Appendix J

Noise Impact Study

Corydon Gateway Development

Noise Impact Study

City of Lake Elsinore, CA

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This purpose of this noise impact study is to evaluate the potential noise impacts for the project study area and compare results to City and CEQA thresholds. The assessment was conducted and compared to the noise standards set forth by the Federal, State and Local agencies. Consistent with the California Environmental Quality Act (CEQA) and CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable agencies.
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An evaluation of the existing ambient noise environment
- An analysis of stationary noise impacts from the project site to adjacent land uses
- Construction noise and vibration evaluation

1.2 Site Location and Study Area

The project site is located at the southwest corner of Mission Trail and Lemon Street in Lake Elsinore, California, as shown in Exhibit A. The site's current land use classification is General Commercial according to the City of Lake Elsinore East Lake Specific Plan Land Use Plan and the proposed use is commercial. Land uses surrounding the site include industrial uses and vacant land to the south, vacant land to the west, commercial and residential land to the east (across Mission Trail), and vacant land to the north.

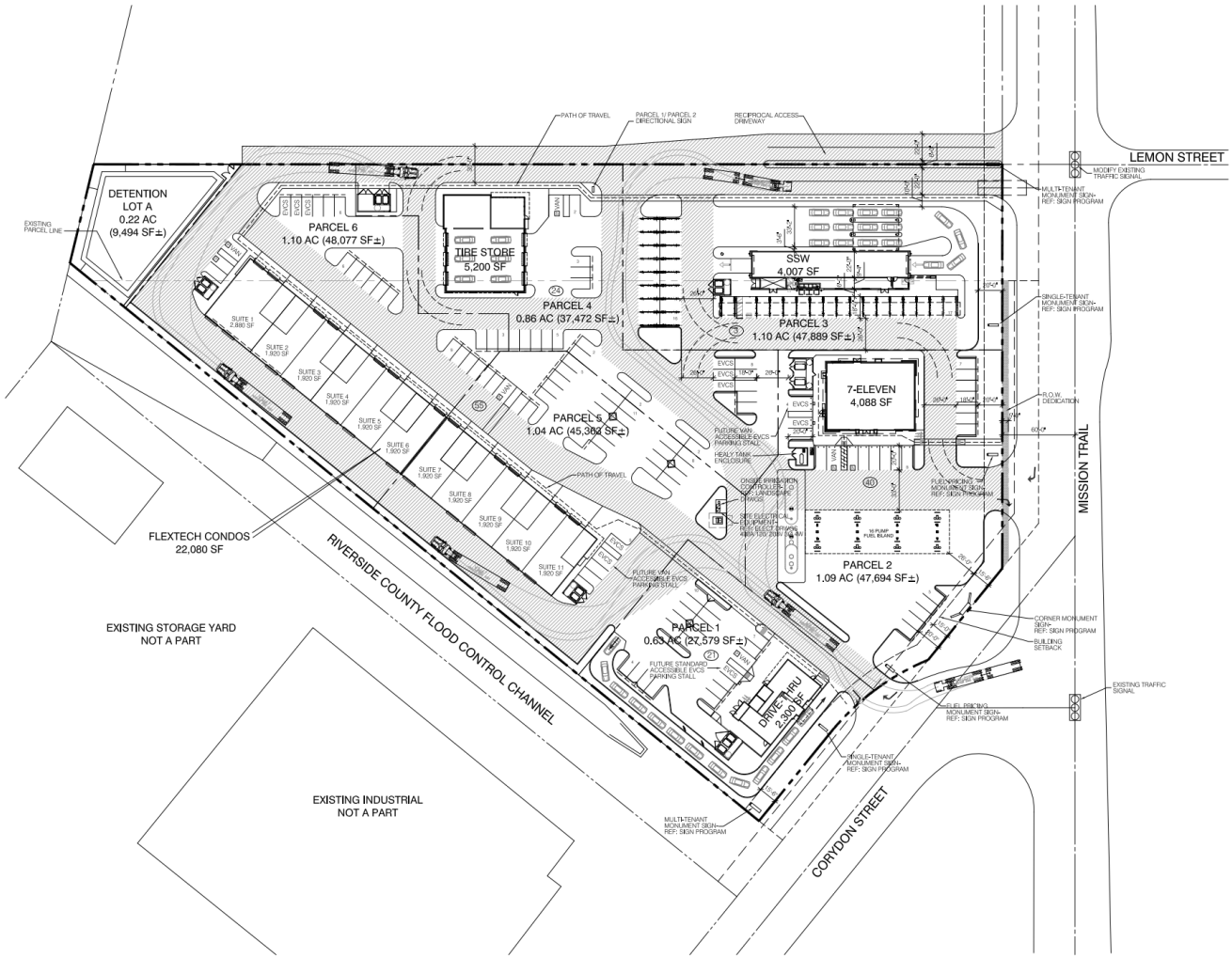
1.3 Proposed Project Description

The Project proposes to develop a convenience store with a 16 pump gas station, 5,298 square feet of fast food drive-through, 11,520 square feet of office use, 11,520 square feet of auto car center , a 120-foot car wash tunnel, and 11,520 square feet of office use on approximately 6.05 acres. Exhibit B demonstrates the site plan for the project.

Exhibit A
Location Map

Exhibit B

Site Plan



PARKING EMC SEC. 17.148.030

REQUIRED PARKING:

PARKING STALL DIMENSIONS (L.N.O.):	9' X 18'
MINIMUM AISLE WIDTH (90° PARKING):	26'
RETAIL (1/250):	17 STALLS
DRIVE-THRU RESTAURANT: 1/ 40 SF CUSTOMER AREA (650 SF/ 40):	15 STALLS
1/ 200 SF NONCUSTOMER AREA (1,650 SF/ 200):	9 STALLS
TIRE STORE: 750 SF/ 250 OFFICE/ SALES:	3 STALLS
4,450 SF SERVICE BAY:	18 STALLS
FLEX-TECH CONDOS: 5,500 SF/ 250 OFFICE:	22 STALLS
16,580 SF/ 500 STORAGE:	34 STALLS
EXPRESS CARWASH (1/ EMPLOYEE)	3 STALLS
PARKING REQUIRED:	121 STALLS
TOTAL PARKING PROVIDED:	143 STALLS

ACCESSIBLE PARKING

2019 CBC TABLE 11B-208.2

TOTAL NUMBER OF PARKING SPACES PROVIDED	TOTAL NUMBER OF ACCESSIBLE SPACES
1- 25	1
26- 50	2
51- 75	3
76- 100	4
101- 150	5
151- 200	6
201- 300	7
301- 400	8
401- 500	9
501- 1,000	2 PERCENT OF TOTAL
1,001 AND OVER	20 PLUS 1/100 OVER 1,000

TOTAL PARKING PROVIDED:	143 STALLS
TOTAL ACCESSIBLE SPACES REQUIRED:	5 STALLS
VAN ACCESSIBLE REQ'D (SEC. 11B-208.2.4)	1 OF TOTAL REQ'D
ACCESSIBLE SPACES PROVIDED:	
STANDARD STALL:	1 STALLS
VAN ACCESSIBLE STALLS:	6 STALLS
TOTAL ACCESSIBLE SPACES PROVIDED:	7 STALLS

CLEAN AIR VEHICLE PARKING

2019 CAL GREEN TABLE 5.106.5.2

TOTAL NUMBER OF PARKING SPACES	TOTAL NUMBER OF PARKING SPACES
0- 9	0
10- 25	1
26- 50	3
51- 75	6
76- 100	8
101- 150	11
151- 200	16
201 AND OVER	8 PERCENT OF TOTAL

TOTAL PARKING PROVIDED:	143 STALLS
TOTAL CAV PARKING REQUIRED:	11 STALLS
TOTAL CAV PARKING PROVIDED:	**11 STALLS

**(CAL GREEN 5.106.5.3.5: FUTURE EVCS SPACES QUALIFY AS DESIGNATED PARKING FOR CLEAN AIR VEHICLES)

FUTURE ELECTRICAL VEHICLE CHARGING STATIONS

2019 CAL GREEN TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	TOTAL NUMBER OF EVCS SPACES
0- 9	0
10- 25	1
26- 50	2
51- 75	4
76- 100	5
101- 150	7
151- 200	10
201 AND OVER	6 PERCENT OF TOTAL

2019 CBC TABLE 11B-228.3.2.1

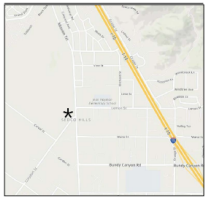
TOTAL NUMBER OF EVCS AT A FACILITY	VAN ACCESSIBLE	STANDARD ACCESSIBLE	AMBULATORY
1- 4	1	0	0
5-25	1	1	0
26- 50	1	1	1
51- 75	1	2	2
76- 100	1	3	3
101 AND OVER	1 + 1/300 OVER 100	3 + 1/60 OVER 100	1 + 1/50 OVER 100

TOTAL PARKING PROVIDED:	143 STALLS
FUTURE EVCS SPACES REQUIRED:	7 STALLS
FUTURE ACCESSIBLE SPACES REQ'D (OF TOTAL):	
VAN ACCESSIBLE:	1 STALL
STANDARD ACCESSIBLE:	1 STALLS
AMBULATORY:	0 STALLS
FUTURE EVCS SPACES PROVIDED:	
FUTURE STANDARD EVCS SPACES:	7 STALLS
FUTURE VAN ACCESSIBLE EVCS PROVIDED:	2 STALL
FUTURE STANDARD ACCESSIBLE EVCS PROVIDED:	1 STALL
FUTURE AMBULATORY EVCS PROVIDED:	0 STALLS
TOTAL FUTURE EVCS SPACES PROVIDED:	11 STALLS

FUTURE EVCS NOTES:

1. ALL CLEAN AIR VEHICLE PARKING SPACES SHALL BE PROVIDED WITH INFRASTRUCTURE FOR THE ADDITION OF FUTURE ELECTRIC VEHICLE CHARGING STATIONS.
2. FUTURE ACCESSIBLE EVCS STALLS SHALL BE CONSTRUCTED TO MEET CURRENT ACCESSIBILITY STANDARDS ALONG ACCESSIBLE ROUTES OR, HAVE THE ABILITY TO BE MODIFIED WITHOUT AFFECTING REQUIRED PARKING SPACE QUANTITIES.

VICINITY



ZONING

GENERAL PLAN:	SPECIFIC PLAN
ZONING:	EAST LAKE SPECIFIC PLAN PLANNING AREA 2 ACTION SPORTS, TOURISM, COMMERCIAL & RECREATION MIXED US OVERLAY
BUILDING SETBACKS:	
FRONT:	10'
SIDE/ADJ TO PUBLIC RIGHT-OF-WAY):	10'
SIDE/ADJ TO INTERIOR LOT LINES):	0'
REAR/ADJ TO INTERIOR LOT LINES):	0'
PARKING SETBACKS:	
FRONT:	25' AVG/ 20' MIN
SIDE/ADJ TO PUBLIC RIGHT-OF-WAY):	10'
SIDE/ADJ TO INTERIOR LOT LINES):	0'
REAR/ADJ TO INTERIOR LOT LINES):	0'
MAXIMUM BUILDING HEIGHT:	40'
ARCHITECTURAL ELEMENTS:	60'
MAXIMUM BUILDING COVERAGE:	
MINIMUM LANDSCAPE COVERAGE:	15%

PROJECT SUMMARY

LAND AREA:	6.05 AC (263,663 SF±)
RETAIL:	4,088 SF
DRIVE-THRU RESTAURANT:	2,300 SF
TIRE STORE:	
SALES:	750 SF
SERVICE:	4,450 SF (6 SERVICE BAYS)
FLEX-TECH:	
OFFICE:	5,500 SF
STORAGE:	16,580 SF
EXPRESS CARWASH:	4,007 SF
TOTAL BUILDING AREA:	38,395 SF
FUELING CANOPY:	4,285 SF
CARWASH PAY CANOPY:	
BUILDING COVERAGE (F.A.R.):	16.2%
MAXIMUM BUILDING HEIGHT:	39'
ONSITE LANDSCAPE AREA:	40,826 SF (15.5%)

LEGEND & SYMBOLS

VAN	VAN ACCESSIBLE PARKING SPACE
CAV	CLEAN AIR VEHICLE PARKING SPACE
EVCS	FUTURE ELECTRICAL VEHICLE CHARGING PARKING SPACE
DDC	DOUBLE DETECTOR CHECK VALVE- REF: CIVIL DRAWINGS
FDC	FIRE DEPARTMENT CONNECTION- REF: CIVIL DRAWINGS
FH	FIRE HYDRANT- REF: CIVIL DRAWINGS PROVIDE BLUE REFLECTOR @ CL DRIVEWAY PER FIRE DEPT REQUIREMENTS
GM	GAS METER LOCATION- REF: PLUMBING & GAS UTILITY DRAWINGS
PIV	POST INDICATOR VALVE- REF: CIVIL DRAWINGS
R	RECYCLE DUMPSTER
T	TRASH DUMPSTER
TR	TRANSFORMER- REF ELECTRICAL UTILITY DRAWINGS
WM	WATER METER- REF: CIVIL DRAWINGS
SS	STOP SIGN- REF: DET. 9/ SD2.0
AP	ACCESSIBLE PATH SIGN- REF DET. 8/ SD2.0
SE	SITE ENTRANCE SIGN- REF DET. 7/ SD2.0

FIRE LANE

FIRE TRUCK TURNING RADIUS

NOTE:

BUILDING AREAS AND LAND COVERAGE ARE PRELIMINARY AND SUBJECT TO ADJUSTMENT. ANY PROPOSED DEVELOPMENT IS SUBJECT TO APPROVAL OF GOVERNMENT OR OTHER AGENCIES HAVING JURISDICTION. ALL DIMENSIONS AND SITE CONDITIONS ARE SUBJECT TO VERIFICATION.

PRELIMINARY SITE PLAN
SCHEME Kv6

CORYDON GATEWAY
LAKE ELSINORE, CA

GKPA PROJECT #19114.01
24 JUNE 2020

0 20' 40' 80'
SCALE: 1" = 40.00'

TRUE NORTH
PROJECT NORTH

CORYDON GATEWAY
LAKE ELSINORE, CALIFORNIA

RED CORYDON, LLC
25425 JEFFERSON AVENUE, SUITE 101
MURRIETA, CA 92562
951.643.4711

GKP PIERCE ARCHITECTS
3 OVERTURE
ALISO VIEJO, CA 92656
T 949.344.2710
F 949.344.2720

2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used in the report.

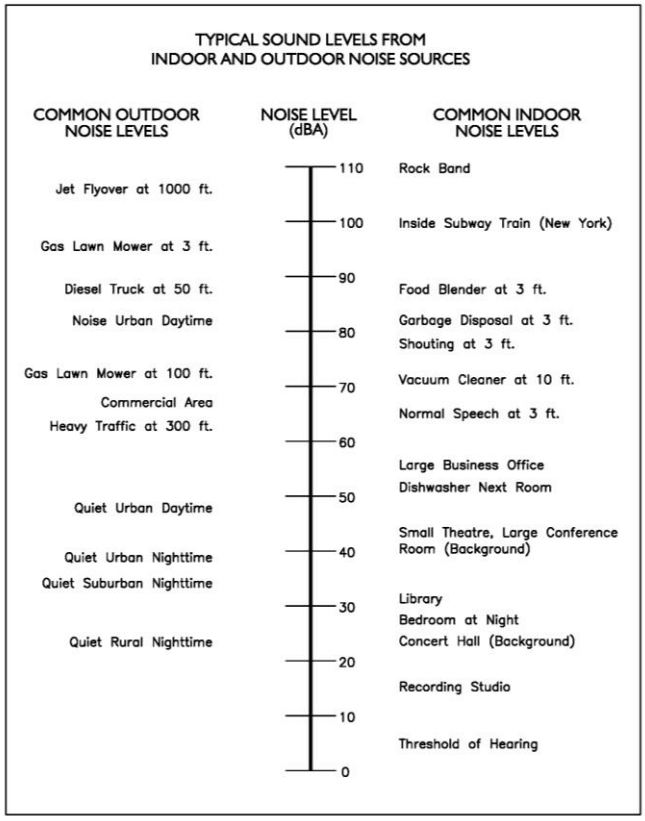
2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

Exhibit C: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter ($\mu N/m^2$), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA), a scale designed to account for the frequency-dependent sensitivity of the ear. Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code, or other applicable regulations, which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90, and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the

receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

3.3 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Lake Elsinore, California and noise regulations are addressed through the efforts of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

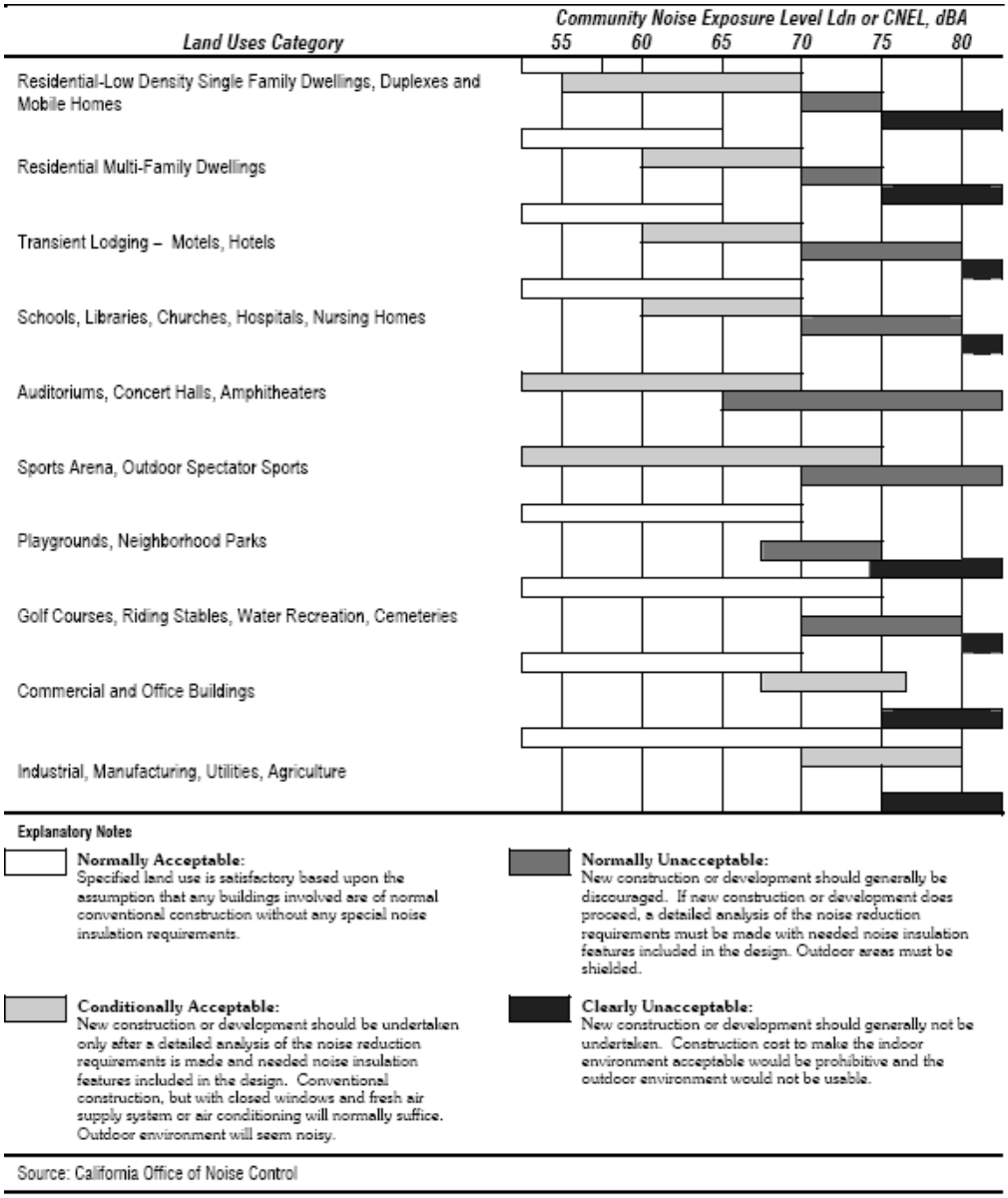
4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general

plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable as illustrated in Exhibit D.

Exhibit D: Land Use Compatibility Guidelines



4.3 City of Lake Elsinore Noise Regulations

The City of Lake Elsinore outlines their noise regulations and standards within the Municipal Code and the Noise Element of the City of Lake Elsinore General Plan.

City of Lake Elsinore Municipal Code

CHAPTER 17.176 - NOISE CONTROL

Sec. 17.176.010. - Purpose

In order to control unnecessary, excessive and annoying noise and vibration in the City, it is hereby declared to be the policy of the City to prohibit such noise and vibration generated from or by all sources as specified in this chapter. It shall be the policy of the City to maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the City where noise levels are above acceptable values.

It is determined that certain noise levels and vibrations are detrimental to the public health, welfare and safety, and are contrary to public interest. Therefore, the City Council does ordain and declare that creating, maintaining, causing or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this chapter, is a public nuisance and shall be punishable as such.

[Ord. 772 § 17.78.010, 1986. Code 1987 § 17.78.010].

City of Lake Elsinore – Noise Ordinance

Section 17.176.060 from the noise ordinance outlines the City's exterior noise limits as it relates to stationary noise sources.

Table 1: Allowable Exterior Noise Level[1]

Sound Level Standards (dBA Leq)*

General Plan Land Use Designation	Maximum Decibel Level	
	7 a.m. - 10 p.m.	10 p.m. - 7 a.m.
Single-Family Residential	50	40
Multiple Dwelling Residential	50	45
Commercial and Office	60	55
General Commercial	65	60
Light Industrial	70	70
Heavy Industrial	75	75

(Ord. 772 § 17.78.060, 1986. Code 1987 § 17.78.060)

Sec. 17.176.080. – Prohibited Acts.

No person shall unnecessarily make, continue, or cause to be made or continued, any noise disturbance. The following acts, and the causing or permitting thereof, are declared to be in violation of this chapter:

A. Operating, playing, or permitting the operation or playing of any radio, television set, phonograph, drum, musical instrument, or similar device which produces or reproduces sound:

   1. Between the hours of 10:00 p.m. and 7:00 a.m. in such a manner as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of LEMC 17.176.060(A), except for which a variance has been issued by the City.
   2. In such a manner as to exceed the levels set forth for public space in Table 1, measured at a distance of at least 50 feet (15 meters) from such device operating on a public right-of-way or public space.

B. Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device between the hours of 10:00 p.m. and 7:00 a.m., such that the sound therefrom creates a noise disturbance across a residential real property line, or at any time violates the provisions of LEMC 17.176.060(A), except for any noncommercial public speaking, public assembly or other activity for which a variance has been issued by the City.

C. Offering for sale, selling anything, or advertising by shouting or outcry within any residential or commercial area or noise sensitive zone of the City except by variance issued by the City. The provisions of this section shall not be construed to prohibit the selling by outcry of merchandise, food, and beverages at licensed sporting events, parades, fairs, circuses, or other similar licensed public entertainment events.

D. Owning, possessing or harboring any animal or bird which frequently or for long duration, howls, barks, meows, squawks, or makes other sounds which create a noise disturbance across a residential or commercial real property line or within a noise sensitive zone. This provision shall not apply to public zoos.

E. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 p.m. and 7:00 a.m. in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of LEMC 17.176.060(A).

F. Construction/Demolition.
   1. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.
   2. Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule:

Sec. 17.176.100. Special Provisions - Exemptions.

The following activities shall be exempted from the provisions of this chapter:

A. The emission of sound for the purpose of alerting persons to the existence of an emergency.
B. The emission of sound in the performance of emergency work.
C. Warning devices necessary for the protection of public safety, as for example, police, fire and ambulance.
D. Regularly scheduled school bands, school athletic and school entertainment events between the hours of 8:45 a.m. and 10:00 p.m., provided a special events permit is also required for band activities on City streets.
E. Regularly scheduled activities conducted on public parks, public playgrounds, and public or private school grounds. However, the use of public address or amplified music systems is not permitted to exceed the exterior noise standard of adjacent property at the property line.
F. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions.
G. Mobile noise sources associated with agricultural pest control through pesticide application; provided, that the application is made in accordance with restricted material permits issued by or regulations enforced by the Agricultural Commissioner.
H. Mobile noise sources associated with agricultural operations, provided such operations take place on Monday through Friday, excepting legal holidays, between the hours of 7:00 a.m. and 6:00 p.m. All other operations shall comply with this chapter.
I. Noise sources associated with the maintenance of real property, provided such operations take place on Monday through Friday, excepting legal holidays, between the hours of 7:00 a.m. and 6:00 p.m., or on holidays and weekends between the hours of 9:00 a.m. and 6:00 p.m. All other operations shall comply with this chapter.
J. Any activity to the extent that regulation thereof has been preempted by State or Federal law.

(Ord. 772 § 17.78.100, 1986. Code 1987 § 17.78.100)

City of Lake Elsinore General Plan

Section 3.0, Public Safety and Welfare from the City's General Plan includes Section 3.7 noise. Section 3.7 describes sensitive land uses as locations where people reside or where the presence of noise could adversely affect the use of the land. The City has designed noise sensitive zones for land uses that require exceptional quiet. Table 3-1 and Table 3-2 provide regulations to ensure noise and land use compatibility and recommended noise standards.

Goals, Policies, and Implementation Measures

Policies, goals and implementation program measures from the Noise Element that would mitigate potential impacts on noise include the following.

Goal 7: Maintain an environment for all City residents and visitors free of unhealthy, obtrusive, or otherwise excessive noise.

7.1 Apply the noise standards set forth in the Lake Elsinore Noise and Land Use Compatibility Matrix (see Table 3-1) and Interior and Exterior Noise Standards (see Table 3-2) when considering all new development and redevelopment proposed within the City.

7.2 Require that mixed-use structures and areas be designed to prevent transfer of noise and vibration from commercial areas to residential areas.

7.3 Strive to reduce the effect of transportation noise on the I-15.

7.4 Consider estimated roadway noise contours based upon Figure 3.6, Noise Contours, when making land use design decisions along busy roadways throughout the City.

4.4 City of Wildomar Noise Regulations

Directly adjacent to the project site to the east is the City of Wildomar. The nearest property to the project is zoned CR Retail Commercial. Section 9.48.040 General sound level standards from the Wildomar Municipal Code state that retail commercial may not exceed 65 dBA during the hours of 7 am to 10 pm and 55 dBA during the hours of 10 pm to 7am. It should be noted that this information is provided for informational purposes only as the project is in the City of Lake Elsinore. The City of Lake Elsinore is not bound to the regulations of a neighboring jurisdiction.

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance to Federal Highway Transportation (FHWA) and Caltrans (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

Noise monitoring locations were selected based on the nearest sensitive receptors relative to the proposed onsite noise sources. Three (3) short-term 1-hour noise measurements were conducted at or near the project site and are illustrated in Exhibit E. Appendix A includes photos, field sheet, and measured noise data.

5.3 Stationary Noise Modeling

SoundPLAN (SP) acoustical modeling software was utilized to model future worst-case stationary noise impacts to the adjacent land uses. SP is capable of evaluating multiple stationary noise source impacts at various receiver locations. SP’s software utilizes algorithms (based on the inverse square law and reference equipment noise level data) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site sources (parking spaces, restaurant drive through speakers, automotive shop tools, vacuums, and car wash blowers at the exit). The model assumes that the car wash tunnel is approximately 4,007 square feet, with an approximate 14 foot tall by 14-foot wide exit opening, a 4,088 square foot 7-11 with an sixteen (16) vehicle fuel station, a 2,298 square foot fast food restaurant with drive through speaker phone, 5,200 square foot tire store, and approximately 121 parking spaces.

A total of fourteen (14) blowers (Sonny Blowers with silencer package) was modeled at 10 to 12 feet high as a point source. It is anticipated that the blowers will be located approximately 5 to 10 feet inside the exit of the tunnel. In addition, the vacutech vacuums were modeled as point sources. The reference equipment sound level data is provided in Appendix B.

The SP model assumes that all noise sources are operating simultaneously (worst-case scenario), when in actuality the noise will be intermittent and lower in noise level. The project proposes that all other noise producing equipment (e.g., compressors, pumps) will be housed within mechanical equipment room. SP modeling inputs and outputs ate provided in Appendix C.

5.4 FHWA Traffic Noise Prediction Model

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes and percentages correspond to the project's traffic impact study as prepared by Trames Solutions Inc (Lake Elsinore Mission Trails/Corydon C-Store Traffic Impact Analysis– Jan 2020) and roadway classification. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour through-out a 24-hour period

Table 2 indicates the roadway parameters and vehicle distribution utilized for this study.

Table 2: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT	Existing Plus Project ADT	Speed (MPH)	Site Conditions
Corydon Street	West of Mission Trail	16,776	18,074	50	Soft
Mission Trail	South of Corydon Street	15,504	16,838	45	Soft
Vehicle Distribution (Truck Mix)[2]					
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**	**Total % of Traffic Flow**
Automobiles		75.5	14.0	10.5	97.42
Medium Trucks		48.9	2.2	48.9	1.84
Heavy Trucks		47.3	5.4	47.3	0.74

Notes:
[1] Per TIA (Lake Elsinore Mission Trails/Corydon C-Store Traffic Impact Analysis, City of Lake Elsinore, CA – Trames Solutions, Inc., 01/20/2020) .

The following outlines key adjustments to the REMEL for project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

MD utilized the existing 1-hour baseline noise data to calibrate the FHWA traffic noise model within 1 dB of the actual measured level. The model incorporates the parameters outlined in Table 2 and is utilized to describe the change in traffic noise level as a result of said project. Modeling inputs and outputs are provided in Appendix D

5.5 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

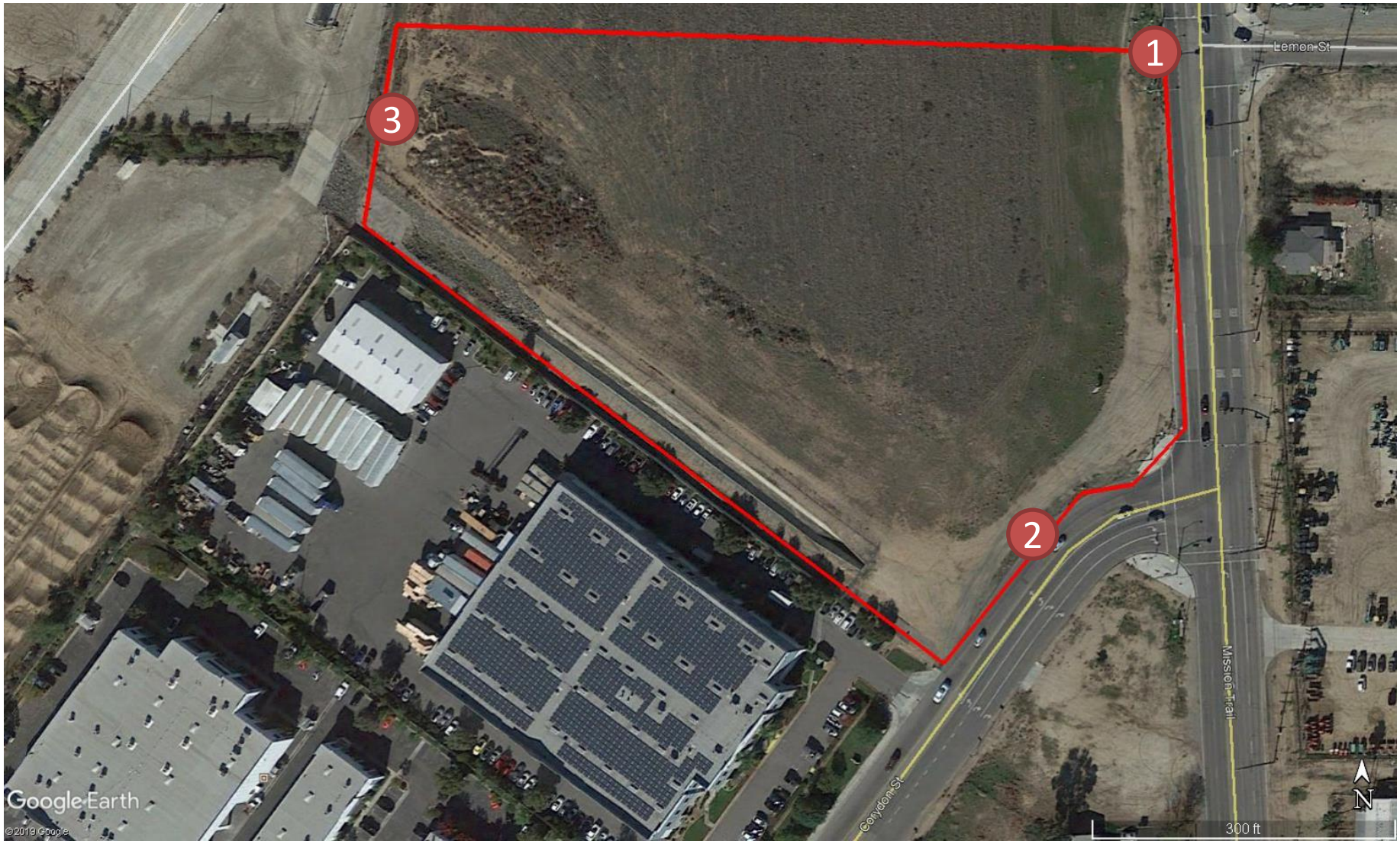
The project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete and building phases of construction. The construction noise calculation output worksheet is located in Appendix E. The following assumptions relevant to short-term construction noise impacts were used:

- It is estimated that construction will occur over a 12 to 18-month time period. Construction noise is expected to be the loudest during the grading, concrete, and building phases.

3 = short-term
Monitoring Location

Exhibit E

Measurement Locations



6.0 Existing Noise Environment

Three (3) one-hour ambient noise measurement was conducted at the project site. Noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Mission Trail and Corydon Street are the primary sources of noise impacting the site and the surrounding area. The ambient data confirms that the existing noise levels exceed the City's noise ordinance for General Commercial (65 dBA). Therefore, this assessment will utilize the ambient noise data as a basis and compare levels to said data.

6.1 Short-Term Noise Measurement Results

The results of the short-term noise data are presented in Table 3.

Table 3: Short-Term Noise Measurement Data[1]

Date	Time	1-Hour dB(A)							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
12/17/2020	12PM-1PM	72.7	97.3	49.3	79.4	75.5	72.5	68.4	59.8
12/17/2020	12PM-1PM	71.4	99.1	54.3	79.2	72.4	69.0	65.9	60.1
12/17/2020	12PM-1PM	57.7	90.6	46.4	61.3	54.1	52.0	50.7	48.8

Notes:
1. Short-term noise monitoring location (LT1) is illustrated in Exhibit E.

Noise data indicates the ambient noise level ranges between 57.7 dBA to 72.7 dBA depending on location. Additional field notes and photographs are provided in Appendix A.

For this evaluation, MD has utilized the measured Leq and has compared the project's projected noise levels to these levels.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts as a result of the project. The analysis details the estimated exterior noise levels. Stationary noise impacts are analyzed from the on-site noise sources such as cars coming and going, drive thru restaurant speakers, dryers/blowers (associated with car wash equipment), vacuums and trucks loading and unloading, and tire store activity.

7.1 Future Exterior Noise

The following outlines the exterior noise levels associated with the proposed project.

7.1.1 Noise Impacts to Off-Site Receptors Due to Stationary Sources

Sensitive receptors that may be affected by project operational noise include existing light manufacturing to the south and west, potential commercial to the north, and existing commercial to the east. The worst-case stationary noise was modeled using SoundPLAN acoustical modeling software. Worst-case assumes the all project activities are always operational when in reality the noise will be intermittent and cycle on/off depending on customer usage. Project car wash and tire store operation are assumed to occur within 7AM to 10PM.

A total of five (5) receptors were modeled to evaluate the proposed project's operational impact. A receptor is denoted by a yellow dot. All yellow dots represent either a property line or a sensitive receptor such as an outdoor sensitive area (courtyard, patio, backyard, etc).

This study compares the Project's operational noise levels to two (2) different noise assessment scenarios: 1) Project Only operational noise level projections, 2) Project plus ambient noise level projections.

Project Operational Noise Levels
Exhibit F shows the "project only" operational noise levels at the project site and illustrates how the noise will propagate at the property lines and/or sensitive receptor area. Operational noise levels at the adjacent uses are anticipated to range between 35.6 dBA to 52.4 dBA Leq (depending on the location).

The "project only" noise projections to the adjacent uses are below the City of Wildomar's 65 commercial limit as outlined within the City's noise ordinance (see Section 9.48.040) and below the City of Lake Elsinore's 65 dBA commercial limit, and 70 dBA light industrial limit as outlined in the City's noise ordinance (see Section 17.176.060).

Project Plus Ambient Operational Noise Levels
Table 4 demonstrates the project plus the ambient noise levels. Project plus ambient noise level projections are anticipated to range between 57.7 to 72.7 dBA Leq depending on location. As previously discussed, the existing condition already exceeds the City's 65 dBA commercial limit and 70 dBA light industrial limit. Therefore, the project has been compared to the quietest hourly average ambient noise level for comparative purposes.

Table 4: Worst-case Predicted Operational Leq

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq)[4]	Change in Noise Level as Result of Project
1	1	72.7	51.8	72.7	**72.7**	0.0
2	1		48.6	72.7		0.0
3	1		52.4	72.7		0.0
4	1	71.4	48.7	71.4	**71.4**	0.0
5	1	57.7	35.6	57.7	**70**	0.0

Notes:
[1.] Receptors 1-2 represent commercial in Wildomar Receptors 3-5 are located in Lake Elsinore.
[2.] Existing ambient taken as multiple one-hour measurements.
[3.] See Exhibit G for the operational noise level projections at said receptors.
[4.] Per the city of Lake Elsinore if the Ambient level exceeds the standard the ambient becomes the standard.

As shown in Table 4, the project will increase the worst-case noise level by approximately 0.0 dBA Leq depending on location. It takes a change of 3 dBA to hear a noticeable difference. The increase in noise level is below the typical noticeable difference in change of noise levels.

Table 5 provides the characteristics associated with changes in noise levels.

Table 5: Change in Noise Level Characteristics[1]

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

The change in noise level at all receptors would fall within the "Not Perceptible" acoustic characteristic.

7.1.2 Noise Impacts to On/Off-Site Receptors Due to Project Generated Traffic

A worst-case project generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated 50 feet from the centerline of the analyzed roadway. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference in with and without project conditions. In addition, the noise contours for 60, 65 and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed project on the nearby roadways were calculated for the following scenarios:

Existing Year (without Project): This scenario refers to existing year traffic noise conditions.

Existing Year (Plus Project): This scenario refers to existing year + project traffic noise conditions.

Table 6 compares the without and with project scenario and shows the change in traffic noise levels as a result of the proposed project. It takes a change of 3 dB or more to hear a perceptible difference. As demonstrated in Table 6, the project is anticipated to change the noise 0.3 to 0.4 dBA CNEL.

Although there is an increase in traffic noise levels the impact is considered less than significant as the noise levels at or near any existing proposed sensitive receptor would be 73.6 dBA CNEL or less and the change in noise level is 3 dBA or less. No further mitigation is required.

Table 6: Existing Scenario - Noise Levels Along Roadways (dBA CNEL)

Existing Without Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Corydon Street	West of Mission Trail	72.0	68	145	313	675
Mission Trail	South of Corydon Street	69.9	49	107	230	495

Existing With Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Corydon street	West of Mission Trail	72.3	67	143	309	665
Mission Trail	South of Corydon Street	70.3	49	106	228	492

Change in Existing Noise Levels as a Result of Project

Roadway[1]	Segment	CNEL at 50 Feet dBA[2]			
		Existing Without Project	Existing With Project	Change in Noise Level	Potential Significant Impact
Corydon street	West of Mission Trail	72.0	72.3	0.3	No
Mission Trail	South of Corydon Street	69.9	73.6	0.4	No

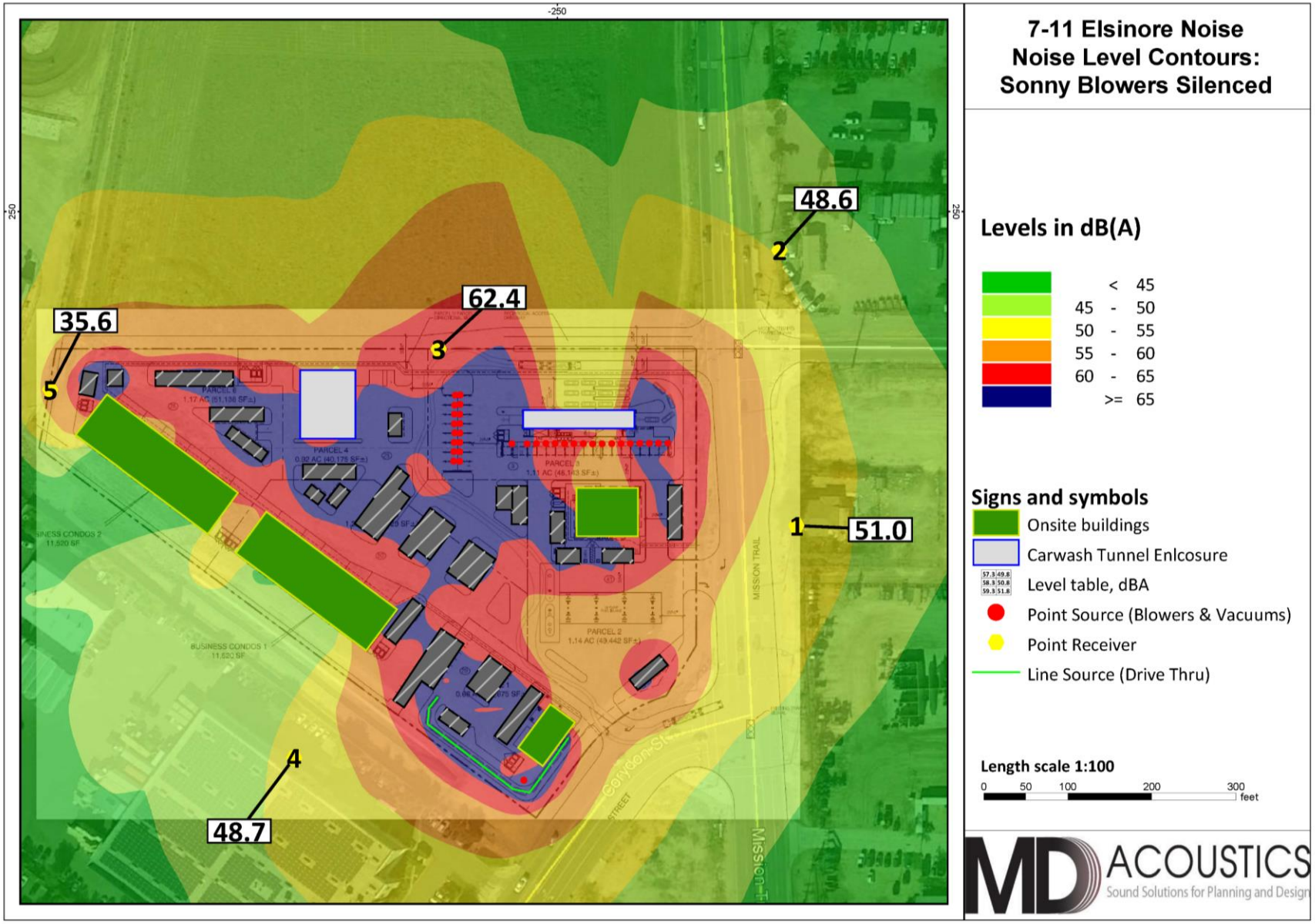
Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated from centerline of subject roadway.

7.2 Mitigation Measures

The project must incorporate the use of a silenced Sonny Blower System or equivalent.

Exhibit F

Operational Noise Levels Leq(h)



8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 7.

Table 7: Typical Construction Equipment Noise Levels[1]

Type	Lmax (dBA) at 50 Feet
Backhoe	80
Truck	88
Concrete Mixer	85
Pneumatic Tool	85
Pump	76
Saw, Electric	76
Air Compressor	81
Generator	81
Paver	89
Roller	74

Notes:
[1] Referenced Noise Levels from FTA noise and vibration manual.

Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City's Noise Element Section 17.176.060 Table 1. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. Furthermore, noise reduction measures are provided to further reduce construction noise. The impact is considered less than significant however construction noise level projections are provided.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels will be loudest during grading phase. A likely worst-case construction noise scenario during grading assumes the use of 1-grader, 1-dozer, 2-excavators, 2-scrapers and 2-backhoes operating at 50 feet from the nearest sensitive receptor.

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels at 50 feet have the potential to reach 90 dBA L_{eq} at the nearest sensitive receptors during building construction. Noise levels for the other construction phases would be lower, approximately 85 dBA.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 8 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 8: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 9 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

Table 9: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

At a distance of 50, a large bulldozer would yield a worst-case 0.042 PPV (in/sec) which may be perceptible for short periods of time during grading along the southern property line of the project site, but is below any threshold of damage. The impact is less than significant and no mitigation is required.

8.3 Construction Noise Reduction Measures

Construction operations must follow the City's General Plan and the Noise Ordinance, which states that construction, repair or excavation work performed must occur within the permissible hours. To further ensure that construction activities do not disrupt the adjacent land uses, the following measures should be taken:

1. Construction should occur during the permissible hours as defined in Section 17.176.060.

2. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.

3. The contractor should locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

4. Idling equipment should be turned off when not in use.

5. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of Lake Elsinore: General Plan Noise Element. Chapter 3.

City of Lake Elsinore East Lake Specific Plan

City of Lake Elsinore: Municipal Code. Chapter 17.176 Noise Control

City of Wildomar: Municipal Code Chapter 9.48 Noise Regulation

Trames Solutions Inc, Lake Elsinore Mission Trails/Corydon C-Store Traffic Impact Analysis, City of Lake Elsinore, CA January 2020

Appendix A:

Photographs and Field Measurement Data

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

1-Hour Continuous Noise Measurement Datasheet

Project: 7-11 Elsinore
Site Address/Location: Mission trail Lemon street, Lake elsinore
Date: 12/17/2019
Field Tech/Engineer: Jason Schylur

Site Observations: Clear sky, winds 10-17 MPh temps in the low 70s. Ambient noise consisted of traffic along Mission Trail and Corydon Street.

General Location:
Sound Meter: LD 831 **SN:** 8312
Settings: A-weighted, slow, 1-sec, 1-hour interval, 24-hour duration
Meteorological Con.: 77 degrees F, 2 to 5 mph wind, eastern direction
Site ID: ST-1-3

Site Topo: Flat
Ground Type: Soft site, w/ street surface hard

Noise Source(s) w/ Distance:
C/L of Mission Trl is 45ft from meter 1
C/L of CorydonSt is 50ft from meter
C/L of Mission Trl is 800ft from meter 3

Figure 1: Monitoring Locations

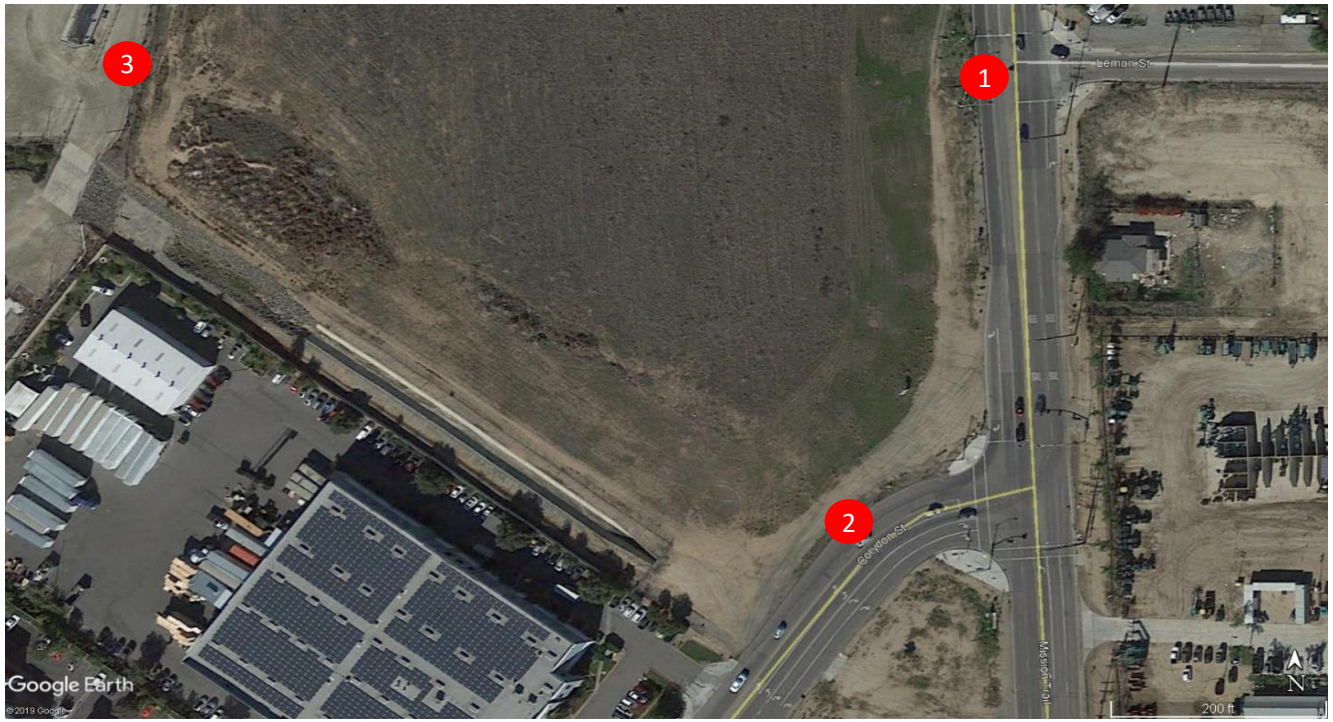


Figure 2: ST-1 Photo

Figure 3: ST-2 Photo

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

1-Hour Continuous Noise Measurement Datasheet - Cont.

Project: 7-11 Elsinore
Site Address/Location: Mission trail Lemon street, Lake elsinore
Site ID: ST-1-3

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
1	12:00 PM	1:00 PM	72.7	97.3	49.3	79.4	75.5	72.5	68.4	59.8
2	12:00 PM	1:00 PM	71.4	99.1	54.3	79.2	72.4	69.0	65.9	60.1
3	12:00 PM	1:00 PM	57.7	90.6	46.4	61.3	54.1	52.0	50.7	48.8

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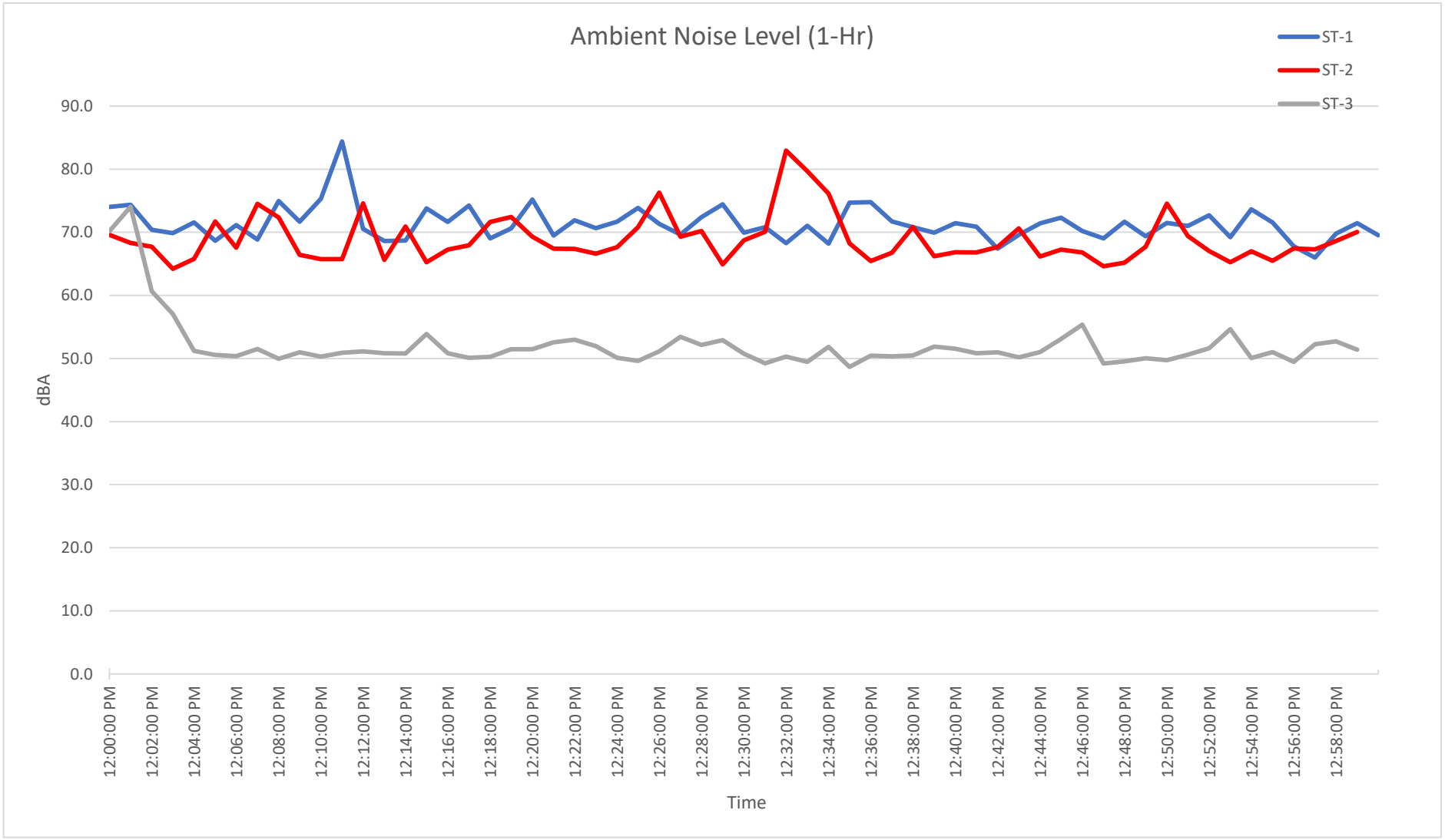
1-Hour Continuous Noise Measurement Datasheet - Cont.

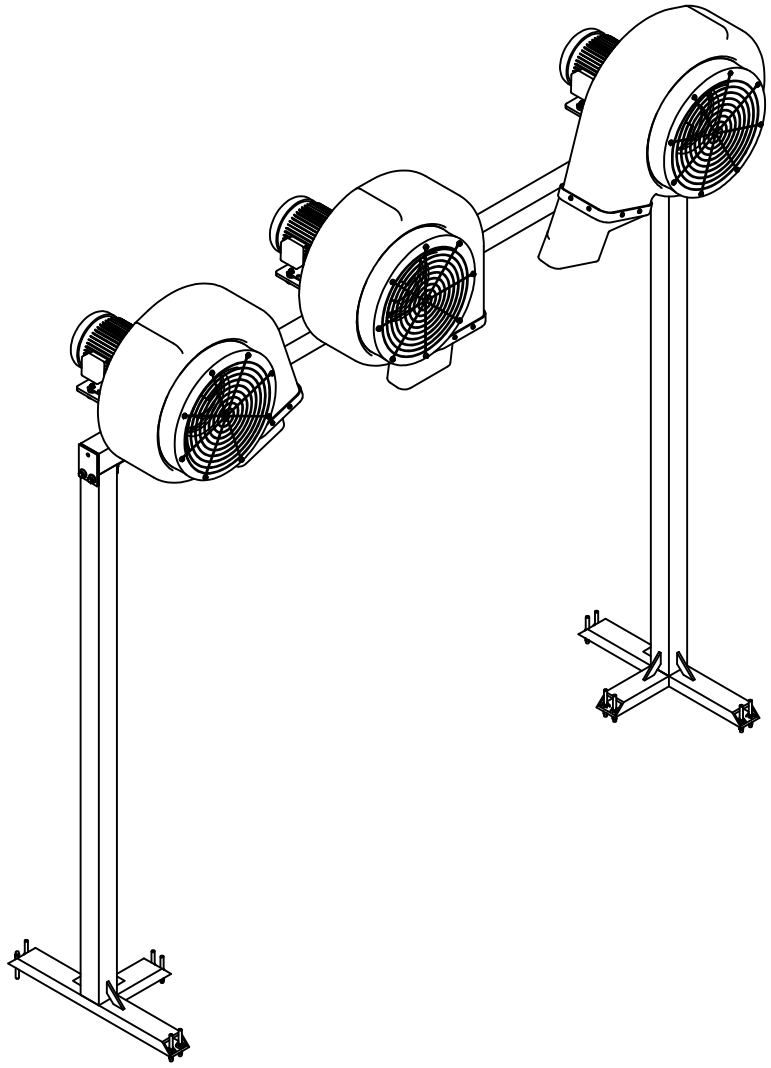
Project: 7-11 Elsinore
Site Address/Location: Mission trail Lemon street, Lake elsinore
Site ID: ST-1-3

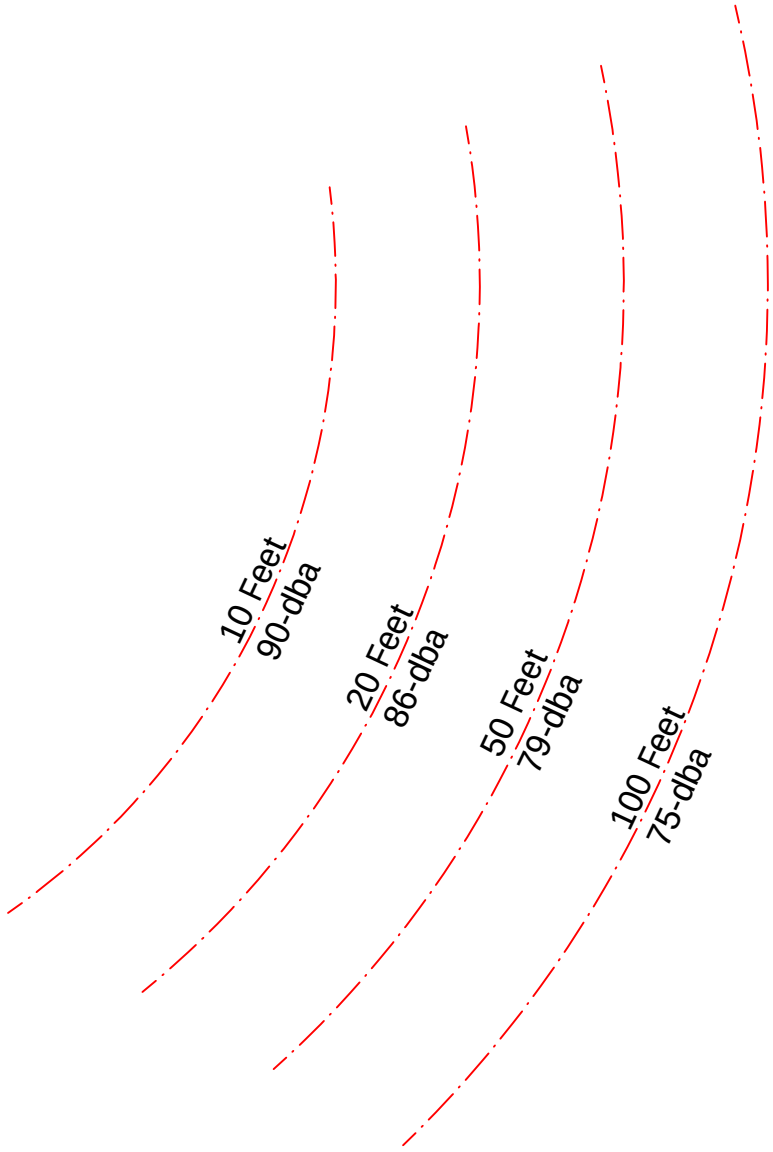


Appendix B:

Manufacturers Cut Sheet

Enviromental Noise with Dryer OFF: 70 dba





THIRD ANGLE PROJECTION	*MACHINING TOLERANCES*	DRAWN LVerdecia	8/26/2011
BREAK ALL SHARP CORNERS. PART TO BE FREE OF BURRS.	FRACTION± 1/16"	APPROVED	8/1/2012
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES	.XX DECIMAL ± 0.030	CATEGORY BLOWER	
MATERIAL	.XXX DECIMAL ± 0.005		
	ANGULARITY ± 2°		
	FINISH 125		

SONNY'S ENTERPRISES
THE CARWASH FACTORY

DESCRIPTION	BLOWER ASSEMBLY, ONE ARCH 45HP		
PART NUMBER	BL1-45HP-1		
SHEET 2 OF 2	SIZE A	SCALE N.T.S.	

SOUND LEVEL METER READINGS

MODEL: FT-CO-T225HP4 **(25HP COUPLED TURBINE VACUUM PRODUCER WITH EXHAUST SILENCER AND ISOLATOR PADS. READINGS TAKEN OUTSIDE ON CONCRETE PAD IN OPEN SPACE)**

READING ONE: 68 DB-A, 3 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING TWO: 66 DB-A, 5 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING THREE: 63 DB-A, 10 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING FOUR: 61 DB-A, 15 FEET FROM CORNER OF BUILDING @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

SOUND LEVEL METER USED:

SIMPSON MODEL #40003 – MSHA APPROVED.
MEETS OSHA & WALSH-HEALY REQUIREMENTS FOR NOISE CONTROL.
CONFORMS TO ANSI S1.4-1983, IEC 651 SPECS FOR METER TYPE.

Vacutech
1350 Hi-Tech Drive, Sheridan WY, 82801
PHONE: (800) 917-9444 FAX: (303) 675-1988
EMAIL: info@vacutechllc
WEB SITE: vacutechllc.com

Appendix C:

SoundPlan Input/Output

7-11 Elsinore Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Day histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB(A)			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Drive Thru 1	Line	80.47			75.0	94.1	0.0	0.0		0	100%/24h	Car Taking Off	77.3	89.0	81.4	86.2	86.3	86.3	83.9	77.7	
Facade 01	Area	181.28	93.3	54.0	38.2	60.8	0.0	0.0		3	100%/24h	21_Facade 01_		45.2	56.9	57.2	51.2	44.7	28.0		
Facade 01	Area	90.12	73.8	54.0	13.9	33.4	0.0	0.0		3	100%/24h	40_Facade 01_		8.4	23.4	28.2	30.6	22.4	8.6		
Facade 02	Area	42.83	17.3	54.0	-33.7	-17.4	0.0	0.0		3	100%/24h	41_Facade 02_									
Facade 02	Area	21.50	92.4	54.0	37.4	50.8	0.0	0.0		3	100%/24h	22_Facade 02_		35.0	46.7	47.3	41.1	34.4	17.4		
Facade 03	Area	90.12	2.5	54.0	-41.3	-21.7	0.0	0.0		3	100%/24h	42_Facade 03_									
Facade 03	Area	181.28	93.3	54.0	38.2	60.8	0.0	0.0		3	100%/24h	23_Facade 03_		45.2	56.9	57.2	51.2	44.7	28.0		
Facade 04	Area	42.82	4.5	54.0	-39.2	-22.9	0.0	0.0		3	100%/24h	43_Facade 04_									
Facade 04	Area	21.50	96.2	54.0	41.1	54.4	0.0	0.0		3	100%/24h	24_Facade 04_		39.2	50.7	50.6	44.6	38.7	22.3		
Roof 01	Area	267.40	93.6	54.0	38.5	62.8	0.0	0.0		0	100%/24h	19_Roof 01_		47.3	58.9	59.2	53.1	46.7	30.0		
Roof 01	Area	497.37	72.4	54.0	12.4	39.4	0.0	0.0		0	100%/24h	38_Roof 01_		13.6	29.0	34.2	36.5	28.4	14.6		
Transmissive area 01	Area	8.37	90.2	0.0	87.2	96.5	0.0	0.0		3	100%/24h	25_Transmissive area 01_		67.7	81.5	91.1	91.8	91.1	82.1		
Transmissive area 01	Area	68.93	73.1	0.0	73.1	91.4	0.0	0.0		3	100%/24h	58_Transmissive area 01_		48.2	65.3	79.4	88.7	86.6	80.7		
Transmissive area 02	Area	8.37	95.0	0.0	92.0	101.2	0.0	0.0		3	100%/24h	26_Transmissive area 02_		72.9	86.2	95.3	96.3	96.4	88.3		
Transmissive area 03	Area	68.92	73.1	0.0	73.1	91.5	0.0	0.0		3	100%/24h	60_Transmissive area 03_		48.2	65.3	79.4	88.7	86.5	80.7		
Vac 1	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 2	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 3	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 4	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 5	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 6	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 7	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 8	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 9	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 10	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 11	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 12	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 13	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 14	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0

7-11 Elsinore Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Day histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB(A)			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 15	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 16	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 18	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 19	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 20	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 21	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 22	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 23	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 24	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 25	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 26	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 27	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 28	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 29	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 30	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 31	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 32	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 33	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 34	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
	PLot	90.06			50.5	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	164.64			47.8	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	191.71			47.2	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	136.28			48.7	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	52.74			52.8	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	250.33			46.0	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	69.06			51.6	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	47.46			53.2	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	41.68			53.8	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	237.54			46.3	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	36.37			54.4	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8

7-11 Elsinore Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Day histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB(A)			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	PLot	27.29			55.7	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	102.70			49.9	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	151.46			48.2	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	98.58			50.1	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	58.12			52.4	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	48.63			53.1	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	59.03			52.3	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	49.13			53.1	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	69.68			51.6	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	123.13			49.1	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	104.17			49.8	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	33.10			54.8	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
	PLot	77.69			51.1	70.0	0.0	0.0		0	gas station	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8

