	0.00
				6322014.44	2121100.15	8.00	0.00
				6322033.97	2121092.34	8.00	0.00
				6322151.16	2121042.86	8.00	0.00
				6322198.03	2121042.86	8.00	0.00
				6322251.42	2121062.39	8.00	0.00
				6322296.99	2121085.83	8.00	0.00
				6322356.89	2121037.65	8.00	0.00
				6322421.99	2120994.68	8.00	0.00
				6322504.02	2120954.32	8.00	0.00
				6322563.92	2120839.74	8.00	0.00
				6322565.22	2120798.07	8.00	0.00
				6322540.48	2120742.08	8.00	0.00
				6322517.04	2120602.76	8.00	0.00
				6322537.87	2120568.90	8.00	0.00
				6322536.57	2120540.26	8.00	0.00
				6322570.43	2120522.03	8.00	0.00
				6322578.24	2120678.28	8.00	0.00
				6322596.47	2120761.61	8.00	0.00
				6322632.93	2120828.02	8.00	0.00
				6322630.32	2120863.17	8.00	0.00
				6322517.04	2121011.61	8.00	0.00
				6322448.03	2121042.86	8.00	0.00
				6322405.06	2121107.97	8.00	0.00
				6322303.50	2121136.61	8.00	0.00
				6322212.35	2121119.68	8.00	0.00
				6322138.14	2121249.89	8.00	0.00
				6322711.89	2121535.96	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6323056.10	2120884.01	8.00	0.00
				6323074.33	2120847.55	8.00	0.00
				6323084.75	2120785.05	8.00	0.00
				6323073.03	2120756.40	8.00	0.00
				6323082.15	2120713.43	8.00	0.00
				6323195.43	2120468.64	8.00	0.00
				6323205.84	2120410.05	8.00	0.00
				6323208.45	2120387.91	8.00	0.00
				6323093.86	2120373.59	8.00	0.00
				6322996.21	2120372.29	8.00	0.00
				6322906.36	2120390.52	8.00	0.00
				6322574.33	2120505.10	8.00	0.00
				6322379.02	2120576.72	8.00	0.00
				6322203.24	2120656.14	8.00	0.00
				6322117.30	2120719.94	8.00	0.00
				6322017.04	2120807.18	8.00	0.00
				6321903.76	2120926.98	8.00	0.00
				6321860.79	2120977.76	8.00	0.00
				6321824.33	2121031.14	8.00	0.00
				6321794.39	2121092.34	8.00	0.00
				6321757.93	2121166.56	8.00	0.00
				6321727.98	2121245.99	8.00	0.00
				6321739.70	2121256.40	8.00	0.00
				6321296.99	2122699.11	8.00	0.00
CA08	CA08	8.00	r	6325084.66	2122571.51	8.00	0.00
				6325193.17	2122200.41	8.00	0.00
				6325219.21	2122083.23	8.00	0.00
				6325230.06	2121976.89	8.00	0.00
				6324767.82	2121803.28	8.00	0.00
				6324691.87	2122007.27	8.00	0.00
				6324743.95	2122098.42	8.00	0.00
				6324793.86	2122159.18	8.00	0.00
				6324945.77	2122204.75	8.00	0.00
				6324941.22	2122226.45	8.00	0.00
				6324978.98	2122262.91	8.00	0.00
				6324870.90	2122561.09	8.00	0.00
				6324924.29	2122585.83	8.00	0.00
CA09	CA09	8.00	r	6323208.45	2120387.91	8.00	0.00
				6323205.84	2120410.05	8.00	0.00
				6323293.36	2120423.61	8.00	0.00
				6323361.07	2120449.65	8.00	0.00
				6324140.58	2120819.45	8.00	0.00
				6324142.32	2120845.49	8.00	0.00
				6324140.58	2120871.53	8.00	0.00
				6324177.04	2120887.15	8.00	0.00
				6324199.61	2120866.32	8.00	0.00
				6324220.44	2120861.11	8.00	0.00
				6324689.19	2121090.28	8.00	0.00
				6324758.64	2121111.11	8.00	0.00
				6324835.02	2121112.85	8.00	0.00
				6324894.05	2121095.49	8.00	0.00
				6324960.02	2121064.24	8.00	0.00
				6324944.40	2121043.40	8.00	0.00
				6324876.69	2121079.86	8.00	0.00
				6324826.34	2121095.49	8.00	0.00
				6324756.90	2121092.01	8.00	0.00
				6324710.02	2121074.65	8.00	0.00
				6323791.62	2120635.42	8.00	0.00
				6323394.05	2120437.50	8.00	0.00
				6323329.82	2120421.88	8.00	0.00
CA10	CA10	8.00	r	6325210.02	2121826.39	8.00	0.00
				6325216.97	2121800.35	8.00	0.00
				6324458.29	2121467.01	8.00	0.00
				6324605.86	2121159.72	8.00	0.00
				6324591.97	2121149.31	8.00	0.00
				6324262.11	2121847.22	8.00	0.00
