Quick Quack Car Wash (Store #33-070)

Noise Impact Study

City of Salinas, CA

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TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

1.0 Executive Summary

This report has been prepared to provide the calculated noise projections from the proposed Quick Quack Car Wash ("Project") located at the Northridge Shopping Center in the City of Salinas, CA. All calculations are compared to the City of Salinas' noise ordinance and General Plan as well as the existing ambient condition. The Project proposes to construct a 108-foot car wash tunnel with 22 vacuum stalls.

1.1 Findings and Conclusions

Three (3) baseline 15-minute ambient measurements were performed at or near the Project site and represent the current operational noise and ambient levels within the Project vicinity. The predominant source of noise impacting the existing site is traffic noise propagating from Madrid Street.

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

Project-only daytime operational noise levels are anticipated to be 52 to 60 dBA CNEL at the nearest residential land uses and 51 dBA CNEL at the nearest commercial land uses. The "project-only" noise projections to the adjacent uses do not exceed the City's noise level limits as outlined within the City's Municipal Code (see Section 4.3). Project plus ambient noise level projections will increase the ambient noise level by up to 0 decibels at residential uses and up to 1 decibel at commercial uses, which is less than significant. This assessment evaluates the baseline noise condition and compares the Project's worst-case operational noise level to the measured noise level.

The following outlines the project design features:

1. The Project will incorporate a 120 HP IDC Predator blower system or equivalent to meet these acoustical benchmarks.

2.0 Introduction

2.1 Purpose of Analysis and Study Objectives

This noise impact study aims to evaluate the potential noise impacts for the Project study area and recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to potentially applicable noise standards set forth by the State and/or local agencies. Consistent with the City's Noise Guidelines, the Project must demonstrate compliance with the applicable noise zoning ordinance and sound attenuation requirements.

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 impact (e.g., blowers and vacuums) from the Project site to adjacent land uses

2.2 Site Location and Study Area

The Project site is located at the Northridge Shopping Center in the City of Salinas, CA, as shown in Exhibit A. The land zoning directly surrounding the Project is commercial to the north and east, and high density residential to the south and west. Madrid Street is to the south and Main Street is to the east.

2.3 Proposed Project Description

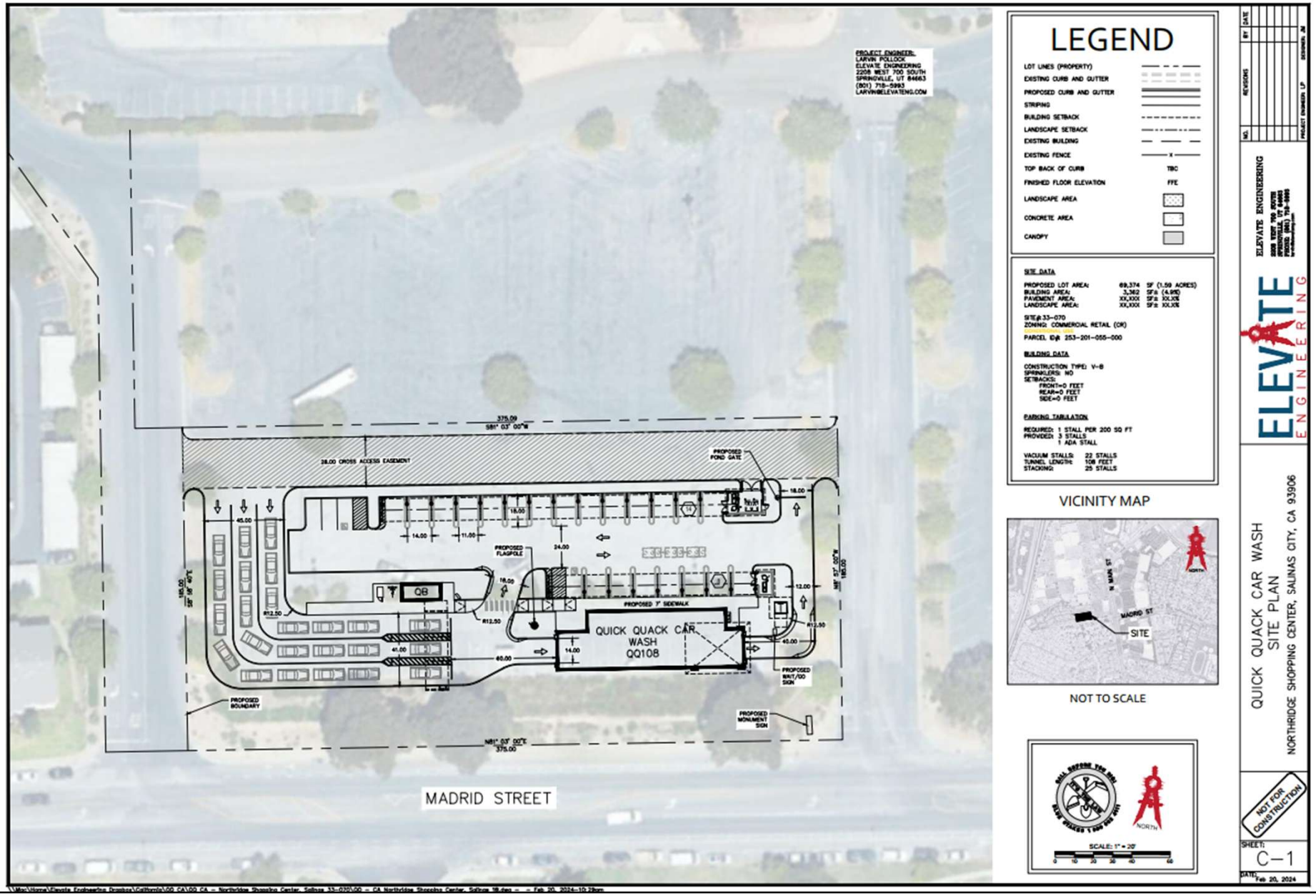
The Project proposes to develop a 108-foot car wash tunnel and 22 covered vacuum stall systems. The site plan used for this is illustrated in Exhibit B. The Project operational hours are assumed to be between 7 AM to 9 PM, seven days per week.

Exhibit A

Location Map

Exhibit B

Site Plan



3.0 Fundamentals of Noise

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

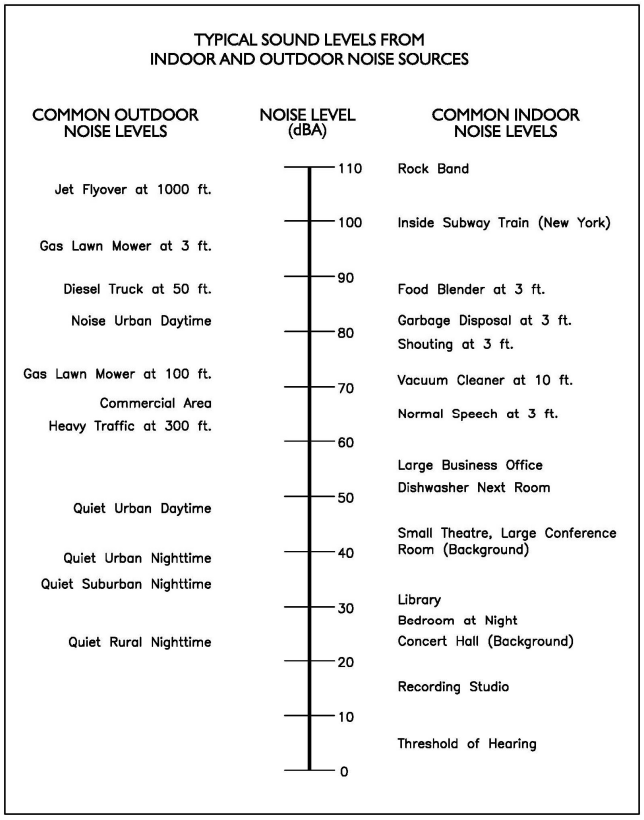
3.1 Sound, Noise, and Acoustics

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 the 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.

3.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and *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 at 20 Hz to the high pitch of 20,000 Hz.

Exhibit C: Typical A-Weighted Noise Levels



3.3 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 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 reference sound levels for different noise sources.

3.4 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.

3.5 Human Response to Changes in Noise Levels

Generally, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (A-weighted scale). 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). Typically, the human ear can barely perceive the change in the 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 traffic volume on a highway) would result in a barely perceptible change in sound level.

3.6 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 the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after the 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, L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, 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.

3.7 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 at least 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact how far sound can travel.

4.0 Regulatory Setting

The proposed Project is located in the City of Salinas, 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) was originally 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 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 the compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 of the California Building Code (CBC), 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 usually recognizes 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.