7-11 Elsinore Noise
Assessed contribution level - Situation 1: Outdoor SP

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Receiver -163,136	Fl G LrD,lim 59 dB(A)	LrD 52.7 dB(A)		Sigma(LrD 0.0 dB(A)		
Drive Thru 1	Default industrial noise	Line		34.5	0.0	
	Default parking lot noise	PLot		37.4	0.0	
	Default parking lot noise	PLot		35.1	0.0	
	Default parking lot noise	PLot		29.1	0.0	
	Default parking lot noise	PLot		43.9	0.0	
	Default parking lot noise	PLot		24.8	0.0	
	Default parking lot noise	PLot		24.2	0.0	
	Default parking lot noise	PLot		31.7	0.0	
	Default parking lot noise	PLot		23.3	0.0	
	Default parking lot noise	PLot		31.1	0.0	
	Default parking lot noise	PLot		33.0	0.0	
	Default parking lot noise	PLot		36.0	0.0	
	Default parking lot noise	PLot		30.4	0.0	
	Default parking lot noise	PLot		31.4	0.0	
	Default parking lot noise	PLot		30.2	0.0	
	Default parking lot noise	PLot		30.3	0.0	
	Default parking lot noise	PLot		30.8	0.0	
	Default parking lot noise	PLot		32.0	0.0	
	Default parking lot noise	PLot		32.0	0.0	
	Default parking lot noise	PLot		32.1	0.0	
	Default parking lot noise	PLot		31.9	0.0	
	Default parking lot noise	PLot		30.7	0.0	
	Default parking lot noise	PLot		28.8	0.0	
	Default parking lot noise	PLot		17.4	0.0	
	Default parking lot noise	PLot		34.1	0.0	
Vac 1	Default industrial noise	Point		23.2	0.0	
Vac 2	Default industrial noise	Point		22.6	0.0	
Vac 3	Default industrial noise	Point		22.0	0.0	
Vac 4	Default industrial noise	Point		21.5	0.0	
Vac 5	Default industrial noise	Point		20.9	0.0	
Vac 6	Default industrial noise	Point		20.4	0.0	
Vac 7	Default industrial noise	Point		19.8	0.0	
Vac 8	Default industrial noise	Point		21.4	0.0	
Vac 9	Default industrial noise	Point		20.9	0.0	
Vac 10	Default industrial noise	Point		20.5	0.0	
Vac 11	Default industrial noise	Point		20.0	0.0	
Vac 12	Default industrial noise	Point		19.6	0.0	
Vac 13	Default industrial noise	Point		16.9	0.0	
Vac 14	Default industrial noise	Point		16.5	0.0	
Vac 15	Default industrial noise	Point		16.2	0.0	
Vac 16	Default industrial noise	Point		15.8	0.0	
Vac 18	Default industrial noise	Point		15.3	0.0	
Vac 19	Default industrial noise	Point		6.0	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Vac 20	Default industrial noise	Point		5.5	0.0	
Vac 21	Default industrial noise	Point		13.4	0.0	
Vac 22	Default industrial noise	Point		9.1	0.0	
Vac 23	Default industrial noise	Point		13.5	0.0	
Vac 24	Default industrial noise	Point		13.6	0.0	
Vac 25	Default industrial noise	Point		13.6	0.0	
Vac 26	Default industrial noise	Point		13.7	0.0	
Vac 27	Default industrial noise	Point		13.7	0.0	
Vac 28	Default industrial noise	Point		13.8	0.0	
Vac 29	Default industrial noise	Point		13.7	0.0	
Vac 30	Default industrial noise	Point		13.9	0.0	
Vac 31	Default industrial noise	Point		9.7	0.0	
Vac 32	Default industrial noise	Point		10.0	0.0	
Vac 33	Default industrial noise	Point		7.9	0.0	
Vac 34	Default industrial noise	Point		8.0	0.0	
	Default industrial noise	Point		2.1	0.0	
Roof 01	Default industrial noise	Area		-21.3	0.0	
Facade 01	Default industrial noise	Area		-23.3	0.0	
Facade 02	Default industrial noise	Area		-74.2	0.0	
Transmissive area 03	Default industrial noise	Area		38.3	0.0	
Facade 03	Default industrial noise	Area		-84.7	0.0	
Facade 04	Default industrial noise	Area		-88.9	0.0	
Transmissive area 01	Default industrial noise	Area		27.2	0.0	
Roof 01	Default industrial noise	Area		8.3	0.0	
Facade 01	Default industrial noise	Area		11.5	0.0	
Facade 02	Default industrial noise	Area		3.0	0.0	
Transmissive area 01	Default industrial noise	Area		50.4	0.0	
Facade 03	Default industrial noise	Area		0.9	0.0	
Facade 04	Default industrial noise	Area		-6.3	0.0	
Transmissive area 02	Default industrial noise	Area		35.3	0.0	
Receiver -169,236	Fl G	LrD,lim 59 dB(A)	LrD 49.7 dB(A)	Sigma(LrD 0.0 dB(A)		
Drive Thru 1	Default industrial noise	Line		30.7	0.0	
	Default parking lot noise	PLot		28.3	0.0	
	Default parking lot noise	PLot		25.3	0.0	
	Default parking lot noise	PLot		27.2	0.0	
	Default parking lot noise	PLot		35.1	0.0	
	Default parking lot noise	PLot		29.0	0.0	
	Default parking lot noise	PLot		25.1	0.0	
	Default parking lot noise	PLot		29.8	0.0	
	Default parking lot noise	PLot		26.3	0.0	
	Default parking lot noise	PLot		31.0	0.0	
	Default parking lot noise	PLot		30.3	0.0	
	Default parking lot noise	PLot		29.8	0.0	
	Default parking lot noise	PLot		28.2	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
	Default parking lot noise	PLot		27.4	0.0	
	Default parking lot noise	PLot		27.1	0.0	
	Default parking lot noise	PLot		27.8	0.0	
	Default parking lot noise	PLot		29.0	0.0	
	Default parking lot noise	PLot		30.2	0.0	
	Default parking lot noise	PLot		28.2	0.0	
	Default parking lot noise	PLot		29.5	0.0	
	Default parking lot noise	PLot		28.8	0.0	
	Default parking lot noise	PLot		29.6	0.0	
	Default parking lot noise	PLot		24.7	0.0	
	Default parking lot noise	PLot		23.9	0.0	
	Default parking lot noise	PLot		33.6	0.0	
Vac 1	Default industrial noise	Point		18.5	0.0	
Vac 2	Default industrial noise	Point		20.2	0.0	
Vac 3	Default industrial noise	Point		20.1	0.0	
Vac 4	Default industrial noise	Point		17.7	0.0	
Vac 5	Default industrial noise	Point		17.4	0.0	
Vac 6	Default industrial noise	Point		12.5	0.0	
Vac 7	Default industrial noise	Point		13.5	0.0	
Vac 8	Default industrial noise	Point		13.1	0.0	
Vac 9	Default industrial noise	Point		14.7	0.0	
Vac 10	Default industrial noise	Point		14.5	0.0	
Vac 11	Default industrial noise	Point		14.3	0.0	
Vac 12	Default industrial noise	Point		14.1	0.0	
Vac 13	Default industrial noise	Point		13.9	0.0	
Vac 14	Default industrial noise	Point		10.8	0.0	
Vac 15	Default industrial noise	Point		9.9	0.0	
Vac 16	Default industrial noise	Point		9.8	0.0	
Vac 18	Default industrial noise	Point		1.2	0.0	
Vac 19	Default industrial noise	Point		13.2	0.0	
Vac 20	Default industrial noise	Point		13.3	0.0	
Vac 21	Default industrial noise	Point		13.8	0.0	
Vac 22	Default industrial noise	Point		13.9	0.0	
Vac 23	Default industrial noise	Point		13.7	0.0	
Vac 24	Default industrial noise	Point		13.8	0.0	
Vac 25	Default industrial noise	Point		13.6	0.0	
Vac 26	Default industrial noise	Point		13.7	0.0	
Vac 27	Default industrial noise	Point		13.4	0.0	
Vac 28	Default industrial noise	Point		12.8	0.0	
Vac 29	Default industrial noise	Point		13.5	0.0	
Vac 30	Default industrial noise	Point		12.9	0.0	
Vac 31	Default industrial noise	Point		12.3	0.0	
Vac 32	Default industrial noise	Point		8.4	0.0	
Vac 33	Default industrial noise	Point		6.0	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Vac 34	Default industrial noise	Point		5.0	0.0	
	Default industrial noise	Point		-1.6	0.0	
Roof 01	Default industrial noise	Area		-21.2	0.0	
Facade 01	Default industrial noise	Area		-33.0	0.0	
Facade 02	Default industrial noise	Area		-74.1	0.0	
Transmissive area 03	Default industrial noise	Area		38.6	0.0	
Facade 03	Default industrial noise	Area		-79.8	0.0	
Facade 04	Default industrial noise	Area		-88.2	0.0	
Transmissive area 01	Default industrial noise	Area		27.7	0.0	
Roof 01	Default industrial noise	Area		7.5	0.0	
Facade 01	Default industrial noise	Area		-0.5	0.0	
Facade 02	Default industrial noise	Area		1.1	0.0	
Transmissive area 01	Default industrial noise	Area		47.1	0.0	
Facade 03	Default industrial noise	Area		10.7	0.0	
Facade 04	Default industrial noise	Area		-6.4	0.0	
Transmissive area 02	Default industrial noise	Area		40.4	0.0	
Receiver -293,200	Fl G	LrD,lim 59 dB(A)	LrD 62.9 dB(A)	Sigma(LrD 0.0 dB(A)		
Drive Thru 1	Default industrial noise	Line		37.8	0.0	
	Default parking lot noise	PLot		28.4	0.0	
	Default parking lot noise	PLot		39.4	0.0	
	Default parking lot noise	PLot		41.6	0.0	
	Default parking lot noise	PLot		31.9	0.0	
	Default parking lot noise	PLot		35.5	0.0	
	Default parking lot noise	PLot		30.4	0.0	
	Default parking lot noise	PLot		38.6	0.0	
	Default parking lot noise	PLot		32.1	0.0	
	Default parking lot noise	PLot		42.1	0.0	
	Default parking lot noise	PLot		42.3	0.0	
	Default parking lot noise	PLot		35.2	0.0	
	Default parking lot noise	PLot		35.9	0.0	
	Default parking lot noise	PLot		36.2	0.0	
	Default parking lot noise	PLot		35.8	0.0	
	Default parking lot noise	PLot		37.0	0.0	
	Default parking lot noise	PLot		35.7	0.0	
	Default parking lot noise	PLot		39.4	0.0	
	Default parking lot noise	PLot		38.7	0.0	
	Default parking lot noise	PLot		39.7	0.0	
	Default parking lot noise	PLot		38.4	0.0	
	Default parking lot noise	PLot		38.0	0.0	
	Default parking lot noise	PLot		29.5	0.0	
	Default parking lot noise	PLot		30.1	0.0	
	Default parking lot noise	PLot		48.9	0.0	
Vac 1	Default industrial noise	Point		4.8	0.0	
Vac 2	Default industrial noise	Point		4.7	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Vac 3	Default industrial noise	Point		4.6	0.0	
Vac 4	Default industrial noise	Point		4.6	0.0	
Vac 5	Default industrial noise	Point		4.7	0.0	
Vac 6	Default industrial noise	Point		4.9	0.0	
Vac 7	Default industrial noise	Point		5.0	0.0	
Vac 8	Default industrial noise	Point		5.3	0.0	
Vac 9	Default industrial noise	Point		5.6	0.0	
Vac 10	Default industrial noise	Point		6.0	0.0	
Vac 11	Default industrial noise	Point		6.6	0.0	
Vac 12	Default industrial noise	Point		7.7	0.0	
Vac 13	Default industrial noise	Point		9.3	0.0	
Vac 14	Default industrial noise	Point		12.7	0.0	
Vac 15	Default industrial noise	Point		24.8	0.0	
Vac 16	Default industrial noise	Point		25.3	0.0	
Vac 18	Default industrial noise	Point		26.2	0.0	
Vac 19	Default industrial noise	Point		35.9	0.0	
Vac 20	Default industrial noise	Point		35.5	0.0	
Vac 21	Default industrial noise	Point		34.1	0.0	
Vac 22	Default industrial noise	Point		33.9	0.0	
Vac 23	Default industrial noise	Point		32.6	0.0	
Vac 24	Default industrial noise	Point		32.4	0.0	
Vac 25	Default industrial noise	Point		31.2	0.0	
Vac 26	Default industrial noise	Point		31.1	0.0	
Vac 27	Default industrial noise	Point		30.0	0.0	
Vac 28	Default industrial noise	Point		29.9	0.0	
Vac 29	Default industrial noise	Point		28.9	0.0	
Vac 30	Default industrial noise	Point		28.7	0.0	
Vac 31	Default industrial noise	Point		27.7	0.0	
Vac 32	Default industrial noise	Point		27.6	0.0	
Vac 33	Default industrial noise	Point		26.7	0.0	
Vac 34	Default industrial noise	Point		26.6	0.0	
	Default industrial noise	Point		8.5	0.0	
Roof 01	Default industrial noise	Area		-9.5	0.0	
Facade 01	Default industrial noise	Area		-24.5	0.0	
Facade 02	Default industrial noise	Area		-57.5	0.0	
Transmissive area 03	Default industrial noise	Area		52.0	0.0	
Facade 03	Default industrial noise	Area		-63.9	0.0	
Facade 04	Default industrial noise	Area		-78.4	0.0	
Transmissive area 01	Default industrial noise	Area		27.6	0.0	
Roof 01	Default industrial noise	Area		12.2	0.0	
Facade 01	Default industrial noise	Area		3.6	0.0	
Facade 02	Default industrial noise	Area		-9.8	0.0	
Transmissive area 01	Default industrial noise	Area		27.5	0.0	
Facade 03	Default industrial noise	Area		16.6	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Facade 04	Default industrial noise	Area		13.4	0.0	
Transmissive area 02	Default industrial noise	Area		61.8	0.0	
Receiver -345,52 Fl G LrD,lim 59 dB(A) LrD 51.7 dB(A) Sigma(LrD 0.0 dB(A)						
Drive Thru 1	Default industrial noise	Line		44.4	0.0	
	Default parking lot noise	PLot		35.9	0.0	
	Default parking lot noise	PLot		35.8	0.0	
	Default parking lot noise	PLot		35.8	0.0	
	Default parking lot noise	PLot		31.9	0.0	
	Default parking lot noise	PLot		29.0	0.0	
	Default parking lot noise	PLot		29.4	0.0	
	Default parking lot noise	PLot		28.8	0.0	
	Default parking lot noise	PLot		20.5	0.0	
	Default parking lot noise	PLot		36.2	0.0	
	Default parking lot noise	PLot		36.2	0.0	
	Default parking lot noise	PLot		35.1	0.0	
	Default parking lot noise	PLot		38.1	0.0	
	Default parking lot noise	PLot		36.4	0.0	
	Default parking lot noise	PLot		38.5	0.0	
	Default parking lot noise	PLot		40.1	0.0	
	Default parking lot noise	PLot		39.2	0.0	
	Default parking lot noise	PLot		37.5	0.0	
	Default parking lot noise	PLot		31.6	0.0	
	Default parking lot noise	PLot		29.1	0.0	
	Default parking lot noise	PLot		28.6	0.0	
	Default parking lot noise	PLot		28.0	0.0	
	Default parking lot noise	PLot		30.1	0.0	
	Default parking lot noise	PLot		16.8	0.0	
	Default parking lot noise	PLot		29.3	0.0	
Vac 1	Default industrial noise	Point		6.3	0.0	
Vac 2	Default industrial noise	Point		6.6	0.0	
Vac 3	Default industrial noise	Point		6.7	0.0	
Vac 4	Default industrial noise	Point		11.2	0.0	
Vac 5	Default industrial noise	Point		10.9	0.0	
Vac 6	Default industrial noise	Point		13.4	0.0	
Vac 7	Default industrial noise	Point		13.6	0.0	
Vac 8	Default industrial noise	Point		13.1	0.0	
Vac 9	Default industrial noise	Point		13.3	0.0	
Vac 10	Default industrial noise	Point		13.4	0.0	
Vac 11	Default industrial noise	Point		13.6	0.0	
Vac 12	Default industrial noise	Point		13.8	0.0	
Vac 13	Default industrial noise	Point		13.9	0.0	
Vac 14	Default industrial noise	Point		14.1	0.0	
Vac 15	Default industrial noise	Point		14.3	0.0	
Vac 16	Default industrial noise	Point		14.0	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Vac 18	Default industrial noise	Point		14.1	0.0	
Vac 19	Default industrial noise	Point		4.4	0.0	
Vac 20	Default industrial noise	Point		4.3	0.0	
Vac 21	Default industrial noise	Point		4.5	0.0	
Vac 22	Default industrial noise	Point		4.4	0.0	
Vac 23	Default industrial noise	Point		4.6	0.0	
Vac 24	Default industrial noise	Point		4.5	0.0	
Vac 25	Default industrial noise	Point		4.7	0.0	
Vac 26	Default industrial noise	Point		4.7	0.0	
Vac 27	Default industrial noise	Point		4.8	0.0	
Vac 28	Default industrial noise	Point		4.7	0.0	
Vac 29	Default industrial noise	Point		4.8	0.0	
Vac 30	Default industrial noise	Point		4.8	0.0	
Vac 31	Default industrial noise	Point		4.9	0.0	
Vac 32	Default industrial noise	Point		4.9	0.0	
Vac 33	Default industrial noise	Point		5.1	0.0	
Vac 34	Default industrial noise	Point		5.2	0.0	
	Default industrial noise	Point		14.4	0.0	
Roof 01	Default industrial noise	Area		-18.8	0.0	
Facade 01	Default industrial noise	Area		-22.9	0.0	
Facade 02	Default industrial noise	Area		-85.3	0.0	
Transmissive area 03	Default industrial noise	Area		21.2	0.0	
Facade 03	Default industrial noise	Area		-89.0	0.0	
Facade 04	Default industrial noise	Area		-79.1	0.0	
Transmissive area 01	Default industrial noise	Area		34.1	0.0	
Roof 01	Default industrial noise	Area		2.8	0.0	
Facade 01	Default industrial noise	Area		6.2	0.0	
Facade 02	Default industrial noise	Area		-15.2	0.0	
Transmissive area 01	Default industrial noise	Area		22.7	0.0	
Facade 03	Default industrial noise	Area		-7.5	0.0	
Facade 04	Default industrial noise	Area		-0.6	0.0	
Transmissive area 02	Default industrial noise	Area		46.3	0.0	
Receiver -434,185	Fl G	LrD,lim 59 dB(A)	LrD 57.1 dB(A)	Sigma(LrD 0.0 dB(A)		
Drive Thru 1	Default industrial noise	Line		19.0	0.0	
	Default parking lot noise	PLot		17.3	0.0	
	Default parking lot noise	PLot		17.6	0.0	
	Default parking lot noise	PLot		18.3	0.0	
	Default parking lot noise	PLot		13.3	0.0	
	Default parking lot noise	PLot		38.9	0.0	
	Default parking lot noise	PLot		27.8	0.0	
	Default parking lot noise	PLot		22.8	0.0	
	Default parking lot noise	PLot		50.3	0.0	
	Default parking lot noise	PLot		19.2	0.0	
	Default parking lot noise	PLot		19.6	0.0	

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
	Default parking lot noise	PLot		17.9	0.0	
	Default parking lot noise	PLot		14.3	0.0	
	Default parking lot noise	PLot		14.8	0.0	
	Default parking lot noise	PLot		14.9	0.0	
	Default parking lot noise	PLot		15.5	0.0	
	Default parking lot noise	PLot		15.2	0.0	
	Default parking lot noise	PLot		17.8	0.0	
	Default parking lot noise	PLot		19.1	0.0	
	Default parking lot noise	PLot		20.6	0.0	
	Default parking lot noise	PLot		21.5	0.0	
	Default parking lot noise	PLot		21.8	0.0	
	Default parking lot noise	PLot		26.0	0.0	
	Default parking lot noise	PLot		55.9	0.0	
	Default parking lot noise	PLot		19.5	0.0	
Vac 1	Default industrial noise	Point		-11.2	0.0	
Vac 2	Default industrial noise	Point		-11.0	0.0	
Vac 3	Default industrial noise	Point		-10.9	0.0	
Vac 4	Default industrial noise	Point		-10.8	0.0	
Vac 5	Default industrial noise	Point		-10.7	0.0	
Vac 6	Default industrial noise	Point		-10.6	0.0	
Vac 7	Default industrial noise	Point		-10.5	0.0	
Vac 8	Default industrial noise	Point		-10.4	0.0	
Vac 9	Default industrial noise	Point		-10.3	0.0	
Vac 10	Default industrial noise	Point		-10.1	0.0	
Vac 11	Default industrial noise	Point		-10.0	0.0	
Vac 12	Default industrial noise	Point		-9.9	0.0	
Vac 13	Default industrial noise	Point		-9.8	0.0	
Vac 14	Default industrial noise	Point		-9.7	0.0	
Vac 15	Default industrial noise	Point		-9.5	0.0	
Vac 16	Default industrial noise	Point		-9.4	0.0	
Vac 18	Default industrial noise	Point		-9.1	0.0	
Vac 19	Default industrial noise	Point		-3.6	0.0	
Vac 20	Default industrial noise	Point		-3.7	0.0	
Vac 21	Default industrial noise	Point		-3.8	0.0	
Vac 22	Default industrial noise	Point		-4.0	0.0	
Vac 23	Default industrial noise	Point		-3.5	0.0	
Vac 24	Default industrial noise	Point		-3.6	0.0	
Vac 25	Default industrial noise	Point		-3.6	0.0	
Vac 26	Default industrial noise	Point		-3.7	0.0	
Vac 27	Default industrial noise	Point		-7.0	0.0	
Vac 28	Default industrial noise	Point		-7.1	0.0	
Vac 29	Default industrial noise	Point		-7.9	0.0	
Vac 30	Default industrial noise	Point		-8.0	0.0	
Vac 31	Default industrial noise	Point		-8.1	0.0	