				6323730.86	2121621.53	8.00	0.00
				6323730.86	2121605.90	8.00	0.00
				6323718.71	2121597.22	8.00	0.00
				6323704.82	2121623.26	8.00	0.00
				6323744.75	2121642.36	8.00	0.00
				6323652.76	2121856.48	8.00	0.00
				6323661.57	2121860.57	8.00	0.00
				6323664.13	2121866.37	8.00	0.00
				6323763.91	2121648.65	8.00	0.00
				6324511.83	2121995.52	8.00	0.00
				6324601.41	2121826.25	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6324617.04	2121791.36	8.00	0.00
				6324621.73	2121765.31	8.00	0.00
				6324623.29	2121713.75	8.00	0.00
				6324618.08	2121677.29	8.00	0.00
				6324592.56	2121631.98	8.00	0.00
				6324581.10	2121609.06	8.00	0.00
				6324558.18	2121572.61	8.00	0.00
				6324541.00	2121581.46	8.00	0.00
				6324603.50	2121693.96	8.00	0.00
				6324607.66	2121712.71	8.00	0.00
				6324605.06	2121766.36	8.00	0.00
				6324602.46	2121789.79	8.00	0.00
				6324511.83	2121972.08	8.00	0.00
				6324279.02	2121856.46	8.00	0.00
				6324453.84	2121492.22	8.00	0.00
CA11	CA11	8.00	r	6322349.59	2122119.51	8.00	0.00
				6322368.35	2122124.69	8.00	0.00
				6322395.55	2122055.67	8.00	0.00
				6322633.32	2121791.62	8.00	0.00
				6323132.05	2120801.72	8.00	0.00
				6323384.22	2120923.85	8.00	0.00
				6323558.53	2120581.49	8.00	0.00
				6323540.47	2120570.38	8.00	0.00
				6323375.19	2120903.02	8.00	0.00
				6323293.94	2120859.27	8.00	0.00
				6323418.25	2120598.85	8.00	0.00
				6323400.89	2120593.99	8.00	0.00
				6323275.19	2120853.71	8.00	0.00
				6323141.16	2120788.44	8.00	0.00
				6323151.58	2120762.05	8.00	0.00
				6323209.22	2120792.60	8.00	0.00
				6323355.75	2120496.07	8.00	0.00
				6323370.33	2120498.85	8.00	0.00
				6323374.50	2120486.35	8.00	0.00
				6323350.19	2120472.46	8.00	0.00
				6323202.28	2120770.38	8.00	0.00
				6323157.83	2120747.46	8.00	0.00
				6323307.14	2120443.30	8.00	0.00
				6323293.25	2120433.57	8.00	0.00
				6323125.19	2120780.80	8.00	0.00
				6323073.03	2120756.40	8.00	0.00
				6323080.06	2120773.60	8.00	0.00
				6323116.16	2120791.91	8.00	0.00
				6322725.37	2121538.95	8.00	0.00
				6322613.39	2121777.32	8.00	0.00
				6322584.22	2121816.91	8.00	0.00
				6322548.11	2121853.71	8.00	0.00
				6322400.89	2122016.21	8.00	0.00
				6322383.53	2122034.96	8.00	0.00
				6322376.58	2122048.85	8.00	0.00
CA12	CA12	8.00	r	6322578.65	2121659.30	8.00	0.00
				6322586.98	2121644.02	8.00	0.00
				6322431.78	2121553.40	8.00	0.00
				6322423.44	2121568.68	8.00	0.00
CA13	CA13	8.00	r	6323364.65	2121722.52	8.00	0.00
				6323384.23	2121731.66	8.00	0.00
				6323778.89	2120894.14	8.00	0.00
				6323807.54	2120905.43	8.00	0.00
				6323814.48	2120888.07	8.00	0.00
				6323745.04	2120851.61	8.00	0.00
				6323735.49	2120874.18	8.00	0.00
				6323756.15	2120886.77	8.00	0.00
				6323644.17	2121125.05	8.00	0.00
				6323525.68	2121066.45	8.00	0.00
				6323493.13	2121136.77	8.00	0.00
				6323508.75	2121145.88	8.00	0.00
				6323533.49	2121099.01	8.00	0.00
				6323636.36	2121140.67	8.00	0.00
CA14	CA14	8.00	r	6323935.95	2121263.94	8.00	0.00
				6323955.92	2121227.48	8.00	0.00
				6323938.56	2121218.80	8.00	0.00
				6323918.59	2121255.26	8.00	0.00
CA15	CA15	8.00	r	6323963.73	2121208.38	8.00	0.00
				6324010.61	2121114.63	8.00	0.00
				6323989.77	2121102.48	8.00	0.00
				6323945.50	2121197.10	8.00	0.00
CA16	CA16	8.00	r	6323965.29	2121042.76	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6324045.85	2120886.51	8.00	0.00
				6324035.43	2120878.87	8.00	0.00
				6323954.18	2121037.20	8.00	0.00