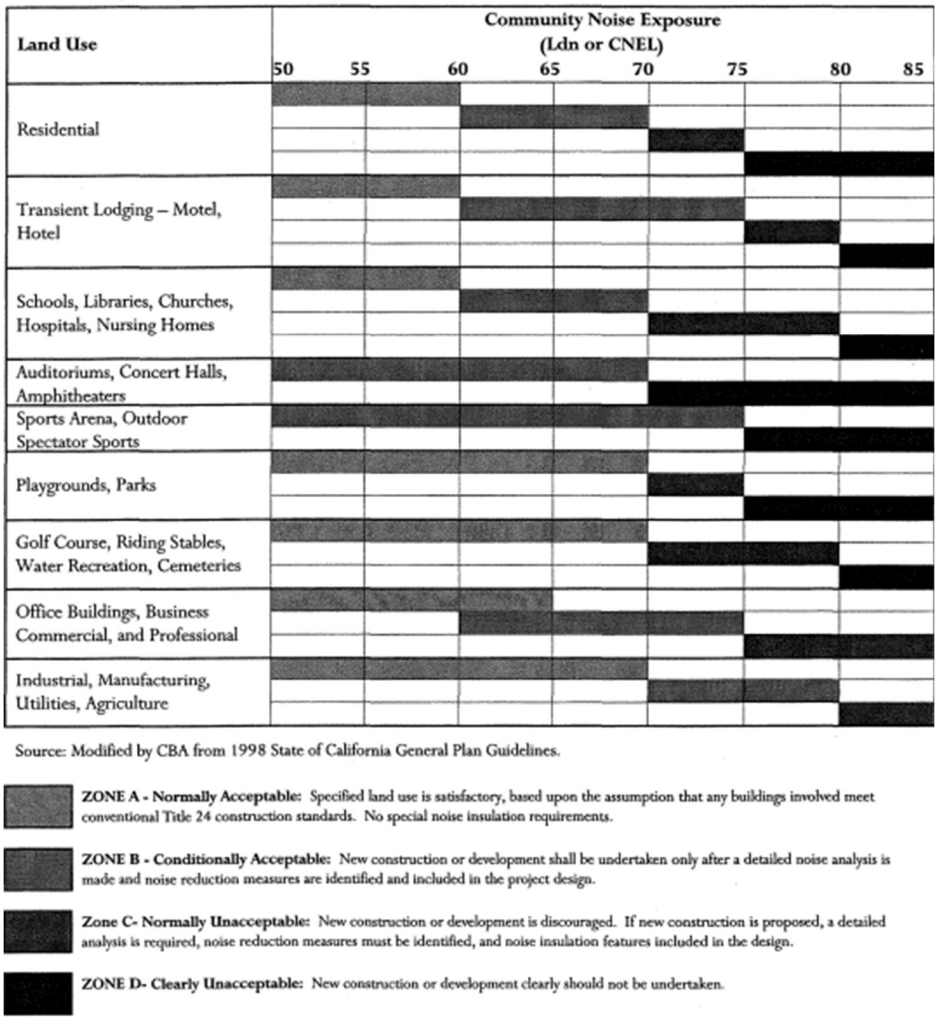
4.3 City of Salinas Noise Regulations

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

City of Salinas General Plan

Applicable policies and standards governing environmental noise in the City are set forth in the General Plan's Noise Element. Table NE-3 (Exhibit D of this report) of the City's Noise Element outlines the exterior noise standards for community noise environments.

Exhibit D: Noise/Land Use Compatibility Matrix



Source: Modified by CBA from 1998 State of California General Plan Guidelines.

ZONE A - Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

ZONE B - Conditionally Acceptable: New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.

Zone C- Normally Unacceptable: New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

ZONE D- Clearly Unacceptable: New construction or development clearly should not be undertaken.

In addition to the noise standards, the City has outlined goals, policies, and implementation measures to reduce potential noise impacts, which are presented below:

Goals and Policies
Goals and policies from the Noise Element that would mitigate potential impacts on noise include the following.

Goal N-1: Minimize the adverse effects of noise through proper land use planning.

Policies:

- **Policy N-1.1:** Ensure that new development can be made compatible with the noise environment by using noise/land use compatibility standards and the Noise Contours Map as a guide for future planning and development decisions.
- **Policy N-1.2:** Require the inclusion of noise-reducing design features in development and reuse/revitalization projects to address the impact of noise on residential development.
- **Policy N-1.4:** Ensure proposed development meets Title 24 Noise Insulation Standards for construction.

Goal N-3: Minimize non-transportation related noise impacts.

Policies:

- **Policy N-3.1:** Enforce the City of Salinas Noise Ordinance to ensure stationary noise sources and noise emanating from construction activities, private developments/residences and special events are minimized.

City of Salinas Municipal Code
Chapter 5 Article XII in the Municipal Code outlines the City's exterior noise limits as it relates to stationary noise sources.

Sec. 5-12.01. - **Disturbing the peace prohibited; Purpose and intent of article.**

It is the intent of this article to prohibit all noises which are disturbing or unreasonably loud. The purpose of this article is to strike a balance between normal, everyday noises that are unavoidable in an urban environment and those noises that are so excessive and annoying to persons of ordinary sensitivity that they must be curtailed in order to protect the comfort and the tranquility of all persons who live and work in the city. To those ends, no person shall disturb the peace, quiet, and comfort of any neighborhood by creating therein any disturbing or unreasonably loud noise.

Sec. 5-12.02. – Prohibited noises—General standard.

Unless otherwise permitted in this article, it shall be unlawful for any person to willfully or negligently make or continue, or cause to be made or continued, or permit or allow to be made or continued any noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to a reasonable person of normal sensitivity in the area.

"Noise disturbance," for purposes of this article means any sound which (a) endangers or injures the safety or health of human beings or animals or (b) annoys or disturbs reasonable persons of normal sensitivities or (c) endangers or injures persons or real property or (d) violates the factors set forth in this section.

Except as may otherwise be specifically permitted in this Municipal Code, no permit shall be issued for any activity that may violate this section.

When considering whether a noise, sound, or vibration is unreasonable within the meaning of this section, the following factors shall be taken into consideration:

(a) The volume and the intensity of the noise, particularly as it is experienced within a residence or a place of business;

(b) Whether the noise is prolonged and continuous;

(c) How the noise contrasts with the ambient noise level;

(d) The proximity of the noise source to residential and to commercial uses;

(e) The time of day;

(f) The anticipated duration of the noise;

(g) Whether the noise is natural or unnatural; and

(h) Any other relevant circumstances or conditions.

Sec. 37-50.180. – Performance standards.

The following performance standards shall apply to all use classifications in all zoning districts:

(a) Noise. No use shall create ambient noise levels which exceed the following standards (see Table 37-50.50), as measured at the property boundary:

(1) Duration and Timing. The noise standards in Table 37-50.50 shall be modified as follows to account for the effects of time and duration on the impact of noise levels:

(A) In residential zones, the noise standard shall be 5.0 dBA lower between 9:00 p.m. and 7:00 a.m.

Table 1: Maximum Noise Standards

Zone of Property Receiving Noise	Maximum Noise Level (CNEL, dBA)
Agricultural District	70 dBA
Residential Districts	60 dBA
Commercial Districts	65 dBA
Industrial Districts	70 dBA
Mixed Use Districts	65 dBA
Parks/Open Space Districts	70 dBA
Public/Semipublic District	60 dBA

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

MD conducted three (3) short-term 15-minute noise measurements near the Project site, representing the noise level from the traffic conditions along Madrid Street (see Appendix A for the field sheet data).

5.2 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 (vacuums and car wash blowers at the exit). The SP model assumes a total of 22 vacuums and the dryer systems are operating simultaneously (worst-case scenario) when the noise will, in reality, be intermittent and lower in noise level. In addition, the modeling takes into account the louver, windows, and openings on the car wash tunnel based on the plan elevations. The reference vacuum equipment and blower system sound level data are provided in Appendix C.

All other noise-producing equipment (e.g., compressors, pumps) will be housed within mechanical equipment rooms.

The following outlines the project design features:

1. The Project will incorporate a 120 HP IDC Predator blower system or equivalent to meet these acoustical benchmarks.

6.0 Existing Noise Environment

Three (3) 15-minute ambient noise measurements were taken near the project site to determine the existing ambient noise levels. Noise data indicates that traffic along Madrid Street is the primary source of noise impacting the site and the surrounding area.

6.1 Short-Term Noise Measurement Results

The results of the 15-minute measurements are presented in Table 2.

Table 2: Short-Term Noise Measurement Data (dBA)

Location[1]	Start Time	Stop Time	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(90)	Estimated CNEL[2]
NM1	2:19 PM	2:34 PM	66.2	84.5	46.5	73.8	70.5	66.1	59.7	49.9	69.3
NM2	2:37 PM	2:52 PM	55.1	66.4	46.7	60.4	57.9	55.5	53.5	50.2	58.2
NM3	2:54 PM	3:09 PM	61.8	76.5	47.2	70.4	66.5	62.0	56.7	50.5	63.7

Notes:
[1.] Short-term noise monitoring locations are illustrated in Exhibit E.
[2.] CNEL estimated based off typical California traffic patterns. See Appendix A.

For this evaluation, MD has utilized the measured ambient noise levels of 55 to 66 dBA Leq and the estimated noise levels of 58 to 69 dBA CNEL for the surrounding land uses.

Exhibit E

Measurement Locations

= Short-term Monitoring Location

7.0 Future Noise Environment Impacts

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 noise sources on-site such as dryers/blowers and vacuums.

7.1 Stationary Source Noise

The following sections outline the exterior noise levels associated with the proposed Project.

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

Sensitive receptors affected by Project operational noise include surrounding residential uses to the south and west. The worst-case stationary noise was modeled using SoundPLAN acoustical modeling software. Worst-case assumes the blowers, vacuums, and equipment are always operational when in reality, the noise will be intermittent and cycle on/off depending on the customer usage.

A total of four (4) receptors (R1 – R4) were modeled to evaluate the proposed Project's operational impact. Receptors 1, 3, and 4 represent adjacent residential uses while Receptor 2 represents the commercial use to the north. This study analyzes the Project only operational noise level projections and the Project plus ambient noise level projections. Table 3 shows the CNEL (dBA) in the project vicinity as a result of daytime (7:00 a.m. to 9:00 p.m.) operations.