7-11 Elsinore Noise
Assessed contribution level - Situation 1: Outdoor SP

Source	Group	Source ty	Tr. lane	LrD dB(A)	A dB	
Vac 32	Default industrial noise	Point		-8.3	0.0	
Vac 33	Default industrial noise	Point		-8.1	0.0	
Vac 34	Default industrial noise	Point		-8.3	0.0	
	Default industrial noise	Point		-11.4	0.0	
Roof 01	Default industrial noise	Area		-21.6	0.0	
Facade 01	Default industrial noise	Area		-38.5	0.0	
Facade 02	Default industrial noise	Area		-85.5	0.0	
Transmissive area 03	Default industrial noise	Area		19.1	0.0	
Facade 03	Default industrial noise	Area		-85.9	0.0	
Facade 04	Default industrial noise	Area		-75.3	0.0	
Transmissive area 01	Default industrial noise	Area		33.1	0.0	
Roof 01	Default industrial noise	Area		-5.8	0.0	
Facade 01	Default industrial noise	Area		-12.5	0.0	
Facade 02	Default industrial noise	Area		-23.5	0.0	
Transmissive area 01	Default industrial noise	Area		16.9	0.0	
Facade 03	Default industrial noise	Area		-5.6	0.0	
Facade 04	Default industrial noise	Area		-10.8	0.0	
Transmissive area 02	Default industrial noise	Area		31.4	0.0	

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receive -163,136 Fl G LrD,lim 59 dB(A LrΣ 52.7 dB(A Sigma(LrΣ 0.0 dB(A																												
	LrD	2.1											2.1															
Drive Thru 1	LrD	34.5	16.2	19.1	18.5	21.8	28.1	25.5	17.6	15.0	13.4	17.5	21.8	23.0	22.4	21.0	21.1	22.5	21.8	19.4	17.6	15.2	10.5	4.5	-4.9	-16.9		
Facade 01	LrD	11.5					-3.9			5.8			8.1			4.7			-1.4			-20.0						
Facade 01	LrD	-23.3					-46.3			-34.8			-29.2			-25.6			-34.5			-52.7						
Facade 02	LrD						-84.0			-80.0			-76.1															
Facade 02	LrD	3.0					-9.5			-2.9			-0.6			-3.8			-9.9			-28.5						
Facade 03	LrD						-88.6			-87.0																		
Facade 03	LrD	0.9					-9.9			-2.2			-3.9			-10.6			-18.7			-38.7						
Facade 04	LrD						-94.6			-90.3																		
Facade 04	LrD	-6.3					-17.3			-9.2			-11.0			-17.9			-25.9			-46.2						
Roof 01	LrD	8.3					-7.2			4.4			4.6			-0.7			-7.3			-25.8						
Roof 01	LrD	-21.3					-47.1			-31.8			-26.8			-23.9			-32.6			-50.4						
Transmissive area 01	LrD	50.4					23.6			31.0			40.5			46.3			47.0			36.3						
Transmissive area 01	LrD	27.2					-15.5			-1.1			10.7			18.9			26.1			14.8						
Transmissive area 02	LrD	35.3					14.5			22.6			29.9			30.8			29.7			18.4						
Transmissive area 03	LrD	38.3					-4.5			7.0			22.8			35.6			34.3			24.3						
Vac 1	LrD	23.2	-15.3	-7.9	-0.6	0.7	4.1	5.7	-0.1	-0.7	-1.1	-1.4	-2.9	-0.7	3.1	4.3	7.9	9.6	10.2	8.6	13.7	15.0	15.0	15.4	14.4	9.3	4.3	-4.2
Vac 2	LrD	22.6	-15.8	-8.4	-1.1	0.1	3.4	4.9	-0.7	-1.3	-1.7	-2.0	-3.5	-1.2	2.6	3.9	7.4	9.1	9.7	8.1	13.2	14.5	14.4	14.7	13.6	8.3	3.1	-5.7
Vac 3	LrD	22.0	-16.3	-8.9	-1.6	-0.5	2.8	4.3	-1.3	-1.9	-2.3	-2.5	-4.0	-1.8	2.2	3.4	7.0	8.7	9.3	7.6	12.7	14.0	13.8	14.1	12.8	7.4	1.9	-7.2
Vac 4	LrD	21.5	-16.8	-9.4	-2.1	-1.0	2.3	3.7	-1.8	-2.5	-2.9	-3.0	-4.6	-2.3	1.7	3.0	6.5	8.2	8.8	7.1	12.2	13.5	13.2	13.4	12.1	6.4	0.7	-8.8
Vac 5	LrD	20.9	-17.2	-9.8	-2.6	-1.5	1.8	3.2	-2.4	-3.0	-3.4	-3.5	-5.1	-2.8	1.3	2.6	6.1	7.8	8.4	6.7	11.7	13.0	12.7	12.8	11.3	5.5	-0.5	-10.3
Vac 6	LrD	20.4	-17.6	-10.2	-3.0	-1.9	1.3	2.7	-2.9	-3.5	-3.9	-4.0	-5.5	-3.3	0.9	2.2	5.7	7.4	8.0	6.3	11.3	12.5	12.2	12.2	10.6	4.6	-1.6	-11.7
Vac 7	LrD	19.8	-18.0	-10.6	-3.4	-2.3	0.9	2.3	-3.4	-4.0	-4.4	-4.5	-6.0	-3.7	0.5	1.8	5.3	7.0	7.6	5.9	10.8	12.0	11.6	11.6	9.8	3.7	-2.8	-13.2
Vac 8	LrD	21.4	-18.4	-11.0	-3.8	-2.7	0.4	1.8	-3.9	-4.5	-4.9	-2.7	-4.2	-1.9	2.1	3.7	7.2	8.9	9.5	7.7	12.7	13.8	13.3	13.1	11.2	4.7	-2.2	-13.1
Vac 9	LrD	20.9	-18.7	-11.4	-4.1	-3.1	0.0	1.4	-4.4	-5.0	-5.4	-3.1	-4.6	-2.3	1.5	3.3	6.8	8.6	9.1	7.3	12.3	13.3	12.8	12.5	10.5	3.8	-3.3	-14.6
Vac 10	LrD	20.5	-19.1	-11.7	-4.5	-3.5	-0.3	1.0	-4.8	-5.4	-5.8	-3.5	-5.0	-2.7	0.8	3.0	6.5	8.2	8.8	7.0	11.9	12.9	12.3	12.0	9.8	3.0	-4.4	-16.1
Vac 11	LrD	20.0	-19.4	-12.1	-4.8	-3.9	-0.7	0.7	-5.2	-5.9	-6.3	-3.9	-5.4	-3.1	0.1	2.5	6.1	7.9	8.4	6.6	11.5	12.5	11.9	11.4	9.1	2.1	-5.6	-17.5
Vac 12	LrD	19.6	-19.7	-12.4	-5.2	-4.2	-1.1	0.3	-5.6	-6.3	-6.7	-4.2	-5.8	-3.5	-0.6	1.9	5.8	7.6	8.1	6.3	11.1	12.1	11.4	10.9	8.4	1.3	-6.6	-19.0
Vac 13	LrD	16.9	-20.0	-12.7	-5.5	-4.6	-1.4	-0.1	-6.0	-6.7	-7.1	-6.9	-8.5	-6.2	-3.8	-1.5	3.1	4.9	5.4	3.6	8.4	9.4	8.7	8.1	5.6	-1.7	-9.7	-22.3
Vac 14	LrD	16.5	-20.2	-12.9	-5.7	-4.9	-1.7	-0.4	-6.4	-7.0	-7.4	-7.3	-8.8	-6.5	-4.2	-2.1	2.8	4.6	5.1	3.3	8.1	9.0	8.2	7.6	5.0	-2.5	-10.8	-23.7
Vac 15	LrD	16.2	-20.4	-13.1	-5.9	-5.1	-2.0	-0.6	-6.7	-7.3	-7.8	-7.6	-9.1	-6.8	-4.3	-2.0	2.6	4.3	4.8	3.0	7.8	8.6	7.8	7.1	4.3	-3.3	-11.9	-25.1
Vac 16	LrD	15.8	-20.6	-13.3	-6.0	-5.4	-2.2	-0.8	-7.0	-7.7	-8.1	-7.9	-9.4	-7.1	-4.3	-1.8	2.3	4.1	4.6	2.7	7.5	8.3	7.4	6.6	3.7	-4.1	-13.0	-26.5
Vac 18	LrD	15.3	-20.9	-13.6	-6.3	-5.7	-2.6	-1.2	-7.5	-8.2	-8.6	-8.3	-9.9	-7.6	-4.2	-1.6	1.9	3.6	4.1	2.2	7.0	7.7	6.8	5.8	2.7	-5.4	-14.7	-28.8
Vac 19	LrD	6.0	-19.4	-12.3	-5.3	-5.5	-2.6	-1.6	-9.6	-10.2	-10.6	-12.2	-14.3	-12.5	-10.6	-10.1	-7.4	-6.4	-6.8	-9.6	-5.9	-6.3	-8.6	-11.2	-16.2	-26.8	-39.0	-56.8

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 20	LrD	5.5	-19.5	-12.4	-5.5	-5.6	-2.8	-1.9	-9.4	-10.1	-10.6	-12.6	-14.7	-13.1	-11.4	-10.9	-8.2	-7.3	-7.7	-10.5	-6.9	-7.2	-9.5	-12.1	-17.1	-27.5	-39.7	-57.2
Vac 21	LrD	13.4	-17.6	-10.3	-3.1	-3.0	0.1	1.4	-9.5	-10.1	-10.5	-10.2	-11.7	-9.5	-4.5	-3.3	0.2	1.9	2.3	0.3	4.9	5.4	4.0	2.4	-1.7	-11.2	-22.4	-39.2
Vac 22	LrD	9.1	-19.1	-11.9	-4.9	-4.9	-1.9	-0.8	-9.4	-10.0	-10.4	-11.3	-13.1	-11.2	-8.0	-7.0	-3.8	-2.4	-2.2	-4.5	-0.3	-0.1	-1.8	-3.8	-8.2	-18.2	-29.8	-47.0
Vac 23	LrD	13.5	-17.5	-10.2	-3.0	-2.9	0.2	1.4	-9.4	-10.0	-10.5	-10.1	-11.7	-9.4	-4.4	-3.2	0.2	2.0	2.4	0.4	5.0	5.5	4.1	2.5	-1.5	-11.0	-22.1	-38.7
Vac 24	LrD	13.6	-17.4	-10.1	-2.9	-2.8	0.3	1.6	-9.3	-9.9	-10.3	-10.0	-11.5	-9.3	-4.3	-3.1	0.4	2.1	2.5	0.5	5.1	5.7	4.3	2.8	-1.2	-10.6	-21.5	-38.0
Vac 25	LrD	13.6	-17.5	-10.2	-3.0	-2.9	0.2	1.5	-9.3	-10.0	-10.4	-10.1	-11.6	-9.4	-4.3	-3.1	0.3	2.0	2.5	0.5	5.0	5.6	4.2	2.7	-1.3	-10.8	-21.8	-38.3
Vac 26	LrD	13.7	-17.4	-10.1	-2.9	-2.7	0.4	1.6	-9.2	-9.8	-10.3	-9.9	-11.5	-9.2	-4.2	-3.0	0.4	2.2	2.6	0.6	5.2	5.8	4.4	2.9	-1.0	-10.3	-21.2	-37.5
Vac 27	LrD	13.7	-17.4	-10.1	-2.9	-2.8	0.3	1.6	-9.3	-9.9	-10.3	-10.0	-11.5	-9.3	-4.3	-3.1	0.4	2.1	2.5	0.6	5.1	5.7	4.3	2.8	-1.1	-10.5	-21.5	-37.9
Vac 28	LrD	13.8	-17.3	-10.0	-2.8	-2.7	0.4	1.7	-9.1	-9.8	-10.2	-9.9	-11.4	-9.1	-4.2	-3.0	0.5	2.2	2.7	0.7	5.3	5.8	4.5	3.1	-0.8	-10.1	-20.9	-37.1
Vac 29	LrD	13.7	-17.4	-10.1	-2.9	-2.7	0.3	1.6	-9.2	-9.8	-10.3	-9.9	-11.5	-9.2	-4.2	-3.0	0.4	2.2	2.6	0.6	5.2	5.7	4.4	2.9	-1.0	-10.4	-21.3	-37.6
Vac 30	LrD	13.9	-17.3	-10.0	-2.8	-2.6	0.5	1.8	-9.1	-9.7	-10.1	-9.8	-11.3	-9.1	-4.1	-2.9	0.5	2.3	2.7	0.7	5.3	5.9	4.6	3.2	-0.7	-9.9	-20.6	-36.8
Vac 31	LrD	9.7	-19.0	-11.7	-4.6	-4.5	-1.5	-0.3	-9.2	-9.8	-10.2	-9.9	-11.5	-9.4	-7.0	-6.1	-2.9	-1.4	-1.4	-3.8	0.3	0.4	-1.5	-3.6	-8.1	-18.1	-29.7	-46.8
Vac 32	LrD	10.0	-18.8	-11.6	-4.5	-4.4	-1.3	-0.1	-9.0	-9.6	-10.1	-9.7	-11.3	-9.2	-6.8	-5.8	-2.6	-1.2	-1.1	-3.5	0.6	0.7	-1.1	-3.2	-7.7	-17.6	-29.1	-45.9
Vac 33	LrD	7.9	-19.1	-11.9	-4.9	-4.9	-2.0	-0.9	-9.1	-9.7	-10.2	-10.6	-12.4	-10.5	-8.7	-8.0	-5.0	-3.7	-3.9	-6.4	-2.5	-2.6	-4.7	-6.9	-11.6	-21.7	-33.4	-50.5
Vac 34	LrD	8.0	-19.0	-11.8	-4.8	-4.7	-1.8	-0.7	-9.0	-9.6	-10.0	-10.5	-12.3	-10.4	-8.6	-7.8	-4.9	-3.7	-3.8	-6.4	-2.5	-2.6	-4.6	-6.8	-11.5	-21.5	-33.0	-49.9
	LrD	30.8		18.2			26.1			16.2			19.6			22.9			24.7			19.7			3.1			-45.5
	LrD	32.0		19.8			27.9			17.5			20.8			23.7			25.3			20.3			5.3			-34.9
	LrD	32.0		20.6			27.7			16.3			20.0			19.9			27.2			21.1			2.2			-47.0
	LrD	31.4		19.7			27.6			17.0			20.3			23.0			24.3			18.2			0.6			-44.5
	LrD	30.2		18.7			26.4			15.6			19.1			21.9			23.3			17.2			-1.2			-49.7
	LrD	30.3		18.6			26.4			15.7			18.8			22.0			23.5			17.7			-0.2			-47.4
	LrD	28.8		18.7			25.3			12.4			15.2			20.4			22.2			14.6			-9.1			-72.7
	LrD	17.4		10.3			15.1			4.7			6.5			3.6			1.9			-9.2			-39.6			
	LrD	34.1		22.4			30.2			15.1			19.8			25.8			28.5			21.9			2.3			-48.4
	LrD	32.1		19.3			26.4			15.2			18.6			21.5			28.5			21.7			1.1			-52.4
	LrD	31.9		17.3			24.8			14.1			17.3			24.1			28.6			21.4			-0.8			-59.2
	LrD	30.7		17.2			24.5			13.7			16.9			23.3			26.7			19.2			-3.7			-64.5
	LrD	43.9		28.0			37.5			28.3			32.8			36.4			38.8			35.4			25.2			1.0
	LrD	24.8		15.8			21.8			11.3			14.3			13.3			16.2			7.1			-20.4			-93.4
	LrD	24.2		15.3			21.3			11.2			13.7			11.3			16.1			7.7			-17.8			-85.8
	LrD	37.4		24.2			33.1			23.8			27.4			29.0			30.8			26.4			14.3			-14.7
	LrD	35.1		22.2			30.9			21.2			24.6			26.8			28.2			23.6			10.4			-23.2
	LrD	29.1		20.6			27.0			15.2			17.4			16.7			17.4			12.3			-1.3			-35.6
	LrD	33.0		21.3			27.7			16.4			18.7			24.8			28.2			22.6			6.2			-36.5
	LrD	36.0		23.0			31.8			22.4			25.7			27.6			29.0			24.5			12.2			-17.8
	LrD	30.4		19.7			27.5			17.1			20.3			21.1			21.0			13.4			-5.3			-50.7

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
	LrD	31.7		17.4			24.7			13.9			17.1			23.6			28.4			20.7			-3.1			-64.3	
	LrD	23.3		13.9			20.4			10.3			13.4			13.8			13.1			2.5			-27.5				
	LrD	31.1		21.3			27.6			16.0			18.1			21.2			24.3			18.7			2.8			-38.3	
Receive -169,236 Fl G LrD,lim 59 dB(A LrΣ 49.7 dB(A Sigma(LrΣ 0.0 dB(A																													
	LrD	-1.6											-1.6																
Drive Thru 1	LrD	30.7	14.2	16.9	16.2	18.6	24.8	22.0	13.3	10.5	8.8	12.1	16.4	17.2	17.9	16.6	16.7	18.5	17.8	16.2	14.0	10.9	5.0	-3.0	-15.3	-31.7			
Facade 01	LrD	-0.5					-11.6			-3.4			-5.3			-12.3			-20.4			-40.4							
Facade 01	LrD						-51.7			-41.3			-38.1			-36.1			-46.7			-66.3							
Facade 02	LrD						-87.2			-79.7			-75.8																
Facade 02	LrD	1.1					-15.1			-4.5			-2.2			-5.9			-12.5			-31.2							
Facade 03	LrD						-85.4			-81.3																			
Facade 03	LrD	10.7					-6.0			4.6			7.5			3.9			-2.4			-21.2							
Facade 04	LrD						-93.5			-89.7																			
Facade 04	LrD	-6.4					-17.3			-9.5			-11.0			-17.8			-25.9			-46.5							
Roof 01	LrD	7.5					-8.0			3.6			3.8			-1.6			-8.1			-26.9							
Roof 01	LrD	-21.2					-46.9			-31.7			-26.7			-23.8			-32.4			-50.1							
Transmissive area 01	LrD	47.1					17.7			29.5			38.9			42.2			43.8			32.9							
Transmissive area 01	LrD	27.7					-15.4			-1.2			10.6			18.9			26.7			15.3							
Transmissive area 02	LrD	40.4					14.6			22.5			30.0			31.0			39.1			26.1							
Transmissive area 03	LrD	38.6					-7.5			6.9			23.1			36.2			34.2			24.6							
Vac 1	LrD	18.5	-18.9	-11.6	-4.4	-3.4	-0.3	1.1	-4.5	-5.2	-5.6	-6.0	-7.2	-4.8	-3.1	-1.2	3.4	6.1	6.7	4.9	9.8	10.9	10.4	10.1	8.1	1.5	-5.6	-16.9	
Vac 2	LrD	20.2	-19.1	-11.8	-4.5	-3.6	-0.4	0.9	-4.8	-5.4	-5.8	-6.1	-5.3	-3.0	0.1	1.8	6.0	8.0	8.5	6.7	11.6	12.6	12.0	11.6	9.4	2.5	-5.0	-16.7	
Vac 3	LrD	20.1	-19.3	-12.0	-4.7	-3.8	-0.6	0.7	-5.0	-5.7	-3.9	-3.9	-5.3	-3.1	-0.4	1.8	6.1	7.9	8.5	6.7	11.6	12.6	12.0	11.5	9.3	2.3	-5.3	-17.1	
Vac 4	LrD	17.7	-19.5	-12.2	-4.9	-4.0	-0.9	0.5	-5.3	-5.9	-6.3	-6.4	-7.8	-5.5	-3.5	-1.4	3.6	5.5	6.0	4.2	9.1	10.1	9.5	9.1	6.9	-0.1	-7.6	-19.5	
Vac 5	LrD	17.4	-19.7	-12.4	-5.1	-4.2	-1.1	0.3	-5.6	-6.2	-6.6	-6.7	-8.0	-5.8	-3.7	-1.6	3.3	5.3	5.8	4.0	8.9	9.9	9.2	8.7	6.4	-0.7	-8.4	-20.5	
Vac 6	LrD	12.5	-17.5	-10.4	-3.3	-2.6	0.3	1.4	-6.3	-7.3	-8.1	-9.4	-11.2	-9.3	-5.8	-4.7	-1.4	0.2	0.5	-1.5	3.1	3.8	2.8	2.0	-0.8	-8.3	-16.7	-29.5	
Vac 7	LrD	13.5	-18.5	-11.5	-4.6	-4.2	-1.6	-0.8	-7.8	-9.1	-10.2	-12.4	-14.7	-13.2	-6.2	-4.7	-0.6	2.3	2.6	0.6	5.2	5.8	4.7	3.4	-0.1	-8.9	-18.9	-33.9	
Vac 8	LrD	13.1	-19.5	-12.6	-5.8	-5.6	-3.1	-2.4	-8.8	-10.1	-11.2	-13.7	-16.0	-8.8	-6.7	-5.2	-0.9	2.0	2.4	0.4	5.0	5.6	4.4	3.1	-0.5	-9.4	-19.6	-34.8	
Vac 9	LrD	14.7	-20.2	-13.3	-6.6	-6.5	-4.0	-3.3	-9.4	-10.7	-11.9	-14.5	-16.8	-9.1	-7.0	-5.4	1.0	4.0	4.4	2.4	6.9	7.5	6.2	4.8	0.9	-8.2	-18.8	-34.6	
Vac 10	LrD	14.5	-20.7	-13.9	-7.2	-7.2	-4.7	-4.0	-10.0	-11.3	-12.5	-15.2	-17.5	-9.0	-7.2	-3.4	1.0	3.8	4.2	2.2	6.7	7.3	6.0	4.5	0.6	-8.7	-19.5	-35.5	
Vac 11	LrD	14.3	-21.2	-14.4	-7.7	-7.7	-5.3	-4.6	-10.6	-11.9	-13.1	-15.8	-18.2	-9.3	-7.4	-3.6	0.8	3.6	4.0	2.0	6.6	7.1	5.8	4.2	0.2	-9.2	-20.1	-36.4	
Vac 12	LrD	14.1	-21.6	-14.8	-8.1	-8.2	-5.7	-5.1	-11.0	-12.4	-13.6	-16.3	-11.6	-9.5	-7.6	-3.7	0.6	3.5	3.9	1.9	6.4	6.9	5.5	3.9	-0.1	-9.6	-20.7	-37.2	
Vac 13	LrD	13.9	-21.9	-15.2	-8.6	-8.7	-6.3	-5.7	-11.6	-13.0	-14.2	-16.9	-11.9	-9.8	-7.8	-3.9	0.5	3.3	3.7	1.7	6.2	6.7	5.3	3.6	-0.5	-10.1	-21.4	-38.2	
Vac 14	LrD	10.8	-22.2	-15.5	-8.9	-9.1	-6.7	-6.1	-12.1	-13.5	-14.7	-17.4	-13.6	-11.8	-7.4	-6.1	-2.2	0.4	0.7	-1.5	2.9	3.3	1.6	-0.3	-4.7	-14.7	-26.5	-43.7	
Vac 15	LrD	9.9	-22.3	-15.5	-8.9	-9.2	-6.8	-6.2	-12.2	-13.6	-14.8	-17.6	-20.0	-18.7	-9.3	-7.5	-3.1	-0.7	-0.3	-2.4	2.1	2.5	0.9	-1.0	-5.5	-15.6	-27.6	-45.0	