Table 3: Worst-Case Predicted Operational Noise Levels (dBA CNEL)

Receptor[1]	Existing Ambient Noise Level (dBA, CNEL)[2]	Project Noise Level (dBA, CNEL)[3]	Non Transp. Noise Limit (dBA, CNEL)	Total Combined Noise Level (dBA, CNEL)	Change in Noise Level as Result of Project
1	64	52	**60**	64	0
2	58	51	**65**	59	1
3	69	55	**60**	69	0
4	69	60	**60**	69	0

Notes:
1. Receptors 1, 3, and 4 represent residential uses, and Receptor 2 represents a commercial use.
2. See Appendix A for the ambient noise measurement and CNEL calculations.
3. See Exhibit F for the operational noise level projections at said receptors.

The model indicates that the project-only noise level will be 51 to 60 dBA CNEL at the residential receptors and meets the City's residential noise standard of 60 dBA CNEL. The project-only noise level is projected to be 51 dBA CNEL at the commercial receptor and meets the City's commercial noise standard of 65 dBA CNEL. The project plus ambient noise level will increase the existing ambient level by 0 dB at the residential receptors and 1 dB at the commercial receptor. Table 4 provides the characteristics associated with changes in noise levels.

Table 4: Change in Noise Level Characteristics

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

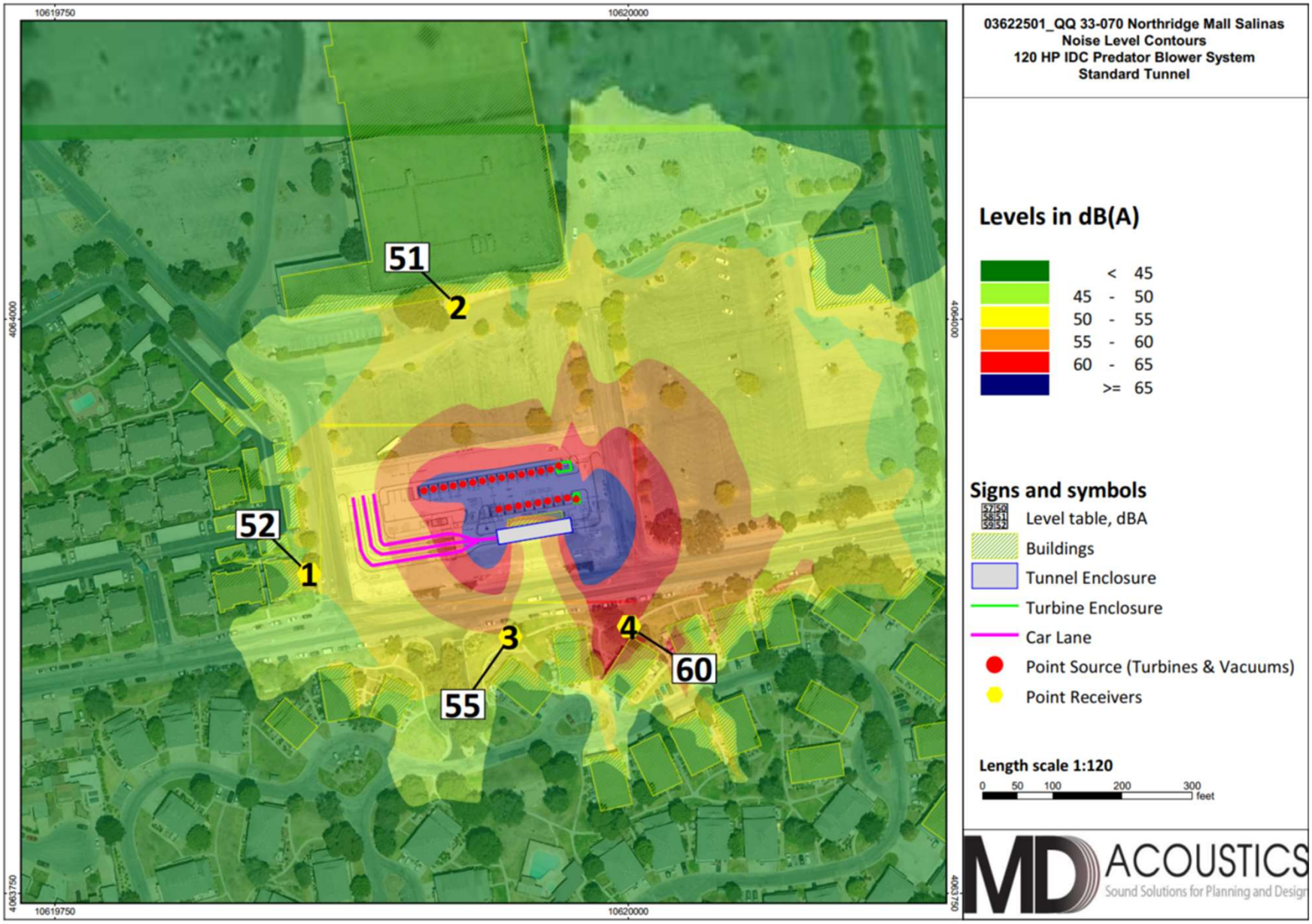
It takes a change of 3 dB for the human ear to perceive a difference. Therefore, the change in noise level would be "Not Perceptible" at residential and commercial receptors. Thus, the change in noise level will be less than significant.

The following outlines the project design features:

1. The Project will incorporate a 120 HP IDC Predator blower system or equivalent to meet these acoustical benchmarks.

Exhibit F

Operational Noise Levels Contours, dBA CNEL



8.0 References

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

City of Salinas: Noise Element of the General Plan

City of Salinas: Municipal Code Chapter 5 Article XII & Section 37-50.180.

Appendix A:

Field Measurement Data

15-Minute Continuous Noise Measurement Datasheet - NM1, NM2, NM3

Project Name:	QQ 33-070 1340 Northridge Mall
Project: #/Name:	0362-2025-001
Site Address/Location:	796 Northridge Dr Salinas, CA 93
Date:	01/14/2025
Field Tech/Engineer:	Joel Demir
Sound Meter:	831, Larson Davis **SN:** 0003715
Settings:	A-weighted, slow, 1-sec, 15-minute interval
Site Id:	NM1, NM2, NM3

Site Observations:

Sunny, low 60's. Little to no wind.
Notable sonic events:
NM1: Bus & loud truck around 2:22 pm, construction noises 275 ft away around 2:23-2:24 pm, car subwoofer around 2:27-2:28 pm & 2:33-2:34 pm, loud car exhaust around 2:31 pm. Car count for Madrid st: 108

NM2: Intermittent construction noise approximately 345 ft away throughout reading, jet plane around 2:43-2:44 pm, loud car exhaust and turbo prop plane around 2:45 pm, loud car exhaust around 2:48-2:49 pm, bus around 2:50 turbo prop plane around

NM3: Intermittent construction noise in background throughout, loud exhaust around 2:55 pm, car stereo Car count for parking lot entrance: 72

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15-Minute Continuous Noise Measurement Datasheet - Cont. - NM1, NM2, NM3

Project Name:	QQ 33-070 1340 Northridge Mall	**Calibrator:**	
Site Address/Location:	796 Northridge Dr Salinas, CA 93	**Cal Check: Pre-test:**	**Post Test:**
Site Id:	NM1, NM2, NM3		

Figure 1: NM1

Figure 2: NM2

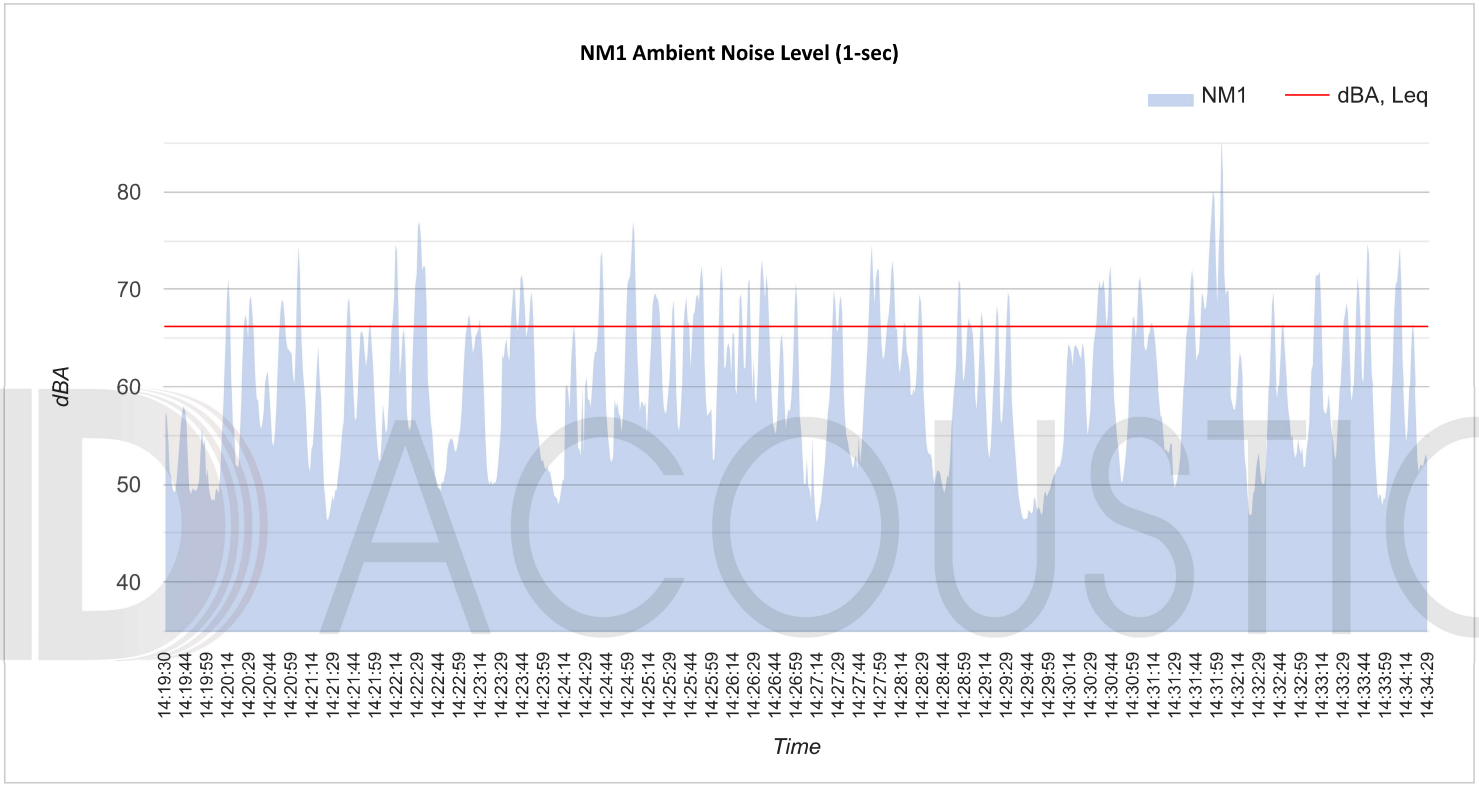
Figure 3: NM3

Table 1: Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
NM1	2:19 PM	2:34 PM	66.2	84.5	46.5	73.8	70.5	66.1	59.7	49.9
NM2	2:37 PM	2:52 PM	55.1	66.4	46.7	60.4	57.9	55.5	53.5	50.2
NM3	2:54 PM	3:09 PM	61.8	76.5	47.2	70.4	66.5	62	56.7	50.5

15-Minute Continuous Noise Measurement Datasheet - Cont. - NM1

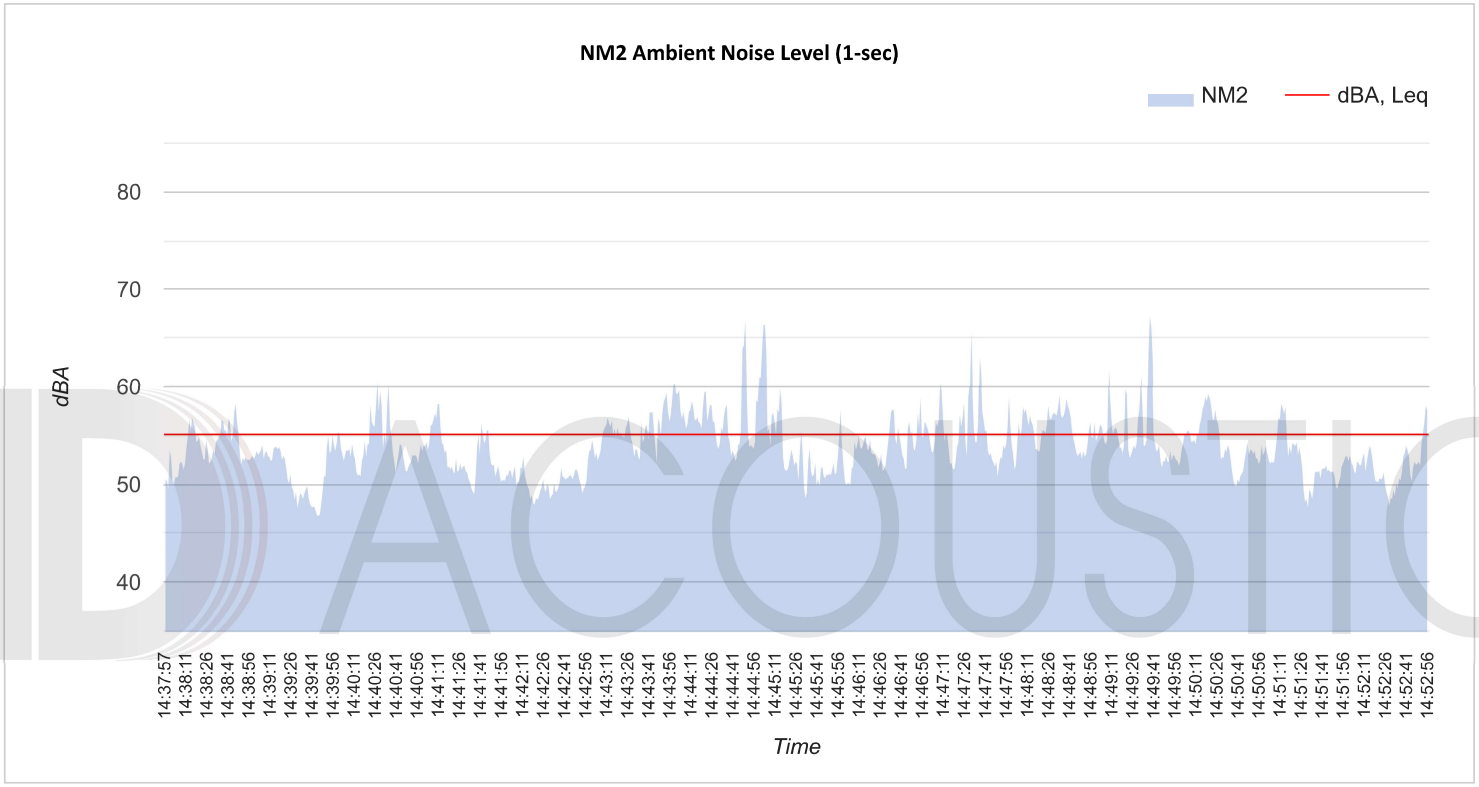
Project Name:	QQ 33-070 1340 Northridge Mall	**Site Topo:**	flat	**Noise Source(s) w/ Distance:**	
Site Address/Location:	796 Northridge Dr Salinas, CA 93	**Meteorological Cond.:**		45 ft from centerline of Madrid st.	
Site Id:	NM1	**Ground Type:**	hard		



MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont. - NM2

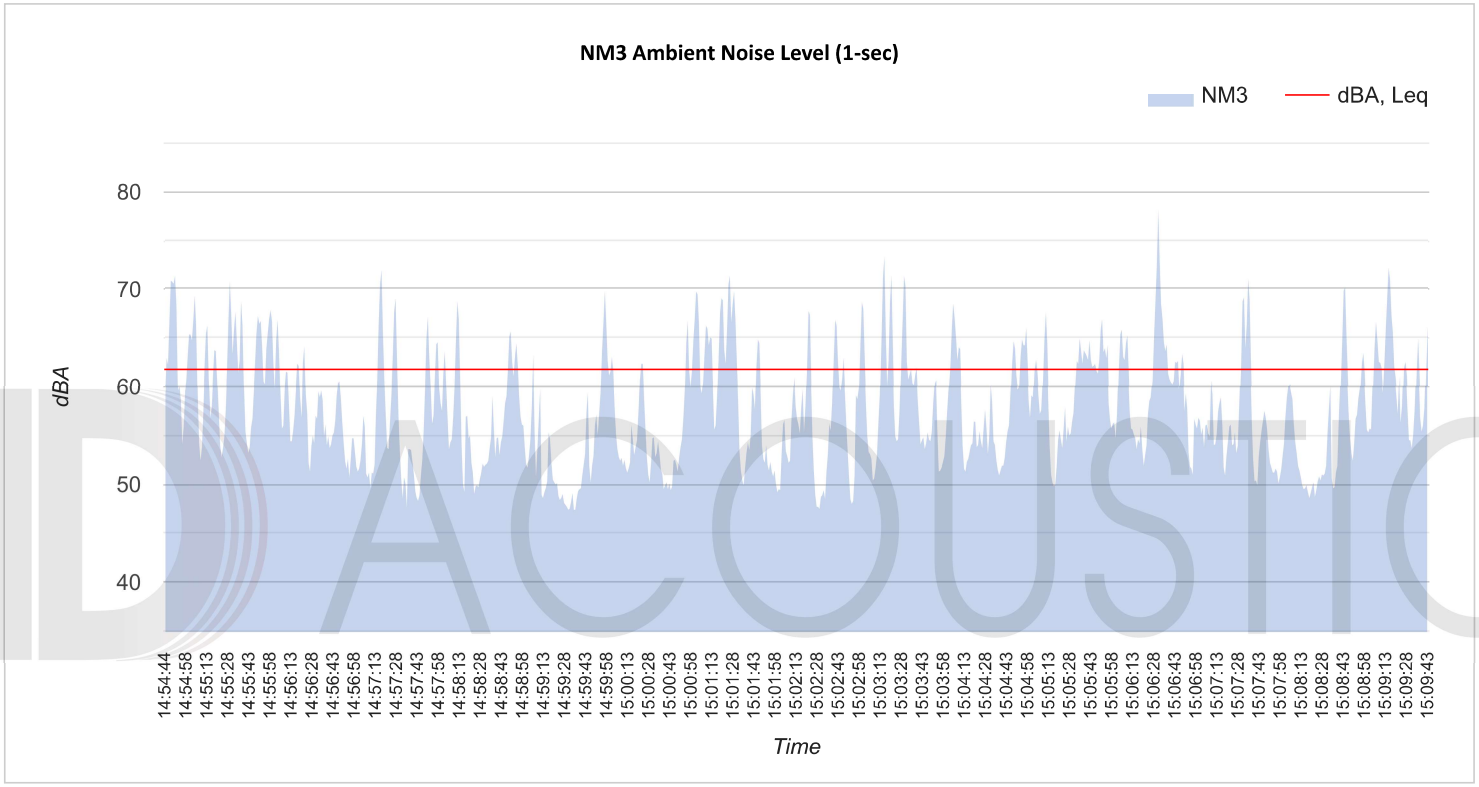
Project Name:	QQ 33-070 1340 Northridge Mall	**Site Topo:**	flat	**Noise Source(s) w/ Distance:**	
Site Address/Location:	796 Northridge Dr Salinas, CA 93	**Meteorological Cond.:**		Madrid st. 225	
Site Id:	NM2	**Ground Type:**	hard		