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
Vac 16	LrD	9.8	-22.2	-15.5	-8.9	-9.2	-6.8	-6.2	-12.3	-13.7	-14.9	-17.7	-20.1	-18.7	-9.1	-7.2	-2.5	-0.8	-0.5	-2.6	1.9	2.3	0.6	-1.3	-5.9	-16.1	-28.3	-46.0	
Vac 18	LrD	1.2	-21.8	-15.0	-8.4	-8.8	-6.4	-5.8	-12.3	-13.7	-14.9	-17.5	-20.0	-18.6	-17.7	-17.4	-14.9	-14.1	-14.6	-17.5	-13.1	-12.7	-14.0	-15.5	-19.2	-28.1	-38.5	-54.0	
Vac 19	LrD	13.2	-21.9	-14.5	-7.2	-6.9	-3.6	-2.1	-9.3	-9.9	-10.4	-10.0	-11.6	-9.3	-4.3	-3.1	0.3	2.1	2.5	0.5	5.1	5.6	4.3	2.7	-1.2	-10.6	-21.6	-38.1	
Vac 20	LrD	13.3	-21.8	-14.4	-7.1	-6.8	-3.5	-2.0	-9.2	-9.8	-10.2	-9.9	-11.4	-9.2	-4.2	-3.0	0.4	2.2	2.6	0.6	5.2	5.8	4.5	3.0	-0.9	-10.2	-21.1	-37.4	
Vac 21	LrD	13.8	-22.0	-14.6	-7.3	-7.0	-3.8	-2.2	-9.4	-10.0	-10.5	-10.1	-11.7	-9.4	-4.4	-3.2	1.5	3.2	3.6	1.5	6.0	6.3	4.8	3.0	-1.3	-10.9	-22.1	-38.8	
Vac 22	LrD	13.9	-21.9	-14.5	-7.2	-6.9	-3.7	-2.1	-9.3	-9.9	-10.3	-10.0	-11.5	-9.3	-4.3	-3.1	1.6	3.3	3.7	1.6	6.1	6.5	4.9	3.2	-1.0	-10.5	-21.6	-38.0	
Vac 23	LrD	13.7	-22.0	-14.7	-7.4	-7.1	-3.9	-2.4	-9.5	-10.2	-10.6	-10.2	-11.8	-9.5	-4.5	-3.3	1.4	3.1	3.5	1.4	5.9	6.2	4.6	2.8	-1.5	-11.3	-22.6	-39.4	
Vac 24	LrD	13.8	-22.0	-14.6	-7.3	-7.0	-3.8	-2.3	-9.4	-10.0	-10.5	-10.1	-11.7	-9.4	-4.4	-3.2	1.5	3.2	3.6	1.5	5.9	6.3	4.8	3.0	-1.3	-10.9	-22.1	-38.7	
Vac 25	LrD	13.6	-22.1	-14.8	-7.5	-7.3	-4.0	-2.5	-9.6	-10.3	-10.7	-10.4	-11.9	-9.7	-4.6	-3.4	1.3	3.0	3.4	1.3	5.7	6.1	4.5	2.6	-1.8	-11.6	-23.1	-40.1	
Vac 26	LrD	13.7	-22.1	-14.7	-7.4	-7.2	-3.9	-2.4	-9.5	-10.2	-10.6	-10.2	-11.8	-9.5	-4.5	-3.3	1.4	3.1	3.5	1.4	5.8	6.2	4.6	2.8	-1.5	-11.3	-22.6	-39.4	
Vac 27	LrD	13.4	-22.2	-14.8	-7.6	-7.4	-4.1	-2.6	-9.7	-10.4	-10.8	-10.4	-11.9	-9.7	-4.7	-3.5	1.2	2.9	3.3	1.2	5.6	5.9	4.3	2.4	-2.1	-12.0	-23.6	-40.8	
Vac 28	LrD	12.8	-22.1	-14.8	-7.5	-7.3	-4.0	-2.5	-9.6	-10.3	-10.7	-10.3	-11.9	-9.6	-4.6	-3.4	0.0	1.8	2.2	0.2	4.7	5.2	3.8	2.1	-2.0	-11.7	-23.1	-40.1	
Vac 29	LrD	13.5	-22.3	-14.9	-7.6	-7.5	-4.2	-2.7	-9.9	-10.5	-11.0	-10.6	-12.1	-9.9	-4.8	-3.6	1.1	2.9	3.7	1.5	5.9	6.1	4.3	2.2	-2.3	-12.4	-24.2	-41.6	
Vac 30	LrD	12.9	-22.2	-14.9	-7.6	-7.4	-4.1	-2.6	-9.8	-10.4	-10.8	-10.5	-12.0	-9.8	-4.7	-3.5	-0.1	1.7	2.7	0.6	5.0	5.4	3.8	2.0	-2.3	-12.1	-23.7	-40.8	
Vac 31	LrD	12.3	-22.4	-15.0	-7.7	-7.6	-4.4	-2.9	-10.0	-10.6	-11.1	-10.7	-12.2	-10.0	-4.9	-3.7	-0.3	1.4	1.8	-0.2	4.3	4.7	3.2	1.4	-3.0	-13.0	-24.8	-42.3	
Vac 32	LrD	8.4	-19.6	-12.4	-5.4	-5.5	-2.5	-1.3	-9.9	-10.5	-11.0	-11.9	-13.7	-11.8	-8.5	-7.6	-4.4	-2.9	-2.8	-5.2	-1.0	-0.9	-2.8	-5.0	-9.8	-20.2	-32.5	-50.5	
Vac 33	LrD	6.0	-19.9	-12.7	-5.7	-5.9	-3.0	-1.9	-10.1	-10.8	-11.2	-12.5	-14.5	-12.8	-10.4	-9.8	-7.0	-5.9	-6.3	-9.1	-5.4	-5.9	-8.3	-11.0	-16.4	-27.4	-40.4	-59.1	
Vac 34	LrD	5.0	-20.0	-12.9	-5.9	-6.2	-3.3	-2.4	-10.0	-10.7	-11.3	-13.3	-15.3	-13.7	-11.8	-11.3	-8.6	-7.7	-8.1	-11.0	-7.4	-7.9	-10.3	-13.1	-18.4	-29.4	-42.2	-60.2	
	LrD	29.0		18.3			25.0			12.9			16.1			19.0			23.8			15.9			-8.4			-72.4	
	LrD	30.2		19.5			26.4			14.5			17.8			19.1			24.5			17.4			-5.2			-63.7	
	LrD	28.2		17.5			24.7			14.3			17.8			19.5			20.5			12.8			-11.1			-70.0	
	LrD	27.4		18.2			24.7			13.0			16.1			17.6			17.5			8.6			-15.7			-77.7	
	LrD	27.1		17.6			24.1			12.1			15.4			18.1			18.7			10.2			-14.8			-81.1	
	LrD	27.8		17.7			24.6			12.6			15.6			18.7			19.4			15.3			-9.6			-75.1	
	LrD	24.7		16.3			22.1			11.1			13.4			14.4			14.0			4.1			-22.8			-89.5	
	LrD	23.9		13.9			20.6			10.3			13.8			15.4			15.5			5.6			-23.9				
	LrD	33.6		18.3			26.5			14.9			20.0			27.2			29.6			23.0			3.2			-48.4	
	LrD	29.5		17.5			24.8			13.9			17.3			22.2			23.7			16.5			-4.6			-58.5	
	LrD	28.8		16.6			24.0			13.2			16.4			21.6			23.0			16.4			-3.7			-61.1	
	LrD	29.6		16.3			23.6			12.9			16.1			23.3			25.0			17.8			-4.7			-63.9	
	LrD	35.1		20.9			29.4			19.1			22.5			26.7			30.4			26.2			11.4			-26.4	
	LrD	29.0		15.7			23.3			11.7			14.8			22.7			24.3			16.5			-8.1			-74.4	
	LrD	25.1		16.3			22.2			11.5			14.0			15.8			15.4			5.6			-21.9			-89.0	
	LrD	28.3		17.8			24.7			14.1			16.5			18.1			21.6			15.9			-0.7			-44.3	
	LrD	25.3		17.5			23.4			11.7			13.6			11.1			9.9			3.2			-14.5			-60.7	
	LrD	27.2		18.3			24.4			12.1			13.8			12.2			19.6			14.4			-10.4			-58.1	

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
	LrD	30.3		19.6			26.4			15.9			18.6			16.7			24.9			19.1			-1.3			-54.7	
	LrD	29.8		17.7			25.4			14.5			17.6			21.5			23.7			19.5			1.0			-51.5	
	LrD	28.2		18.7			25.5			12.8			15.9			18.8			19.3			10.9			-13.2			-75.8	
	LrD	29.8		16.6			24.1			13.3			16.6			22.6			25.4			18.1			-3.7			-60.4	
	LrD	26.3		14.6			21.3			12.9			16.1			19.2			20.2			11.6			-15.6			-90.2	
	LrD	31.0		20.2			27.1			16.2			19.3			17.8			25.5			19.7			-1.1			-54.1	
Receive -293,200 Fl G	LrD,lim	59 dB(A	LrD	62.9 dB(A	Sigma(LrD	0.0 dB(A																							
	LrD	8.5											8.5																
Drive Thru 1	LrD	37.8	19.6	22.5	21.9	25.2	31.6	29.0	16.3	13.7	12.0	15.5	19.9	20.8	26.0	24.9	25.2	26.9	26.5	24.4	22.9	20.7	16.2	10.3	1.1	-10.7			
Facade 01	LrD	3.6					-6.7			0.7			-1.2			-8.6			-17.4			-37.3							
Facade 01	LrD	-24.5					-42.3			-31.9			-29.3			-28.1			-38.6			-55.6							
Facade 02	LrD						-69.4			-62.4			-59.6																
Facade 02	LrD	-9.8					-20.4			-12.6			-14.7			-22.8			-31.8			-52.1							
Facade 03	LrD						-69.0			-65.5																			
Facade 03	LrD	16.6					3.1			11.2			13.0			9.3			3.0			-14.9							
Facade 04	LrD						-82.9			-80.3																			
Facade 04	LrD	13.4					-0.6			8.5			9.8			5.3			-0.5			-17.8							
Roof 01	LrD	12.2					-2.9			8.4			8.4			3.0			-3.9			-22.6							
Roof 01	LrD	-9.5					-34.8			-19.8			-14.9			-12.1			-20.8			-36.5							
Transmissive area 01	LrD	27.5					8.7			17.0			22.4			21.8			22.1			11.0							
Transmissive area 01	LrD	27.6					-6.7			6.2			17.5			25.4			21.5			13.2							
Transmissive area 02	LrD	61.8					33.4			43.3			54.1			57.6			57.8			48.6							
Transmissive area 03	LrD	52.0					8.7			22.5			37.7			49.2			47.4			40.7							
Vac 1	LrD	4.8	-19.7	-12.7	-5.8	-5.4	-2.8	-2.1	-7.7	-9.1	-10.4	-13.2	-15.6	-14.2	-13.9	-13.6	-11.1	-10.2	-10.6	-13.4	-9.5	-9.5	-11.1	-12.6	-16.0	-24.1	-32.9	-45.8	
Vac 2	LrD	4.7	-19.4	-12.5	-5.7	-5.2	-2.7	-2.1	-7.8	-9.3	-10.6	-13.5	-15.9	-14.6	-14.3	-14.0	-11.5	-10.6	-11.1	-13.8	-9.9	-9.9	-11.5	-12.9	-16.1	-24.1	-32.3	-44.3	
Vac 3	LrD	4.6	-19.2	-12.3	-5.5	-5.1	-2.7	-2.2	-8.0	-9.5	-10.9	-13.8	-16.3	-14.9	-14.7	-14.4	-11.8	-11.0	-11.5	-14.2	-10.3	-10.2	-11.8	-13.1	-16.2	-23.8	-31.2	-42.9	
Vac 4	LrD	4.6	-19.0	-12.1	-5.3	-5.0	-2.6	-2.1	-8.0	-9.7	-11.1	-14.0	-16.5	-15.2	-14.9	-14.6	-12.1	-11.3	-11.7	-14.5	-10.6	-10.4	-11.9	-13.2	-16.2	-22.9	-30.1	-41.4	
Vac 5	LrD	4.7	-18.7	-11.8	-5.1	-4.8	-2.5	-2.0	-8.1	-9.8	-11.2	-14.2	-16.7	-15.5	-15.1	-14.8	-12.3	-11.5	-11.9	-14.7	-10.7	-10.6	-12.0	-13.2	-15.4	-22.0	-28.9	-39.9	
Vac 6	LrD	4.9	-18.2	-11.4	-4.7	-4.4	-2.1	-1.8	-8.1	-9.8	-11.3	-14.2	-16.8	-15.6	-15.1	-14.8	-12.3	-11.5	-12.0	-14.7	-10.7	-10.6	-11.9	-12.7	-14.6	-21.0	-27.7	-38.4	
Vac 7	LrD	5.0	-17.9	-11.1	-4.5	-4.3	-2.0	-1.7	-8.1	-9.8	-11.4	-14.3	-16.9	-15.7	-15.1	-14.8	-12.3	-11.6	-12.0	-14.7	-10.7	-10.5	-11.8	-12.0	-13.9	-20.1	-26.6	-36.9	
Vac 8	LrD	5.3	-17.6	-10.9	-4.3	-4.0	-1.8	-1.5	-8.1	-9.8	-11.4	-14.3	-16.9	-15.7	-15.0	-14.7	-12.2	-11.5	-11.9	-14.6	-10.6	-10.4	-11.1	-11.3	-13.0	-19.1	-25.4	-35.4	
Vac 9	LrD	5.6	-17.3	-10.5	-4.0	-3.7	-1.5	-1.2	-8.0	-9.7	-11.4	-14.2	-16.8	-15.6	-14.7	-14.5	-11.9	-11.2	-11.6	-14.3	-10.3	-9.8	-10.3	-10.5	-12.2	-18.1	-24.1	-33.9	
Vac 10	LrD	6.0	-16.8	-10.1	-3.6	-3.3	-1.1	-0.8	-7.8	-9.6	-11.2	-14.0	-16.6	-15.4	-14.3	-14.1	-11.6	-10.8	-11.2	-13.9	-9.8	-8.9	-9.5	-9.6	-11.2	-17.0	-22.9	-32.3	
Vac 11	LrD	6.6	-16.3	-9.6	-3.1	-2.8	-0.5	-0.2	-7.5	-9.3	-11.0	-13.6	-16.2	-15.0	-13.6	-13.3	-10.8	-10.1	-10.5	-13.1	-8.7	-7.9	-8.5	-8.6	-10.1	-15.8	-21.5	-30.7	
Vac 12	LrD	7.7	-15.6	-8.8	-2.2	-1.9	0.4	0.8	-6.8	-8.5	-10.1	-12.5	-15.1	-13.9	-12.2	-12.0	-9.4	-8.7	-9.1	-11.6	-7.2	-6.4	-7.1	-7.2	-8.8	-14.4	-19.9	-28.9	

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 13	LrD	9.3	-14.7	-7.9	-1.2	-0.6	1.8	2.4	-5.5	-7.1	-8.5	-10.7	-13.2	-12.0	-9.9	-9.6	-7.1	-6.3	-6.7	-9.1	-4.8	-4.1	-4.9	-5.1	-6.6	-12.2	-17.7	-26.5
Vac 14	LrD	12.7	-13.7	-6.6	0.3	1.1	3.8	4.7	-3.3	-4.5	-5.6	-7.1	-9.3	-7.7	-5.2	-4.6	-1.9	-1.0	-1.2	-3.6	0.7	1.3	0.5	0.2	-1.5	-7.2	-12.7	-21.6
Vac 15	LrD	24.8	-10.0	-2.7	4.5	5.7	8.8	10.0	1.2	0.6	0.2	-0.2	-1.7	0.6	4.1	5.4	8.9	10.6	11.3	9.6	14.8	16.2	16.3	16.8	16.1	11.3	6.8	-1.1
Vac 16	LrD	25.3	-9.6	-2.3	4.9	6.1	9.2	10.5	1.8	1.2	0.8	0.3	-1.2	1.1	4.6	5.8	9.4	11.0	11.7	10.1	15.2	16.7	16.8	17.4	16.8	12.1	7.8	0.2
Vac 18	LrD	26.2	-8.9	-1.6	5.6	6.8	9.9	11.2	2.7	2.1	1.7	1.2	-0.3	1.9	5.3	6.5	10.1	11.8	12.4	10.8	16.0	17.5	17.7	18.4	17.9	13.4	9.4	2.2
Vac 19	LrD	35.9	-1.1	6.2	13.4	14.8	17.9	19.2	12.8	12.2	11.8	10.6	9.1	11.4	13.3	14.6	18.2	19.6	20.4	18.9	24.3	26.1	26.7	28.1	28.6	25.6	23.7	19.3
Vac 20	LrD	35.5	-1.4	5.9	13.1	14.5	17.6	18.9	12.5	11.9	11.5	10.3	8.7	11.0	13.0	14.3	17.9	19.3	20.1	18.6	24.0	25.8	26.3	27.8	28.2	25.2	23.2	18.7
Vac 21	LrD	34.1	-2.6	4.7	11.9	13.3	16.4	17.7	11.0	10.4	10.0	8.9	7.3	9.6	11.8	13.1	16.6	18.1	18.9	17.4	22.7	24.5	25.0	26.4	26.7	23.6	21.4	16.6
Vac 22	LrD	33.9	-2.8	4.5	11.7	13.1	16.2	17.5	10.8	10.2	9.7	8.6	7.1	9.4	11.6	12.9	16.4	18.0	18.7	17.2	22.6	24.3	24.8	26.2	26.5	23.3	21.1	16.2
Vac 23	LrD	32.6	-3.8	3.5	10.7	12.0	15.1	16.4	9.4	8.8	8.4	7.4	5.9	8.2	10.5	11.8	15.4	16.9	17.6	16.1	21.4	23.2	23.6	24.9	25.1	21.8	19.3	14.2
Vac 24	LrD	32.4	-4.0	3.3	10.5	11.8	14.9	16.2	9.2	8.6	8.2	7.2	5.7	7.9	10.3	11.6	15.2	16.7	17.4	15.9	21.2	23.0	23.4	24.7	24.9	21.5	19.0	13.8
Vac 25	LrD	31.2	-5.0	2.3	9.5	10.9	14.0	15.3	8.0	7.3	6.9	6.0	4.5	6.8	9.3	10.6	14.2	15.8	16.5	14.9	20.2	21.9	22.4	23.5	23.6	20.1	17.3	11.8
Vac 26	LrD	31.1	-5.1	2.2	9.4	10.7	13.8	15.1	7.8	7.2	6.8	5.9	4.4	6.6	9.2	10.5	14.0	15.6	16.3	14.8	20.1	21.8	22.2	23.3	23.4	19.9	17.1	11.5
Vac 27	LrD	30.0	-5.9	1.4	8.6	9.9	13.0	14.3	6.7	6.1	5.7	4.8	3.3	5.6	8.3	9.6	13.2	14.8	15.5	13.9	19.2	20.9	21.2	22.3	22.2	18.5	15.5	9.6
Vac 28	LrD	29.9	-6.1	1.2	8.4	9.7	12.8	14.1	6.5	5.9	5.5	4.7	3.2	5.5	8.2	9.5	13.0	14.6	15.3	13.8	19.1	20.7	21.1	22.1	22.1	18.3	15.3	9.4
Vac 29	LrD	28.9	-6.8	0.5	7.7	8.9	12.0	13.3	5.5	4.9	4.5	3.7	2.2	4.5	7.4	8.7	12.2	13.9	14.5	13.0	18.2	19.9	20.2	21.1	21.0	17.1	13.8	7.5
Vac 30	LrD	28.7	-10.6	-2.9	4.7	6.6	10.8	13.2	5.4	4.8	4.3	3.6	2.1	4.4	7.3	8.6	12.1	13.8	14.5	12.9	18.1	19.8	20.0	21.0	20.8	16.9	13.6	7.3
Vac 31	LrD	27.7	-11.7	-4.2	3.3	4.9	8.5	10.5	4.4	3.8	3.4	2.8	1.2	3.5	6.6	7.8	11.4	13.0	13.7	12.1	17.4	19.0	19.2	20.1	19.8	15.7	12.1	5.5
Vac 32	LrD	27.6	-11.8	-4.4	3.1	4.7	8.2	10.2	4.3	3.7	3.3	2.6	1.1	3.4	6.5	7.7	11.3	12.9	13.6	12.0	17.3	18.8	19.1	20.0	19.6	15.5	11.9	5.3
Vac 33	LrD	26.7	-12.6	-5.2	2.2	3.6	7.0	8.8	3.4	2.8	2.4	1.8	0.3	2.6	5.8	7.1	10.6	12.3	12.9	11.3	16.6	18.1	18.3	19.1	18.6	14.3	10.5	3.5
Vac 34	LrD	26.6	-12.8	-5.3	2.0	3.5	6.9	8.6	3.3	2.7	2.3	1.7	0.2	2.5	5.7	7.0	10.5	12.2	12.9	11.3	16.5	18.0	18.2	19.0	18.5	14.2	10.3	3.3
	LrD	35.7		21.3			29.7			19.1			22.5			27.7			31.3			26.2			11.5			-25.5
	LrD	39.4		24.8			33.6			21.8			25.3			31.8			34.7			30.2			16.8			-16.0
	LrD	38.7		23.5			32.7			23.5			27.3			30.7			33.4			30.8			19.0			-10.5
	LrD	36.2		24.5			32.5			17.3			20.6			27.5			30.3			24.6			7.9			-34.8
	LrD	35.8		23.6			31.5			16.2			19.6			28.3			30.4			24.4			6.1			-41.0
	LrD	37.0		24.9			33.1			17.9			21.0			28.9			31.3			25.8			9.6			-31.5
	LrD	29.5		21.6			27.7			14.8			16.0			15.7			15.5			8.1			-7.2			-40.1
	LrD	30.1		19.1			27.0			16.8			20.5			21.0			21.1			13.7			-5.5			-52.4
	LrD	48.9		34.6			44.1			32.6			37.2			41.1			42.9			39.3			30.0			9.0
	LrD	39.7		24.5			33.8			25.1			29.0			32.1			34.4			30.3			19.3			-6.5
	LrD	38.4		23.8			33.0			24.0			27.6			30.6			32.7			28.9			16.6			-11.9
	LrD	38.0		23.5			32.5			23.2			27.9			30.2			32.2			28.8			16.0			-13.9
	LrD	31.9		21.1			28.2			16.9			18.7			22.6			25.9			18.8			-1.4			-49.4
	LrD	35.5		22.2			30.8			20.5			23.8			27.0			29.2			26.7			13.7			-20.4
	LrD	30.4		22.4			28.7			15.6			16.8			17.1			16.4			8.8			-6.4			-39.0