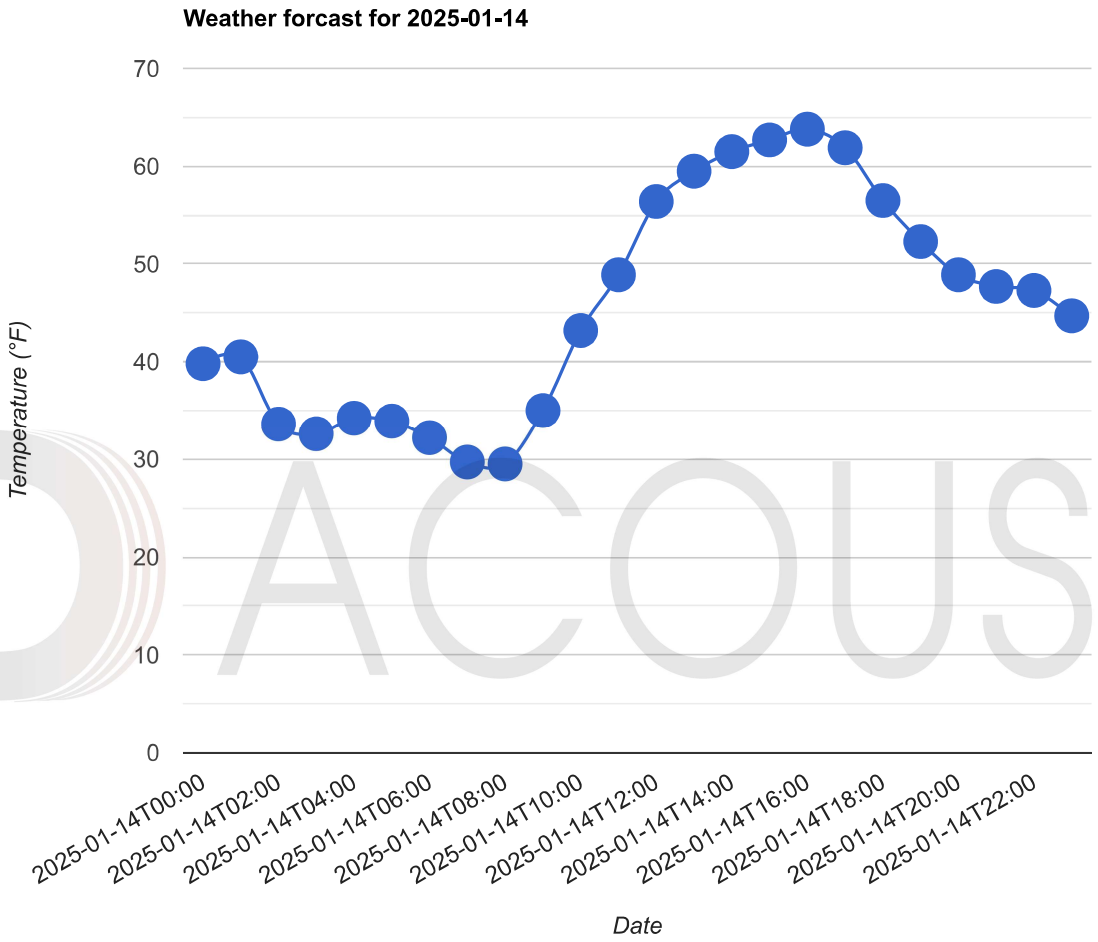
MD ACOUSTICS

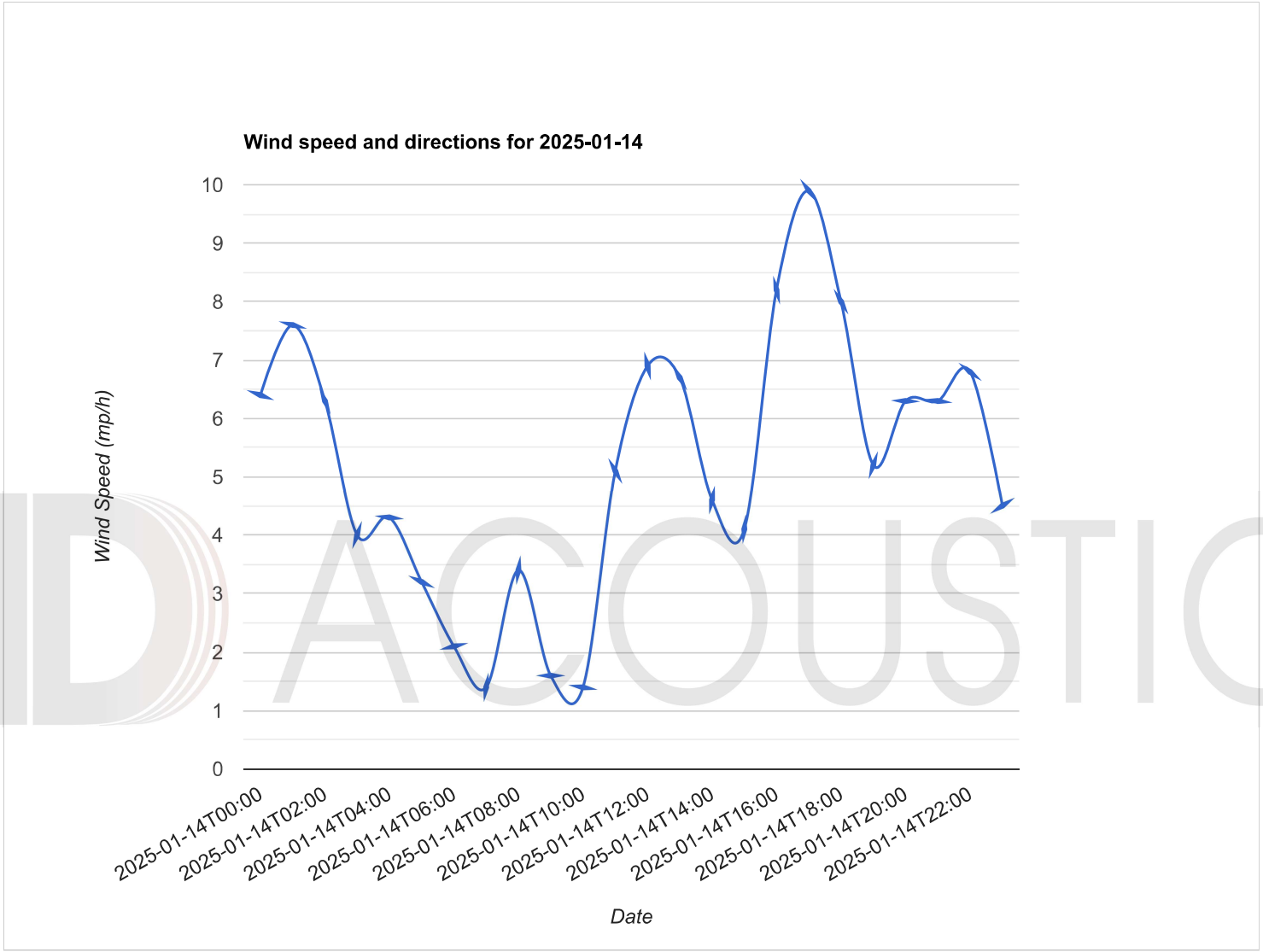
15-Minute Continuous Noise Measurement Datasheet - Cont. - NM3

Project Name:	QQ 33-070 1340 Northridge Mall	**Site Topo:**	flat	**Noise Source(s) w/ Distance:**	
Site Address/Location:	796 Northridge Dr Salinas, CA 93	**Meteorological Cond.:**		Madrid st. @ 155 ft	
Site Id:	NM3	**Ground Type:**	hard		



MD ACOUSTICS





Source: Global Forecast System (GFS) weather forcast model

CNEL CALCULATED FROM SITE MEASUREMENTS

PROJECT: QQ 33-070 DATE: 17-Jan-25

LOCATION: NM1 JN: 0362-25-01

TIME BEGINNING	HOURLY LEQ		HOURLY LEQ WEIGHTING	ADJUSTED HOURLY LEQ
0000	60.5		10.0	70.5
0100	58.1		10.0	68.1
0200	56.8		10.0	66.8
0300	55.1		10.0	65.1
0400	56.0		10.0	66.0
0500	59.8		10.0	69.8
0600	66.3		10.0	76.3
0700	68.5		0.0	68.5
0800	66.7		0.0	66.7
0900	65.7		0.0	65.7
1000	65.6		0.0	65.6
1100	65.8		0.0	65.8
1200	65.9		0.0	65.9
1300	65.9		0.0	65.9
1400	66.2	*	0.0	66.2
1500	67.4		0.0	67.4
1600	68.9		0.0	68.9
1700	68.5		0.0	68.5
1800	66.8		0.0	66.8
1900	65.5		5.0	70.5
2000	64.4		5.0	69.4
2100	63.7		5.0	68.7
2200	62.7		10.0	72.7
2300	62.1		10.0	72.1
CNEL (dBA)				69.3