Source	Time slice	Sum dB(A)	50Hz dB(A)	63Hz dB(A)	80Hz dB(A)	100Hz dB(A)	125Hz dB(A)	160Hz dB(A)	200Hz dB(A)	250Hz dB(A)	315Hz dB(A)	400Hz dB(A)	500Hz dB(A)	630Hz dB(A)	800Hz dB(A)	1kHz dB(A)	1.25kHz dB(A)	1.6kHz dB(A)	2kHz dB(A)	2.5kHz dB(A)	3.15kHz dB(A)	4kHz dB(A)	5kHz dB(A)	6.3kHz dB(A)	8kHz dB(A)	10kHz dB(A)	12.5kHz dB(A)	16kHz dB(A)	
	LrD	28.4		20.6			26.8			13.6			14.4			14.6			13.1			5.2			-11.1			-49.4	
	LrD	39.4		26.6			35.2			20.6			24.0			31.6			33.8			28.8			14.6			-20.6	
	LrD	41.6		27.4			36.3			24.1			27.6			34.3			36.6			32.2			18.6			-14.3	
	LrD	42.3		28.4			37.7			25.1			28.7			34.2			36.8			32.5			21.0			-6.6	
	LrD	35.2		23.4			31.3			15.8			19.0			26.1			30.0			23.8			5.1			-42.9	
	LrD	35.9		23.6			31.5			17.0			21.3			28.3			30.3			24.7			6.5			-40.5	
	LrD	38.6		25.0			33.8			23.9			27.3			30.2			32.8			28.5			17.2			-8.3	
	LrD	32.1		20.1			28.1			19.3			22.2			23.8			25.0			19.2			2.5			-40.1	
	LrD	42.1		28.7			37.9			24.2			27.8			33.8			36.3			31.9			19.9			-8.7	
Receive -345,52 Fl G LrD,lim 59 dB(A LrD 51.7 dB(A Sigma(LrD 0.0 dB(A																													
	LrD	14.4											14.4																
Drive Thru 1	LrD	44.4	21.3	24.3	23.8	28.4	35.0	32.5	25.5	23.2	21.7	25.1	29.6	30.5	32.6	32.6	33.6	35.2	35.0	33.2	32.2	31.0	27.9	24.2	18.3	11.3			
Facade 01	LrD	6.2					-6.9			-0.5			2.9			-0.3			-7.3			-27.6							
Facade 01	LrD	-22.9					-45.8			-32.0			-28.0			-25.9			-35.2			-52.6							
Facade 02	LrD						-95.2			-88.6			-89.0																
Facade 02	LrD	-15.2					-25.7			-18.3			-19.7			-27.1			-36.9			-60.1							
Facade 03	LrD						-94.1			-90.5																			
Facade 03	LrD	-7.5					-17.5			-9.9			-12.9			-20.8			-29.7			-51.5							
Facade 04	LrD						-86.2			-80.1																			
Facade 04	LrD	-0.6					-14.3			-5.2			-4.1			-8.9			-15.7			-36.1							
Roof 01	LrD	2.8					-12.5			-1.0			-0.9			-6.4			-13.5			-33.9							
Roof 01	LrD	-18.8					-44.3			-29.1			-24.2			-21.4			-30.3			-47.7							
Transmissive area 01	LrD	22.7					3.8			11.8			17.8			17.6			16.8			2.9							
Transmissive area 01	LrD	34.1					-6.4			9.6			22.8			31.9			28.6			19.0							
Transmissive area 02	LrD	46.3					19.7			29.2			40.0			42.3			41.3			28.7							
Transmissive area 03	LrD	21.2					-14.5			-0.7			11.1			19.2			15.0			4.9							
Vac 1	LrD	6.3	-22.6	-15.6	-8.7	-9.4	-6.7	-5.8	-12.3	-12.9	-13.4	-15.8	-17.9	-16.3	-15.2	-14.8	-5.0	-3.4	-3.4	-5.8	-1.9	-2.3	-5.0	-8.7	-15.7	-29.6	-46.8	-71.3	
Vac 2	LrD	6.6	-22.3	-15.3	-8.4	-9.1	-6.4	-5.5	-12.1	-12.8	-13.5	-15.9	-18.1	-16.6	-15.5	-15.1	-5.0	-3.4	-3.3	-5.3	-1.4	-1.8	-4.6	-8.3	-15.4	-29.2	-46.2	-70.5	
Vac 3	LrD	6.7	-22.0	-14.9	-8.0	-8.7	-5.9	-5.0	-12.0	-12.6	-13.4	-15.9	-18.1	-16.7	-15.4	-15.1	-4.9	-3.3	-3.3	-5.2	-1.3	-1.7	-4.5	-8.1	-15.1	-28.8	-45.7	-69.7	
Vac 4	LrD	11.2	-21.5	-14.4	-7.4	-8.0	-5.2	-4.3	-11.9	-10.1	-10.6	-11.2	-13.1	-11.1	-7.1	-6.0	-1.0	1.6	1.8	-0.5	3.6	3.4	1.0	-2.2	-8.4	-21.1	-36.5	-58.5	
Vac 5	LrD	10.9	-21.1	-13.9	-6.9	-7.4	-4.4	-3.3	-11.7	-9.9	-10.4	-10.6	-12.5	-10.5	-6.4	-5.5	-0.6	1.0	1.1	-1.2	2.9	2.8	0.5	-2.5	-8.5	-20.9	-35.9	-57.6	
Vac 6	LrD	13.4	-19.1	-11.8	-4.6	-4.9	-1.9	-0.6	-11.6	-9.8	-10.2	-9.7	-11.2	-9.0	-4.0	-2.8	1.6	3.2	3.5	1.3	5.6	5.6	3.5	0.8	-4.8	-16.6	-30.8	-51.5	
Vac 7	LrD	13.6	-19.0	-11.7	-4.5	-4.8	-1.7	-0.4	-11.4	-9.7	-10.1	-9.6	-11.1	-8.9	-3.8	-2.7	1.7	3.4	3.7	1.5	5.7	5.8	3.8	1.1	-4.4	-16.0	-30.1	-50.5	
Vac 8	LrD	13.1	-18.9	-11.6	-4.4	-4.7	-1.6	-0.3	-11.3	-9.6	-10.0	-9.5	-11.1	-8.8	-3.7	-2.6	0.8	2.5	2.9	0.7	5.0	5.2	3.3	0.8	-4.5	-15.8	-29.5	-49.5	
Vac 9	LrD	13.3	-18.8	-11.5	-4.3	-4.5	-1.4	-0.2	-11.2	-9.4	-9.9	-9.4	-11.0	-8.8	-3.6	-2.4	1.0	2.7	3.0	0.9	5.2	5.4	3.5	1.1	-4.1	-15.3	-28.8	-48.6	

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 10	LrD	13.4	-18.7	-11.4	-4.2	-4.4	-1.3	0.0	-11.0	-9.3	-9.8	-9.3	-10.9	-8.6	-3.5	-2.3	1.1	2.8	3.1	1.0	5.4	5.6	3.7	1.4	-3.7	-14.8	-28.1	-47.6
Vac 11	LrD	13.6	-18.6	-11.3	-4.1	-4.3	-1.2	0.1	-10.9	-9.1	-9.6	-9.0	-10.6	-8.3	-3.3	-2.2	1.2	2.9	3.3	1.1	5.5	5.8	3.9	1.7	-3.3	-14.3	-27.4	-46.7
Vac 12	LrD	13.8	-18.5	-11.2	-4.0	-4.1	-1.1	0.2	-10.7	-9.1	-9.5	-9.1	-10.6	-8.4	-3.3	-2.1	1.3	3.1	3.4	1.3	5.7	6.0	4.2	2.0	-2.9	-13.8	-26.7	-45.8
Vac 13	LrD	13.9	-18.4	-11.1	-3.9	-4.0	-0.9	0.3	-10.6	-8.9	-9.4	-9.0	-10.5	-8.3	-3.1	-2.0	1.5	3.2	3.5	1.4	5.9	6.1	4.4	2.3	-2.6	-13.3	-26.1	-44.9
Vac 14	LrD	14.1	-18.3	-11.0	-3.8	-3.9	-0.8	0.5	-10.5	-8.8	-9.2	-8.8	-10.4	-8.2	-3.0	-1.8	1.6	3.3	3.7	1.6	6.0	6.3	4.6	2.5	-2.2	-12.8	-25.4	-44.0
Vac 15	LrD	14.3	-18.2	-10.9	-3.7	-3.8	-0.7	0.6	-10.3	-8.7	-9.1	-8.7	-10.3	-8.0	-2.9	-1.7	1.7	3.4	3.8	1.7	6.2	6.5	4.8	2.8	-1.9	-12.3	-24.8	-43.1
Vac 16	LrD	14.0	-18.1	-10.8	-3.6	-3.6	-0.5	0.7	-10.2	-10.8	-11.3	-10.9	-12.4	-8.2	-3.1	-1.9	1.5	3.2	3.6	1.5	5.9	6.2	4.5	2.4	-2.3	-12.7	-25.1	-43.2
Vac 18	LrD	14.1	-17.9	-10.6	-3.4	-3.4	-0.3	0.9	-10.0	-10.6	-11.0	-10.7	-12.2	-10.0	-3.1	-1.9	1.5	3.3	3.6	1.6	6.0	6.3	4.6	2.6	-2.0	-12.2	-24.3	-42.0
Vac 19	LrD	4.4	-21.7	-14.6	-7.6	-7.9	-5.0	-4.0	-10.3	-11.0	-11.4	-13.1	-15.0	-13.2	-12.3	-11.6	-8.7	-7.6	-7.8	-10.6	-6.9	-7.3	-9.7	-12.5	-18.0	-29.1	-42.3	-61.3
Vac 20	LrD	4.3	-21.6	-14.5	-7.6	-7.9	-5.0	-4.0	-10.4	-11.0	-11.5	-13.2	-15.1	-13.3	-12.3	-11.6	-8.8	-7.6	-7.9	-10.7	-7.0	-7.4	-9.9	-12.7	-18.1	-29.3	-42.6	-61.6
Vac 21	LrD	4.5	-21.5	-14.4	-7.4	-7.7	-4.8	-3.8	-10.1	-10.7	-11.2	-13.0	-15.0	-13.1	-12.2	-11.6	-8.7	-7.6	-7.9	-10.7	-6.9	-7.3	-9.7	-12.4	-17.7	-28.7	-41.6	-60.2
Vac 22	LrD	4.4	-21.4	-14.3	-7.4	-7.6	-4.8	-3.8	-10.2	-10.8	-11.2	-13.1	-15.0	-13.2	-12.3	-11.6	-8.8	-7.7	-8.0	-10.7	-7.0	-7.4	-9.8	-12.6	-17.9	-29.0	-41.9	-60.7
Vac 23	LrD	4.6	-21.3	-14.2	-7.2	-7.4	-4.6	-3.6	-9.9	-10.5	-11.0	-12.9	-14.9	-13.1	-12.2	-11.5	-8.7	-7.6	-7.9	-10.7	-7.0	-7.3	-9.7	-12.3	-17.5	-28.3	-41.0	-59.3
Vac 24	LrD	4.5	-21.2	-14.1	-7.2	-7.4	-4.6	-3.5	-10.0	-10.6	-11.0	-13.0	-14.9	-13.1	-12.2	-11.6	-8.8	-7.7	-8.0	-10.8	-7.1	-7.4	-9.8	-12.5	-17.7	-28.6	-41.2	-59.7
Vac 25	LrD	4.7	-21.0	-14.0	-7.0	-7.2	-4.4	-3.4	-9.7	-10.3	-10.7	-12.8	-14.8	-13.0	-12.1	-11.5	-8.7	-7.7	-8.0	-10.7	-7.0	-7.4	-9.7	-12.2	-17.3	-27.9	-40.3	-58.3
Vac 26	LrD	4.7	-21.0	-13.9	-6.9	-7.1	-4.3	-3.3	-9.7	-10.4	-10.8	-12.9	-14.9	-13.1	-12.2	-11.6	-8.8	-7.7	-8.0	-10.8	-7.1	-7.5	-9.8	-12.4	-17.5	-28.2	-40.6	-58.7
Vac 27	LrD	4.8	-20.8	-13.7	-6.8	-6.9	-4.1	-3.2	-9.5	-10.1	-10.5	-12.8	-14.8	-13.0	-12.2	-11.6	-8.8	-7.8	-8.1	-10.9	-7.2	-7.5	-9.8	-12.3	-17.2	-27.7	-39.9	-57.5
Vac 28	LrD	4.7	-20.7	-13.6	-6.7	-6.9	-4.1	-3.1	-9.5	-10.2	-10.6	-12.8	-14.8	-13.1	-12.2	-11.6	-8.9	-7.8	-8.2	-11.0	-7.3	-7.6	-9.9	-12.4	-17.4	-27.9	-40.2	-57.9
Vac 29	LrD	4.8	-20.6	-13.5	-6.6	-6.7	-3.9	-2.9	-9.2	-9.9	-10.4	-12.8	-14.8	-13.1	-12.3	-11.7	-9.0	-8.0	-8.3	-11.1	-7.4	-7.7	-10.0	-12.4	-17.2	-27.6	-39.5	-56.8
Vac 30	LrD	4.8	-20.5	-13.4	-6.4	-6.6	-3.8	-2.9	-9.3	-9.9	-10.5	-12.8	-14.9	-13.2	-12.3	-11.7	-9.0	-8.0	-8.4	-11.2	-7.5	-7.8	-10.1	-12.5	-17.4	-27.8	-39.8	-57.2
Vac 31	LrD	4.9	-20.3	-13.3	-6.3	-6.4	-3.6	-2.7	-9.0	-9.6	-10.4	-12.8	-14.9	-13.2	-12.4	-11.9	-9.1	-8.2	-8.6	-11.4	-7.6	-7.9	-10.1	-12.5	-17.2	-27.4	-39.0	-56.1
Vac 32	LrD	4.9	-20.2	-13.1	-6.2	-6.3	-3.5	-2.6	-9.1	-9.7	-10.5	-12.8	-14.9	-13.3	-12.3	-11.8	-9.1	-8.2	-8.6	-11.4	-7.7	-8.0	-10.2	-12.6	-17.4	-27.6	-39.3	-56.4
Vac 33	LrD	5.1	-20.1	-13.0	-6.1	-6.1	-3.4	-2.5	-8.8	-9.5	-10.4	-12.8	-14.9	-13.3	-12.4	-12.0	-9.3	-8.3	-8.7	-10.5	-6.9	-7.4	-9.8	-12.4	-17.2	-27.2	-38.6	-55.3
Vac 34	LrD	5.2	-19.9	-12.8	-5.9	-5.9	-3.2	-2.3	-8.8	-9.5	-10.4	-12.8	-14.9	-13.3	-12.3	-11.9	-9.2	-8.3	-8.7	-10.4	-6.8	-7.3	-9.8	-12.4	-17.2	-27.3	-38.8	-55.6
	LrD	39.2		24.0			33.3			24.3			28.0			30.6			33.9			31.2			19.7			-8.4
	LrD	37.5		24.7			33.2			19.9			23.3			29.0			32.1			27.2			13.0			-23.1
	LrD	31.6		22.6			29.7			16.5			18.1			19.3			20.3			13.4			-2.8			-40.6
	LrD	36.4		22.8			31.7			22.2			25.7			28.2			30.1			26.4			15.4			-15.3
	LrD	38.5		24.4			33.7			24.9			28.7			30.2			31.8			28.5			19.7			-6.9
	LrD	40.1		26.5			35.9			25.3			28.8			31.8			33.6			30.0			20.2			-5.2
	LrD	30.1		20.5			27.0			14.9			16.5			14.5			24.0			17.9			0.1			-46.6
	LrD	16.8		10.7			14.6			2.3			3.5			1.1			2.4			-3.9			-23.1			-74.2
	LrD	29.3		19.7			27.0			16.9			19.8			17.7			16.8			8.6			-11.0			-58.0
	LrD	29.1		20.4			27.0			15.4			16.9			14.4			18.6			11.2			-8.2			-48.2
	LrD	28.6		19.8			26.0			14.3			15.7			16.4			19.8			12.9			-4.8			-48.0
	LrD	28.0		19.5			25.4			13.3			14.7			15.8			19.3			12.6			-4.7			-47.3

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
	LrD	31.9		20.3			27.8			13.7			16.4			22.1			27.1			20.2			-0.9			-54.9	
	LrD	29.0		19.2			25.8			14.6			16.6			14.6			22.8			16.1			-3.6			-56.1	
	LrD	29.4		19.3			25.9			14.8			16.8			14.4			23.6			17.3			-1.3			-50.2	
	LrD	35.9		23.5			31.4			16.0			21.4			28.5			30.6			24.7			6.5			-41.2	
	LrD	35.8		24.3			32.4			17.1			20.4			27.3			29.5			24.0			7.4			-36.0	
	LrD	35.8		24.1			32.1			17.6			20.9			27.4			29.6			24.3			7.3			-37.2	
	LrD	36.2		24.4			32.5			17.3			20.6			27.5			30.4			25.0			8.2			-35.0	
	LrD	35.1		23.8			31.7			16.4			19.5			26.5			28.8			23.0			5.7			-39.8	
	LrD	38.1		22.4			31.1			22.4			26.4			29.9			33.8			29.9			16.5			-17.1	
	LrD	28.8		19.9			26.5			15.1			19.8			17.3			15.8			7.5			-11.2			-52.3	
	LrD	20.5		13.9			18.5			6.6			8.0			5.0			3.5			-3.6			-22.7			-73.3	
	LrD	36.2		24.3			32.4			17.2			20.4			27.3			30.3			25.4			8.2			-35.7	
Receive -434,185 Fl G		LrD,lim	59	dB(A	LrD	57.1	dB(A	Sigma(LrD	0.0	dB(A																			
	LrD	-11.4											-11.4																
Drive Thru 1	LrD	19.0	6.7	8.7	7.1	8.8	14.3	10.8	3.5	0.0	-2.6	-0.6	2.8	2.8	1.3	-0.7	-1.3	0.4	-0.2	-2.1	-3.7	-6.6	-12.2	-19.7	-31.2	-46.3			
Facade 01	LrD	-12.5					-23.7			-15.0			-17.6			-25.2			-33.4			-55.1							
Facade 01	LrD						-57.4			-45.9			-43.7			-42.0			-50.3			-66.5							
Facade 02	LrD						-95.6			-88.5			-89.4																
Facade 02	LrD	-23.5					-34.7			-26.1			-28.5			-36.3			-44.8			-67.1							
Facade 03	LrD						-91.4			-87.4																			
Facade 03	LrD	-5.6					-17.3			-8.1			-10.5			-18.6			-28.4			-52.4							
Facade 04	LrD						-82.7			-76.2																			
Facade 04	LrD	-10.8					-22.4			-13.2			-15.9			-24.0			-33.3			-56.6							
Roof 01	LrD	-5.8					-17.9			-8.4			-10.7			-18.8			-28.8			-52.8							
Roof 01	LrD	-21.6					-44.7			-30.3			-26.4			-24.8			-34.9			-53.0							
Transmissive area 01	LrD	16.9					-4.7			5.2			11.8			11.9			11.7			-2.3							
Transmissive area 01	LrD	33.1					-6.5			9.2			22.1			30.9			27.6			18.6							
Transmissive area 02	LrD	31.4					10.6			21.2			27.6			26.5			23.2			8.2							
Transmissive area 03	LrD	19.1					-16.9			-3.1			8.3			16.4			14.3			5.0							
Vac 1	LrD	-11.2	-31.5	-25.1	-18.9	-20.9	-18.7	-18.4	-24.0	-25.6	-27.0	-30.0	-32.6	-31.3	-30.8	-30.7	-28.3	-27.7	-27.8	-30.3	-26.4	-26.9	-30.0	-34.1	-41.9	-56.9	-75.8		
Vac 2	LrD	-11.0	-31.4	-25.1	-18.9	-20.8	-18.6	-18.3	-23.9	-25.5	-26.9	-29.9	-32.5	-31.3	-30.7	-30.6	-28.2	-27.6	-27.6	-30.1	-26.2	-26.7	-29.7	-33.7	-41.4	-56.2	-74.8		
Vac 3	LrD	-10.9	-31.3	-25.0	-18.8	-20.6	-18.5	-18.2	-23.8	-25.4	-26.8	-29.9	-32.4	-31.2	-30.6	-30.5	-28.1	-27.5	-27.5	-29.9	-26.0	-26.5	-29.4	-33.3	-40.9	-55.5	-73.8	-99.9	
Vac 4	LrD	-10.8	-31.2	-24.9	-18.7	-20.5	-18.4	-18.1	-23.7	-25.3	-26.8	-29.8	-32.3	-31.1	-30.5	-30.4	-28.0	-27.4	-27.3	-29.7	-25.8	-26.2	-29.1	-32.9	-40.3	-54.8	-72.8	-98.5	
Vac 5	LrD	-10.7	-31.2	-24.8	-18.6	-20.4	-18.3	-18.0	-23.6	-25.2	-26.7	-29.7	-32.2	-31.0	-30.5	-30.3	-28.0	-27.3	-27.2	-29.6	-25.6	-26.0	-28.8	-32.5	-39.8	-54.0	-71.8	-97.2	
Vac 6	LrD	-10.6	-31.1	-24.8	-18.6	-20.3	-18.2	-17.9	-23.5	-25.2	-26.6	-29.6	-32.1	-30.9	-30.4	-30.2	-27.9	-27.2	-27.0	-29.4	-25.4	-25.8	-28.5	-32.2	-39.3	-53.3	-70.8	-95.8	

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 7	LrD	-10.5	-31.0	-24.7	-18.5	-20.2	-18.1	-17.8	-23.4	-25.1	-26.5	-29.5	-32.0	-30.8	-30.3	-30.1	-27.8	-27.0	-26.8	-29.2	-25.2	-25.5	-28.2	-31.8	-38.8	-52.6	-69.8	-94.4
Vac 8	LrD	-10.4	-30.9	-24.6	-18.4	-20.1	-18.0	-17.7	-23.4	-25.0	-26.4	-29.4	-31.9	-30.7	-30.2	-30.0	-27.7	-26.8	-26.7	-29.0	-25.0	-25.3	-27.9	-31.4	-38.2	-51.8	-68.8	-93.0
Vac 9	LrD	-10.3	-30.8	-24.5	-18.3	-20.0	-17.9	-17.6	-23.3	-24.9	-26.3	-29.3	-31.8	-30.6	-30.1	-29.9	-27.6	-26.7	-26.5	-28.8	-24.8	-25.0	-27.6	-31.0	-37.7	-51.1	-67.7	-91.7
Vac 10	LrD	-10.1	-30.8	-24.5	-18.3	-19.9	-17.8	-17.5	-23.2	-24.8	-26.2	-29.2	-31.7	-30.5	-30.0	-29.9	-27.5	-26.5	-26.3	-28.6	-24.6	-24.8	-27.3	-30.6	-37.1	-50.4	-66.7	-90.3
Vac 11	LrD	-10.0	-30.7	-24.4	-18.2	-19.8	-17.7	-17.4	-23.1	-24.7	-26.1	-29.1	-31.7	-30.4	-29.9	-29.8	-27.4	-26.4	-26.1	-28.4	-24.3	-24.5	-26.9	-30.1	-36.6	-49.6	-65.7	-88.9
Vac 12	LrD	-9.9	-30.6	-24.3	-18.1	-19.7	-17.6	-17.3	-23.0	-24.6	-26.0	-29.0	-31.6	-30.3	-29.9	-29.7	-27.3	-26.2	-26.0	-28.2	-24.1	-24.2	-26.6	-29.8	-36.1	-48.9	-64.7	-87.5
Vac 13	LrD	-9.8	-30.5	-24.3	-18.1	-19.6	-17.5	-17.2	-22.9	-24.5	-25.9	-28.9	-31.5	-30.2	-29.8	-29.6	-27.2	-26.0	-25.8	-28.0	-23.9	-24.0	-26.3	-29.3	-35.5	-48.1	-63.7	-86.1
Vac 14	LrD	-9.7	-30.5	-24.2	-18.0	-19.5	-17.4	-17.1	-22.8	-24.4	-25.9	-28.9	-31.4	-30.2	-29.7	-29.5	-27.1	-25.8	-25.6	-27.9	-23.7	-23.7	-26.0	-28.9	-35.0	-47.4	-62.7	-84.8
Vac 15	LrD	-9.5	-30.4	-24.1	-17.9	-19.4	-17.3	-17.0	-22.7	-24.3	-25.7	-28.7	-31.3	-30.0	-29.6	-29.4	-27.0	-25.7	-25.4	-27.7	-23.4	-23.5	-25.7	-28.5	-34.4	-46.7	-61.6	-83.4
Vac 16	LrD	-9.4	-30.3	-24.0	-17.8	-19.3	-17.2	-16.9	-22.6	-24.2	-25.6	-28.6	-31.1	-29.9	-29.5	-29.3	-26.9	-25.5	-25.2	-27.5	-23.2	-23.2	-25.4	-28.1	-33.9	-45.9	-60.6	-82.0
Vac 18	LrD	-9.1	-30.1	-23.8	-17.7	-19.0	-16.9	-16.6	-22.4	-24.0	-25.4	-28.4	-30.9	-29.7	-29.2	-29.1	-26.7	-25.2	-24.9	-27.1	-22.9	-22.8	-24.8	-27.4	-33.0	-44.7	-59.0	-79.7
Vac 19	LrD	-3.6	-25.6	-19.0	-12.5	-13.4	-11.1	-10.6	-16.1	-17.6	-18.9	-21.9	-24.3	-23.0	-22.7	-22.4	-20.0	-19.2	-19.8	-22.9	-19.4	-20.1	-22.6	-24.7	-29.3	-39.8	-52.3	-70.7
Vac 20	LrD	-3.7	-25.7	-19.0	-12.6	-13.5	-11.2	-10.7	-16.2	-17.7	-19.0	-22.0	-24.4	-23.1	-22.8	-22.5	-20.1	-19.3	-19.9	-23.0	-19.5	-20.2	-22.8	-24.9	-29.6	-40.2	-52.9	-71.5
Vac 21	LrD	-3.8	-25.8	-19.2	-12.7	-13.6	-11.3	-10.8	-16.4	-17.8	-19.2	-22.1	-24.6	-23.2	-22.9	-22.7	-20.2	-19.4	-20.0	-23.1	-19.7	-20.3	-22.6	-24.6	-29.3	-39.8	-52.3	-70.7
Vac 22	LrD	-4.0	-25.9	-19.3	-12.8	-13.7	-11.4	-10.9	-16.5	-18.0	-19.3	-22.2	-24.7	-23.4	-23.0	-22.8	-20.3	-19.5	-20.2	-23.2	-19.8	-20.4	-22.8	-24.9	-29.6	-40.2	-52.9	-71.5
Vac 23	LrD	-3.5	-25.8	-19.2	-12.8	-13.6	-11.3	-10.9	-16.4	-17.9	-19.2	-22.2	-24.6	-23.3	-21.1	-20.9	-18.4	-17.7	-18.3	-21.5	-18.1	-18.9	-21.5	-23.9	-28.8	-39.6	-52.2	-70.7
Vac 24	LrD	-3.6	-25.9	-19.3	-12.8	-13.7	-11.4	-11.0	-16.5	-18.0	-19.3	-22.3	-24.7	-23.4	-21.1	-20.9	-18.5	-17.7	-18.4	-21.5	-18.2	-19.0	-21.6	-24.1	-29.1	-39.9	-52.8	-71.5
Vac 25	LrD	-3.6	-25.9	-19.3	-12.8	-13.7	-11.4	-10.9	-16.5	-18.0	-19.3	-22.2	-24.7	-23.4	-21.1	-20.9	-18.5	-17.7	-18.4	-21.0	-17.7	-18.6	-21.3	-23.8	-28.8	-39.6	-52.3	-70.8
Vac 26	LrD	-3.7	-26.0	-19.3	-12.9	-13.8	-11.5	-11.0	-16.6	-18.1	-19.4	-22.3	-24.8	-23.5	-21.2	-21.0	-18.5	-17.8	-18.5	-21.1	-17.8	-18.7	-21.5	-24.0	-29.1	-40.0	-52.8	-71.6
Vac 27	LrD	-7.0	-29.2	-22.9	-16.8	-17.9	-15.8	-15.5	-21.2	-22.9	-24.3	-27.3	-29.8	-28.5	-23.8	-23.6	-21.2	-20.2	-20.4	-22.4	-18.7	-19.1	-21.4	-23.9	-28.9	-39.7	-52.4	-71.0
Vac 28	LrD	-7.1	-29.3	-23.0	-16.9	-18.0	-15.9	-15.6	-21.4	-23.0	-24.4	-27.4	-29.9	-28.6	-23.8	-23.6	-21.2	-20.2	-20.5	-22.4	-18.7	-19.2	-21.5	-24.1	-29.2	-40.1	-53.0	-71.7
Vac 29	LrD	-7.9	-29.3	-23.1	-16.9	-18.0	-15.9	-15.6	-21.4	-23.0	-24.4	-27.4	-29.9	-28.7	-28.3	-28.1	-25.7	-24.0	-23.7	-24.5	-20.5	-20.5	-22.5	-24.7	-29.5	-40.0	-52.6	-71.1
Vac 30	LrD	-8.0	-29.4	-23.1	-17.0	-18.1	-16.0	-15.7	-21.5	-23.1	-24.5	-27.5	-30.0	-28.8	-28.4	-28.2	-25.8	-24.1	-23.8	-24.6	-20.6	-20.7	-22.7	-24.9	-29.8	-40.5	-53.2	-71.9
Vac 31	LrD	-8.1	-29.4	-23.2	-17.0	-18.1	-16.0	-15.7	-21.5	-23.1	-24.5	-27.5	-30.0	-28.8	-28.4	-28.2	-25.7	-24.0	-23.7	-25.8	-21.4	-21.1	-22.8	-24.8	-29.6	-40.1	-52.7	-71.2
Vac 32	LrD	-8.3	-29.5	-23.2	-17.1	-18.2	-16.1	-15.9	-21.6	-23.2	-24.6	-27.6	-30.2	-28.9	-28.5	-28.3	-25.9	-24.2	-23.8	-25.9	-21.5	-21.2	-23.0	-25.1	-29.9	-40.6	-53.3	-72.1
Vac 33	LrD	-8.1	-29.3	-23.0	-16.9	-18.1	-16.0	-15.7	-21.5	-23.1	-24.5	-27.5	-30.0	-28.8	-28.4	-28.2	-25.8	-24.1	-23.7	-25.8	-21.4	-21.1	-22.8	-24.9	-29.6	-40.2	-52.8	-71.4
Vac 34	LrD	-8.3	-29.4	-23.2	-17.0	-18.2	-16.1	-15.9	-21.6	-23.2	-24.6	-27.6	-30.2	-28.9	-28.5	-28.4	-25.9	-24.2	-23.9	-26.0	-21.6	-21.3	-23.0	-25.2	-30.0	-40.7	-53.5	-72.3
	LrD	15.2		8.3			13.0			1.3			2.7			1.1			2.5			-3.8			-22.9			-73.8
	LrD	17.8		11.8			15.7			3.4			4.5			1.4			1.8			-4.8			-25.0			-78.8
	LrD	19.1		12.9			17.1			4.6			5.6			2.5			2.9			-3.2			-21.8			-70.9
	LrD	14.8		8.1			12.6			1.1			2.5			-0.6			0.3			-6.8			-29.0			-89.1
	LrD	14.9		8.2			12.7			1.2			2.6			-0.5			0.4			-6.7			-28.9			-88.8
	LrD	15.5		8.7			13.3			1.7			3.1			0.2			1.5			-5.2			-25.7			-80.8
	LrD	26.0		18.4			24.3			11.8			12.2			10.0			10.1			5.5			-7.3			-38.4
	LrD	55.9		41.7			51.3			41.7			46.0			47.9			48.8			45.8			38.5			22.2
	LrD	19.5		12.3			17.4			5.8			7.3			4.3			5.6			-0.9			-18.0			-62.1

7-11 Elsinore Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
	LrD	20.6		14.1			18.8			6.2			7.0			3.8			4.2			-1.5			-18.5			-63.1	
	LrD	21.5		15.0			19.6			7.0			8.0			4.8			5.8			0.3			-15.4			-55.8	
	LrD	21.8		15.2			19.9			7.4			8.5			5.4			6.4			1.2			-13.8			-52.2	
	LrD	13.3		6.9			11.1			-0.2			1.2			-2.0			-1.6			-9.7			-35.4				
	LrD	38.9		25.8			35.0			26.5			30.5			30.2			30.7			25.9			14.4			-11.0	
	LrD	27.8		19.3			26.2			15.1			16.0			12.6			10.6			5.9			-6.2			-35.5	
	LrD	17.3		11.1			15.3			2.9			3.4			-0.1			-0.9			-8.6			-32.8			-98.8	
	LrD	17.6		11.5			15.6			3.1			3.7			0.3			0.0			-7.3			-30.1			-91.9	
	LrD	18.3		12.0			16.5			4.0			4.3			0.8			0.3			-6.8			-29.1			-89.2	
	LrD	19.6		12.9			17.8			5.5			5.6			1.8			1.5			-5.1			-25.6			-80.4	
	LrD	17.9		10.8			15.7			5.0			6.6			3.5			2.9			-5.4			-31.8				
	LrD	14.3		7.8			12.1			0.7			2.1			-1.1			-0.5			-8.0			-31.6			-95.8	
	LrD	22.8		15.9			21.1			8.4			8.9			5.6			6.0			0.8			-14.2			-52.8	
	LrD	50.3		35.5			45.2			35.2			39.8			42.7			44.1			40.8			32.6			13.9	
	LrD	19.2		12.6			17.5			5.1			5.2			1.5			1.2			-5.6			-26.6			-82.9	

Appendix D:

Traffic Noise Modeling Output

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: Corydon Development
ROADWAY Corydon St
SEGMENT West of Mission Trl
LOCATION: City of Lake Elsinore SCENARIO: Existing

JOB #: 0641-19-01
DATE: 21-Jan-20
ENGINEER: R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	16,776
SPEED =	50
PK HR % =	10
NEAR LANE/FAR LANE DIST =	44
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,678

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL =	0 FT
AMBIENT =	0
BARRIER =	0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.105	0.974
MEDIUM TRUCKS	0.489	0.022	0.489	0.018
HEAVY TRUCKS	0.473	0.054	0.473	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	45.0	- -
MEDIUM TRUCKS=	4.00	44.9	- -
HEAVY TRUCKS =	8.01	45.0	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.3	68.3	67.0	61.0	69.4	70.1
MEDIUM TRUCKS	60.8	56.9	49.4	58.1	64.3	64.4
HEAVY TRUCKS	61.0	57.0	53.6	58.3	64.5	64.5
VEHICULAR NOISE	71.2	68.9	67.3	64.1	71.5	**72.0**

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	68	145	313	675
LDN	63	136	294	633

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: Corydon Development
ROADWAY Mission Tr
SEGMENT South of Corydon St
LOCATION: City of Lake Elsinore SCENARIO: Existing

JOB #: 0641-19-01
DATE: 21-Jan-20
ENGINEER: R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	15,504
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	12
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,550

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL =	0 FT
AMBIENT =	0
BARRIER =	0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.105	0.974
MEDIUM TRUCKS	0.489	0.022	0.489	0.018
HEAVY TRUCKS	0.473	0.054	0.473	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.7	- -
MEDIUM TRUCKS=	4.00	49.6	- -
HEAVY TRUCKS =	8.01	49.7	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.0	66.0	64.7	58.7	67.1	67.7
MEDIUM TRUCKS	59.1	55.2	47.7	56.4	62.6	62.6
HEAVY TRUCKS	59.6	55.6	52.2	56.8	63.0	63.1
VEHICULAR NOISE	69.1	66.7	65.0	62.2	69.5	**69.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	49	107	230	495
LDN	47	100	216	465

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: Corydon Development
ROADWAY Corydon St
SEGMENT West of Mission Trl
LOCATION: City of Lake Elsinore SCENARIO: E+P

JOB #: 0641-19-01
DATE: 14-Sep-20
ENGINEER: R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	18,074
SPEED =	50
PK HR % =	10
NEAR LANE/FAR LANE DIST =	44
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,807

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL =	0 FT
AMBIENT =	0
BARRIER =	0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.105	0.974
MEDIUM TRUCKS	0.489	0.022	0.489	0.018
HEAVY TRUCKS	0.473	0.054	0.473	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	45.0	- -
MEDIUM TRUCKS=	4.00	44.9	- -
HEAVY TRUCKS =	8.01	45.0	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.7	68.7	67.3	61.3	69.7	70.4
MEDIUM TRUCKS	61.1	57.2	49.8	58.5	64.6	64.7
HEAVY TRUCKS	61.4	57.3	53.9	58.6	64.8	64.9
VEHICULAR NOISE	71.6	69.2	67.6	64.4	71.9	**72.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	71	153	329	710
LDN	67	143	309	665

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: Corydon Development
ROADWAY Mission Tr
SEGMENT South of Corydon St
LOCATION: City of Lake Elsinore SCENARIO: E+P

JOB #: 0641-19-01
DATE: 14-Sep-20
ENGINEER: R. Pearson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	16,838
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	12
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,684

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL =	0 FT
AMBIENT =	0
BARRIER =	0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.105	0.974
MEDIUM TRUCKS	0.489	0.022	0.489	0.018
HEAVY TRUCKS	0.473	0.054	0.473	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.7	- -
MEDIUM TRUCKS=	4.00	49.6	- -
HEAVY TRUCKS =	8.01	49.7	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.4	66.4	65.1	59.1	67.5	68.1
MEDIUM TRUCKS	59.4	55.5	48.1	56.8	63.0	63.0
HEAVY TRUCKS	60.0	55.9	52.5	57.2	63.4	63.5
VEHICULAR NOISE	69.4	67.1	65.4	62.6	69.9	**70.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	52	113	243	523
LDN	49	106	228	492

Appendix E:

Construction Noise Modeling Output

Activity	L_{eq} at 50 feet dBA	L_{Max} at 50 feet dBA
Grading	90	94
Building Construction	85	89
Paving	85	89

Equipment Summary	Reference (dBA) 50 ft Lmax
Rock Drills	96
Jack Hammers	82
Pneumatic Tools	85
Pavers	80
Dozers	85
Scrappers	87
Haul Trucks	88
Cranes	82
Portable Generators	80
Rollers	80
Tractors	80
Front-End Loaders	86
Hydraulic Excavators	86
Graders	85
Air Compressors	86
Trucks	86

Grading

		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Leq	Energy
1	Grader	85	1	40	50	0.5	0	85.0	81.0	126491106
2	Dozer	85	1	40	50	0.5	0	85.0	81.0	126491106
3	Tractor/Backhoe	80	2	40	50	0.5	0	83.0	79.0	80000000
4	Excavators	86	2	40	50	0.5	0	89.0	85.0	318485736
5	Scrapers	87	2	40	50	0.5	0	90.0	86.0	400949787
							Lmax*	**94**	**Leq**	**90**
							Lw	**126**	**Lw**	**122**

Source: MD Acoustics, Feb 2019.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**90**	**89**	**88**	**87**	**86**	**85**	**84**	**83**	**82**	**81**	**80**	**79**	**78**	**77**	**76**	**75**
60	18.3	0.5	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73
70	21.3	0.5	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
80	24.4	0.5	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70
90	27.4	0.5	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69
100	30.5	0.5	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68
110	33.5	0.5	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67
120	36.6	0.5	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66
130	39.6	0.5	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
140	42.7	0.5	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
150	45.7	0.5	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63
160	48.8	0.5	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63
170	51.8	0.5	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62
180	54.9	0.5	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
190	57.9	0.5	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
200	61.0	0.5	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
210	64.0	0.5	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
220	67.1	0.5	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59
230	70.1	0.5	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59
240	73.1	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
250	76.2	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
260	79.2	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
270	82.3	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
280	85.3	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
290	88.4	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
300	91.4	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
310	94.5	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
320	97.5	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
330	100.6	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
340	103.6	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
350	106.7	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
360	109.7	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
370	112.8	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53

Building Construction

		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
								Calculated (dBA)		
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Lmax	Leq	Energy
1	Cranes	82	1	40	50	0.5	0	82.0	78.0	63395727.7
2	Forklift/Tractor	80	3	40	50	0.5	0	84.8	80.8	120000000
3	Generator	80	1	40	50	0.5	0	80.0	76.0	40000000
4	Tractor/Backhoe	80	3	40	50	0.5	0	84.8	80.8	120000000
							Lmax*	**89**	**Leq**	**85**
							Lw	**121**	**Lw**	**117**

Source: MD Acoustics, Feb 2019.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**85**	**84**	**83**	**82**	**81**	**80**	**79**	**78**	**77**	**76**	**75**	**74**	**73**	**72**	**71**	**70**
60	18.3	0.5	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68
70	21.3	0.5	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67
80	24.4	0.5	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
90	27.4	0.5	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
100	30.5	0.5	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63
110	33.5	0.5	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62
120	36.6	0.5	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
130	39.6	0.5	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
140	42.7	0.5	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59
150	45.7	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
160	48.8	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
170	51.8	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
180	54.9	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
190	57.9	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
200	61.0	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
210	64.0	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
220	67.1	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
230	70.1	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
240	73.1	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
250	76.2	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
260	79.2	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
270	82.3	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
280	85.3	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
290	88.4	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
300	91.4	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
310	94.5	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
320	97.5	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
330	100.6	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
340	103.6	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
350	106.7	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
360	109.7	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
370	112.8	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

Paving

		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Leq	Energy
1	Pavers	86	1	40	50	0.5	0	86.0	82.0	159242868
2	Rollers	80	2	40	50	0.5	0	83.0	79.0	80000000
3	Paving Equipment	80	2	40	50	0.5	0	83.0	79.0	80000000
Source: MD Acoustics, January 2019.							**Lmax***	**89**	**Leq**	**85**
1- Percentage of time that a piece of equipment is operating at full power.							**Lw**	**121**	**Lw**	**117**

dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**85**	**84**	**83**	**82**	**81**	**80**	**79**	**78**	**77**	**76**	**75**	**74**	**73**	**72**	**71**	**70**
60	18.3	0.5	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68
70	21.3	0.5	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66
80	24.4	0.5	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
90	27.4	0.5	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
100	30.5	0.5	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63
110	33.5	0.5	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
120	36.6	0.5	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61
130	39.6	0.5	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
140	42.7	0.5	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59
150	45.7	0.5	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58
160	48.8	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
170	51.8	0.5	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57
180	54.9	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
190	57.9	0.5	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56
200	61.0	0.5	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
210	64.0	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
220	67.1	0.5	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
230	70.1	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
240	73.1	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
250	76.2	0.5	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53
260	79.2	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
270	82.3	0.5	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
280	85.3	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
290	88.4	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
300	91.4	0.5	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
310	94.5	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
320	97.5	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
330	100.6	0.5	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50
340	103.6	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
350	106.7	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
360	109.7	0.5	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
370	112.8	0.5	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48

VIBRATION LEVEL IMPACT

Project:	Corydon Lake Elsinore	Date: 1/22/20
Source:	Large Bulldozer	
Scenario:	Unmitigated	
Location:	Project Site	
Address:		

PPV = PPVref(25/D)^n (in/sec)

DATA INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN BLUE
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	50.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.042**	IN/SEC	OUTPUT IN RED