HR. MEASURED: 1400 *

MEASURED LEQ: 66.2 *

CNEL CALCULATED FROM SITE MEASUREMENTS

PROJECT: QQ 33-070 DATE: 17-Jan-25

LOCATION: NM2 JN: 0362-25-01

TIME BEGINNING	HOURLY LEQ		HOURLY LEQ WEIGHTING	ADJUSTED HOURLY LEQ
0000	49.4		10.0	59.4
0100	47.0		10.0	57.0
0200	45.7		10.0	55.7
0300	44.0		10.0	54.0
0400	44.9		10.0	54.9
0500	48.7		10.0	58.7
0600	55.2		10.0	65.2
0700	57.4		0.0	57.4
0800	55.6		0.0	55.6
0900	54.6		0.0	54.6
1000	54.5		0.0	54.5
1100	54.7		0.0	54.7
1200	54.8		0.0	54.8
1300	54.8		0.0	54.8
1400	55.1	*	0.0	55.1
1500	56.3		0.0	56.3
1600	57.8		0.0	57.8
1700	57.4		0.0	57.4
1800	55.7		0.0	55.7
1900	54.4		5.0	59.4
2000	53.3		5.0	58.3
2100	52.6		5.0	57.6
2200	51.6		10.0	61.6
2300	51.0		10.0	61.0
CNEL (dBA)				58.2

HR. MEASURED: 1400 *

MEASURED LEQ: 55.1 *

CNEL CALCULATED FROM SITE MEASUREMENTS

PROJECT: QQ 33-070 DATE: 17-Jan-25

LOCATION: NM3 JN: 0362-25-01

TIME BEGINNING	HOURLY LEQ		HOURLY LEQ WEIGHTING	ADJUSTED HOURLY LEQ
0000	54.9		10.0	64.9
0100	52.5		10.0	62.5
0200	51.3		10.0	61.3
0300	49.5		10.0	59.5
0400	50.5		10.0	60.5
0500	54.3		10.0	64.3
0600	60.7		10.0	70.7
0700	63.0		0.0	63.0
0800	61.1		0.0	61.1
0900	60.1		0.0	60.1
1000	60.0		0.0	60.0
1100	60.2		0.0	60.2
1200	60.3		0.0	60.3
1300	60.4		0.0	60.4
1400	60.6		0.0	60.6
1500	61.8	*	0.0	61.8
1600	63.3		0.0	63.3
1700	63.0		0.0	63.0
1800	61.3		0.0	61.3
1900	59.9		5.0	64.9
2000	58.8		5.0	63.8
2100	58.1		5.0	63.1
2200	57.1		10.0	67.1
2300	56.5		10.0	66.5
CNEL (dBA)				63.7

HR. MEASURED: 1500 *

MEASURED LEQ: 61.8 *

Appendix B:

SoundPLAN Input/Outputs

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
Receiver R1	Fl G	dB(A)	Ldn 51.5 dB(A)		Sigma(Ldn) 0.0 dB(A)																										
	Ldn	-22.1														-22.1															
	Ldn	-23.7														-23.7															
	Ldn	-20.6														-20.6															
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Ldn	11.9					8.6			-0.2			7.1			2.9			-6.0			-12.7			-25.8			-46.7			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Ldn	-2.0					-3.5			-14.8			-9.2			-15.8			-21.8			-30.3			-46.5			-72.2			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Ldn	7.2					4.2			-4.9			2.4			-2.8			-13.6			-19.3			-32.5			-53.7			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Ldn	4.2					-2.3			-9.6			1.8			-4.1			-20.2			-35.8			-57.1			-79.1			
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Ldn	10.6					4.6			-2.6			7.8			2.6			-7.8			-14.4			-27.9			-49.6			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Ldn	49.3					26.1			33.6			45.4			45.7			39.5			28.1			10.4			-14.1			

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Ldn	35.5					20.0			22.2			27.9			28.0			31.5			27.6			15.2			-11.1			
Turbine	Ldn	27.1				-7.6	-0.6	6.3	9.1	11.7	12.5	6.8	5.6	4.5	1.9	-0.4	6.8	10.2	11.1	14.5	17.2	17.6	15.1	19.1	19.1	17.1	14.8	10.0	-0.2	-12.1	-29.4
Turbine	Ldn	24.7				-7.7	-0.7	6.1	8.9	11.5	15.7	10.2	9.2	8.3	7.8	5.8	7.5	8.9	9.6	13.4	14.4	14.0	11.1	14.7	14.3	11.9	9.4	4.6	-5.5	-16.9	-33.7
Vac	Ldn	32.0	-6.9	-3.9	3.1	7.1	10.1	14.1	14.4	15.4	18.4	18.7	19.7	15.7	14.0	17.9	11.9	17.8	18.9	17.1	22.8	23.2	22.6	21.8	20.4	16.4	12.3	4.7	-4.9	-15.8	-31.6
Vac	Ldn	31.9	-6.6	-3.6	3.4	7.4	10.4	16.7	16.1	17.1	20.1	19.1	20.1	16.1	14.3	18.2	12.2	19.1	20.1	18.1	22.2	21.9	21.4	20.7	19.4	15.6	11.8	4.7	-4.4	-14.8	-29.9
Vac	Ldn	31.5	-11.9	-8.9	-1.9	2.2	5.2	9.2	10.8	11.9	14.9	18.4	19.3	15.3	13.6	17.5	11.5	15.4	16.9	18.2	23.2	23.1	22.5	21.6	20.2	16.1	11.9	4.2	-5.6	-17.0	-33.3
Vac	Ldn	31.5	-12.1	-9.1	-2.1	1.9	4.9	8.9	10.5	11.6	14.6	18.0	19.0	14.9	13.2	17.2	11.1	18.6	19.8	18.0	22.9	23.0	22.4	21.5	20.1	15.9	11.7	3.8	-6.2	-17.9	-34.7
Vac	Ldn	32.1	-7.7	-4.7	2.3	6.3	9.3	13.3	13.5	14.5	17.5	17.7	18.6	17.0	15.2	19.2	13.1	19.7	20.6	18.6	23.1	22.9	22.3	21.4	20.0	15.8	11.5	3.6	-6.5	-18.5	-35.7
Vac	Ldn	34.2	-5.0	-2.0	5.0	9.0	12.0	16.0	18.1	19.0	22.0	21.6	22.5	18.5	16.7	20.7	14.7	21.2	22.4	20.3	24.4	24.1	23.7	23.1	22.1	18.7	15.5	9.2	1.5	-7.0	-19.7
Vac	Ldn	33.8	-5.3	-2.3	4.7	8.7	11.7	15.7	17.7	18.7	21.7	21.1	22.1	18.0	16.2	20.2	14.2	20.8	22.0	19.9	24.0	23.7	23.3	22.6	21.6	18.1	14.8	8.4	0.4	-8.5	-21.6
Vac	Ldn	33.2	-5.6	-2.6	4.4	8.4	11.4	15.4	17.3	18.3	21.3	20.6	21.6	17.6	15.8	19.8	13.7	20.4	21.4	19.3	23.3	23.1	22.7	22.0	21.0	17.4	14.1	7.5	-0.6	-9.8	-23.4
Vac	Ldn	32.8	-5.9	-2.9	4.1	8.1	11.1	15.1	17.0	17.9	20.9	20.2	21.2	17.1	15.4	19.3	13.3	20.0	21.0	18.9	23.0	22.7	22.3	21.6	20.5	16.9	13.4	6.7	-1.7	-11.2	-25.2
Vac	Ldn	36.2	-3.2	-0.2	6.8	10.8	13.8	17.8	19.9	20.9	23.9	23.9	24.9	20.9	19.0	23.0	17.0	23.1	24.0	22.1	26.0	25.8	25.5	25.0	24.3	21.1	18.4	12.8	6.1	-1.2	-12.1
Vac	Ldn	35.6	-3.8	-0.8	6.2	10.2	13.2	17.2	19.4	20.4	23.4	23.2	24.2	20.2	18.4	22.4	16.3	22.6	23.5	21.4	25.4	25.2	24.9	24.4	23.6	20.4	17.6	11.8	4.9	-2.7	-14.0
Vac	Ldn	40.5	1.2	4.2	11.2	15.2	18.2	22.2	24.4	25.4	28.4	28.1	29.1	25.1	23.3	27.3	21.2	27.6	28.5	26.4	30.4	30.2	29.9	29.3	28.5	25.2	22.3	16.4	9.2	1.3	-10.5
Vac	Ldn	34.5	-4.7	-1.7	5.3	9.3	12.3	16.3	18.5	19.4	22.4	22.1	23.0	19.0	17.2	21.2	15.2	21.6	22.5	20.4	24.5	24.3	23.9	23.3	22.5	19.1	16.1	10.0	2.6	-5.6	-17.8
Vac	Ldn	32.4	-6.2	-3.2	3.8	7.8	10.8	14.8	16.6	17.6	20.6	19.8	20.7	16.7	14.9	18.9	12.9	19.7	20.6	18.5	22.6	22.3	21.9	21.2	20.1	16.4	12.8	5.9	-2.8	-12.6	-27.0
Vac	Ldn	32.5	-7.5	-4.5	2.5	6.5	9.5	13.5	15.0	16.0	19.0	17.9	18.9	17.2	15.4	19.4	13.3	20.4	21.4	19.3	23.4	23.1	22.5	21.6	20.3	16.1	11.9	4.1	-5.9	-17.6	-34.5
Vac	Ldn	33.1	-5.7	-2.7	4.2	8.2	11.2	17.5	17.1	18.1	21.1	20.4	21.4	17.4	15.6	19.6	13.5	20.2	21.2	19.2	23.3	23.0	22.6	21.9	20.8	17.2	13.8	7.1	-1.1	-10.5	-24.2
Vac	Ldn	32.7	-6.0	-3.0	4.0	7.9	10.9	17.2	16.8	17.8	20.8	20.0	20.9	16.9	15.2	19.1	13.1	19.9	20.8	18.8	22.9	22.6	22.2	21.4	20.3	16.7	13.1	6.3	-2.2	-11.9	-26.1
Vac	Ldn	32.3	-6.3	-3.3	3.7	7.7	10.7	17.0	16.4	17.4	20.4	19.5	20.5	16.5	14.7	18.7	12.7	19.5	20.4	18.4	22.6	22.2	21.8	21.0	19.9	16.1	12.4	5.5	-3.3	-13.3	-28.0
Vac	Ldn	32.0	-6.5	-3.5	3.5	7.5	10.5	14.5	16.3	17.3	20.2	19.3	20.3	16.3	14.5	18.5	12.5	19.3	20.3	18.2	22.3	22.0	21.5	20.8	19.6	15.8	12.1	5.1	-3.8	-14.0	-28.9
Vac	Ldn	31.7	-6.7	-3.7	3.3	7.3	10.3	14.2	15.9	16.9	19.9	19.0	19.9	15.9	14.2	18.1	12.1	19.0	19.9	17.8	21.9	21.6	21.1	20.4	19.2	15.3	11.5	4.3	-4.8	-15.4	-30.7
Vac	Ldn	31.3	-7.0	-4.0	3.0	7.0	10.0	14.0	15.6	16.6	19.6	18.6	19.6	15.5	13.8	17.7	11.7	18.7	19.6	17.5	21.6	21.3	20.8	20.0	18.7	14.8	10.9	3.5	-5.9	-16.7	-32.5
Vac	Ldn	31.6	-7.3	-4.3	2.7	6.7	9.7	13.7	15.3	16.3	19.3	18.2	19.2	15.2	13.4	17.4	11.3	19.4	20.3	18.2	22.3	21.9	21.4	20.5	19.2	15.2	11.0	3.4	-6.4	-17.8	-34.1
Receiver R2 Fl G dB(A) Ldn 51.5 dB(A) Sigma(Ldn) 0.0 dB(A)																															
	Ldn															-30.5															
	Ldn															-31.2															
	Ldn															-30.4															

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Ldn	4.4					2.4			-7.7			-1.4			-9.9			-18.4			-17.1			-33.2			-63.7			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Ldn	3.4					0.7			-8.4			-1.8			-6.7			-18.1			-25.3			-35.1			-56.1			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Ldn	11.9					7.4			-0.5			8.0			3.8			-6.1			-12.5			-25.6			-47.0			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Ldn	2.3					-4.0			-12.5			-0.1			-5.7			-21.3			-36.6			-58.7			-82.9			
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Ldn	10.0					3.6			-3.2			7.4			2.3			-8.3			-14.0			-27.5			-49.5			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Ldn	47.5					24.7			30.8			43.3			44.0			38.5			27.4			8.9			-17.8			

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	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)	dB(A)	dB(A)	dB(A)
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Ldn	42.8					25.5			30.5			36.9			38.0			36.4			32.9			20.7			1.1			
Turbine	Ldn	25.8				-4.9	2.1	9.1	12.3	14.9	15.7	10.3	9.2	11.2	9.7	7.7	9.3	10.1	10.7	13.7	14.7	14.3	11.6	15.3	15.2	13.3	11.5	8.1	0.2	-8.0	-20.1
Turbine	Ldn	25.7				-5.8	1.3	8.3	11.5	14.1	14.9	10.4	10.7	9.6	6.8	4.5	5.9	6.7	10.4	13.7	15.2	15.1	12.4	16.1	16.0	14.0	11.9	7.8	-1.4	-11.6	-26.1
Vac	Ldn	34.5	-6.1	-3.1	3.9	7.9	10.9	14.9	17.7	18.7	21.7	22.0	23.0	19.0	17.2	21.2	15.1	22.0	22.9	20.8	24.9	24.6	24.1	23.4	22.3	18.5	15.5	8.5	-0.4	-10.4	-25.1
Vac	Ldn	34.6	-6.0	-3.0	4.0	8.0	11.0	15.0	17.7	18.8	21.8	22.1	23.1	19.0	17.2	21.2	15.2	22.0	23.0	20.9	25.1	24.8	24.3	23.6	22.5	18.7	15.0	8.1	-0.6	-10.5	-25.0
Vac	Ldn	34.5	-6.2	-3.2	3.8	7.8	10.8	14.8	17.6	18.6	21.6	21.9	22.9	18.9	17.1	21.1	15.0	21.9	22.8	20.7	24.8	24.5	24.1	23.3	22.2	19.5	15.8	8.8	0.1	-10.0	-24.6
Vac	Ldn	34.3	-6.2	-3.2	3.8	7.8	10.8	14.8	17.5	18.5	21.5	21.8	22.8	18.8	17.0	21.0	14.9	21.8	22.7	20.6	24.7	24.4	23.9	23.2	22.0	18.4	14.7	7.6	-1.3	-11.5	-26.3
Vac	Ldn	32.1	-6.3	-3.3	3.7	7.7	10.7	14.7	15.2	16.2	19.2	19.5	20.5	16.5	14.7	18.7	12.6	19.5	20.4	18.3	22.4	22.1	21.7	20.9	19.8	16.1	12.4	5.5	-3.3	-13.4	-28.0
Vac	Ldn	33.9	-5.0	-2.0	5.0	9.0	12.0	16.0	16.8	17.9	20.9	21.5	22.5	18.5	16.7	20.7	14.6	21.2	22.1	20.1	24.1	23.9	23.5	22.9	22.0	18.5	15.4	9.1	1.5	-7.1	-19.7
Vac	Ldn	34.0	-5.0	-2.0	5.0	9.0	12.0	16.0	16.9	17.9	21.0	21.6	22.6	18.5	16.8	20.7	14.7	21.2	22.1	20.2	24.2	24.0	23.6	23.0	22.0	18.6	15.5	9.2	1.6	-6.9	-19.5
Vac	Ldn	34.0	-5.0	-2.0	5.0	9.0	12.0	16.0	16.9	17.9	21.0	21.6	22.6	18.6	16.8	20.8	14.7	21.2	22.2	20.1	24.2	23.9	23.5	23.0	22.0	18.6	15.5	9.3	1.6	-6.8	-19.4
Vac	Ldn	34.8	-4.9	-1.9	5.1	9.1	12.0	16.0	16.9	17.9	21.0	21.6	22.6	18.6	16.8	21.9	15.9	22.5	23.4	21.4	25.4	25.2	24.7	24.1	23.1	19.5	16.2	9.7	1.9	-6.7	-19.3
Vac	Ldn	33.8	-5.3	-2.3	4.7	8.7	11.7	15.7	16.4	17.4	20.5	21.1	22.0	18.0	16.2	20.2	14.2	21.0	22.0	19.9	24.2	24.0	23.6	22.9	21.9	18.3	14.9	8.4	0.4	-8.5	-21.6
Vac	Ldn	33.6	-5.2	-2.2	4.8	8.8	11.8	15.8	16.5	17.6	20.6	21.2	22.2	18.2	16.4	20.4	14.3	20.9	21.8	19.7	23.9	23.6	23.2	22.6	21.7	18.2	14.9	8.6	0.7	-8.0	-21.0
Vac	Ldn	39.2	0.4	3.4	10.4	14.4	17.4	21.4	22.2	23.2	26.3	26.8	27.8	23.8	22.0	26.0	19.9	26.5	27.4	25.3	29.4	29.1	28.8	28.2	27.2	23.8	20.6	14.3	6.5	-2.1	-15.0
Vac	Ldn	33.8	-5.1	-2.1	4.9	8.9	11.9	15.9	16.8	17.8	20.8	21.4	22.4	18.4	16.6	20.6	14.6	21.1	22.0	20.0	24.0	23.8	23.4	22.8	21.9	18.4	15.2	9.0	1.3	-7.3	-20.0
Vac	Ldn	34.8	-5.0	-2.0	5.0	9.0	12.0	16.0	16.9	17.9	20.9	21.6	22.6	18.5	16.8	21.9	15.8	22.5	23.4	21.3	25.4	25.1	24.7	24.0	23.0	19.5	16.1	9.7	1.8	-6.8	-19.5
Vac	Ldn	34.5	-5.3	-2.3	4.7	8.7	11.7	15.7	16.4	17.4	20.4	21.0	22.0	19.3	17.6	21.5	15.5	22.2	23.2	21.1	25.2	24.9	24.4	23.7	22.7	19.0	15.6	8.9	0.8	-8.3	-21.5
Vac	Ldn	34.3	-5.9	-2.9	4.1	8.1	11.1	15.1	15.7	16.7	19.7	21.3	23.0	18.9	17.0	21.0	14.9	21.9	22.8	20.8	24.9	24.6	24.2	23.4	22.3	18.5	14.9	7.9	-0.7	-10.6	-24.9
Vac	Ldn	34.7	-5.9	-2.9	4.1	8.1	11.1	15.0	17.9	18.9	21.9	22.2	23.2	19.1	17.3	21.2	15.2	22.1	23.0	20.9	25.1	24.8	24.4	23.6	22.5	18.8	15.2	8.3	-0.3	-10.2	-24.5
Vac	Ldn	34.6	-6.0	-3.0	4.0	8.0	11.0	15.0	17.8	18.8	21.8	22.1	23.1	19.1	17.3	21.3	15.2	22.1	23.0	20.9	25.1	24.8	24.3	23.6	22.5	18.7	15.1	8.2	-0.5	-10.3	-24.7
Vac	Ldn	34.9	-5.0	-2.0	5.0	9.0	12.0	16.0	16.8	17.8	20.9	21.5	22.5	19.8	18.0	21.9	15.9	22.6	23.5	21.4	25.5	25.2	24.8	24.1	23.1	19.6	16.2	9.7	1.8	-6.9	-19.7
Vac	Ldn	34.9	-5.0	-2.0	5.0	9.0	11.9	15.9	16.8	17.8	20.8	21.4	22.4	19.7	17.9	21.8	15.8	22.5	23.4	21.3	25.4	25.2	24.7	24.1	23.0	19.5	16.1	9.6	1.8	-7.1	-20.0
Vac	Ldn	34.8	-5.1	-2.1	4.9	8.9	11.9	15.9	16.7	17.7	20.7	21.3	22.3	19.6	17.8	21.8	15.7	22.4	23.4	21.3	25.4	25.1	24.7	24.0	22.9	19.4	16.0	9.4	1.4	-7.4	-20.4
Vac	Ldn	34.7	-5.3	-2.3	4.7	8.7	11.7	15.7	16.5	17.5	20.5	21.2	22.2	19.5	17.8	21.8	15.7	22.4	23.3	21.2	25.3	25.0	24.5	23.9	22.8	19.2	15.8	9.2	1.1	-7.9	-20.9
Receiver R3 Fl G dB(A) Ldn 54.7 dB(A) Sigma(Ldn) 0.0 dB(A)																															
	Ldn	-27.1														-27.1															
	Ldn	-28.5														-28.5															
	Ldn	-27.0														-27.0															

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Ldn	22.7					18.5			10.2			18.4			15.0			4.7			-1.4			-12.9			-29.3			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Ldn	7.5					5.2			-4.6			1.8			-3.7			-15.4			-23.6			-37.4			-56.1			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Ldn	9.8					7.9			-2.9			3.9			-4.2			-17.3			-23.5			-36.9			-55.3			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Ldn	8.9					3.3			-5.8			6.4			0.1			-16.5			-32.0			-52.3			-70.7			
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Ldn	15.2					10.4			1.7			11.7			7.3			-3.8			-10.5			-23.0			-40.9			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Ldn	53.8					31.6			37.2			50.3			50.1			43.2			31.9			15.1			-5.8			

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Ldn	45.0					29.2			33.4			39.9			40.0			38.1			34.0			23.3			2.6			
Turbine	Ldn	18.7				-6.2	0.3	6.6	7.0	8.9	11.5	5.5	3.9	2.4	-0.6	-3.1	-0.3	0.9	1.3	4.8	5.7	5.1	2.1	5.8	6.3	5.3	4.6	2.3	-4.5	-11.6	-22.7
Turbine	Ldn	18.2				-5.9	0.6	6.8	7.2	9.0	8.9	2.6	0.7	-1.0	-4.2	-5.3	-2.7	0.8	1.0	4.4	5.2	4.9	2.6	6.9	7.4	6.3	5.5	3.3	-3.2	-9.5	-19.4
Vac	Ldn	18.4	-8.8	-6.5	-0.2	3.0	5.1	8.1	7.1	6.9	8.6	10.2	9.8	4.3	0.9	4.3	-1.9	0.0	0.3	-0.1	3.5	2.8	2.0	1.0	-0.2	-3.7	-6.8	-12.7	-19.5	-26.6	-37.2
Vac	Ldn	18.7	-8.5	-6.1	0.1	3.3	5.5	8.5	7.5	7.3	9.0	10.6	10.1	4.7	1.3	3.9	-2.2	-0.2	0.1	-0.2	3.4	2.6	1.8	0.8	-0.3	-3.9	-6.9	-12.5	-19.2	-26.1	-36.5
Vac	Ldn	18.2	-9.0	-6.6	-0.4	2.8	4.9	7.9	6.9	6.7	8.3	10.0	9.5	4.1	0.7	4.1	-2.1	-0.1	0.2	-0.3	3.3	2.6	1.8	0.8	-0.4	-4.0	-7.1	-13.0	-20.0	-27.3	-38.0
Vac	Ldn	18.4	-8.8	-6.5	-0.2	3.0	5.1	8.1	7.1	6.9	8.6	10.0	9.5	4.1	0.7	4.1	-1.9	0.1	0.3	0.4	4.5	3.6	2.5	1.3	-0.2	-4.0	-7.3	-13.4	-20.5	-28.0	-39.0
Vac	Ldn	19.5	-8.4	-6.0	0.3	3.6	5.8	8.9	8.0	7.9	9.8	10.7	10.4	5.1	2.0	5.5	0.9	3.7	3.9	2.3	6.0	4.9	3.7	2.3	0.6	-3.3	-6.8	-13.1	-20.5	-28.3	-39.6
Vac	Ldn	33.0	-4.3	-1.3	5.7	9.7	12.7	16.7	16.7	17.7	20.7	20.5	21.5	17.5	15.7	19.7	13.7	19.9	21.0	18.9	22.9	22.7	22.3	21.8	21.0	17.7	14.8	9.0	2.0	-5.7	-17.3
Vac	Ldn	33.0	-4.2	-1.2	5.8	9.8	12.8	16.7	16.8	17.8	20.7	20.6	21.6	17.6	15.8	19.7	13.7	20.0	21.0	19.0	22.9	22.7	22.4	21.8	21.0	17.8	14.9	9.1	2.1	-5.6	-17.1
Vac	Ldn	33.2	-4.2	-1.2	5.8	9.8	12.8	16.8	16.8	17.8	20.8	20.6	21.6	17.6	15.8	19.8	13.8	20.0	21.2	19.1	23.1	22.9	22.5	22.0	21.1	17.9	15.0	9.2	2.2	-5.5	-17.0
Vac	Ldn	27.8	-6.4	-3.6	3.3	7.1	9.9	13.7	13.5	14.2	16.9	17.7	18.2	13.8	11.5	15.1	8.8	14.5	15.2	12.8	16.5	15.9	15.2	14.2	12.9	9.1	5.7	-0.8	-8.5	-16.9	-29.2
Vac	Ldn	32.5	-4.8	-1.8	5.2	9.2	12.2	16.2	16.2	17.2	20.2	19.9	20.9	16.8	15.0	19.0	13.0	19.6	20.6	18.5	22.5	22.3	21.9	21.4	20.5	17.2	14.1	8.1	0.7	-7.3	-19.4
Vac	Ldn	32.7	-4.6	-1.6	5.4	9.4	12.4	16.3	16.3	17.3	20.3	20.1	21.1	17.0	15.2	19.2	13.2	19.8	20.7	18.8	22.8	22.6	22.2	21.6	20.8	17.5	14.4	8.4	1.1	-6.8	-18.7
Vac	Ldn	38.2	1.0	4.0	11.0	15.0	18.0	22.0	22.0	23.0	26.0	25.7	26.7	22.7	20.9	24.9	18.9	25.2	26.3	24.2	28.2	27.9	27.6	27.0	26.2	22.9	20.0	14.1	7.0	-0.9	-12.6
Vac	Ldn	32.9	-4.4	-1.4	5.6	9.6	12.6	16.6	16.6	17.6	20.6	20.4	21.4	17.4	15.6	19.6	13.6	19.8	20.9	18.8	22.8	22.6	22.2	21.7	20.9	17.6	14.7	8.9	1.8	-6.0	-17.6
Vac	Ldn	23.7	-6.9	-4.1	2.6	6.2	8.8	12.4	11.9	12.2	14.6	15.6	15.7	10.6	7.6	10.5	4.1	7.9	7.8	4.8	7.9	6.7	5.4	4.0	2.5	-1.5	-5.1	-11.6	-19.3	-27.6	-39.6
Vac	Ldn	19.9	-8.9	-6.4	0.1	3.5	5.8	9.1	8.2	8.3	10.2	12.2	11.8	6.5	3.2	6.0	1.1	3.2	3.9	1.3	4.3	2.9	1.3	-0.1	-1.7	-5.7	-9.3	-15.9	-23.8	-32.2	-44.5
Vac	Ldn	25.6	-5.3	-2.6	4.1	7.7	10.4	13.9	13.6	14.0	16.5	17.1	17.3	12.5	9.8	12.9	6.1	10.6	10.8	7.8	10.9	10.0	8.9	7.7	6.2	2.5	-0.8	-6.8	-13.8	-21.0	-31.7
Vac	Ldn	21.0	-6.9	-4.5	1.9	5.2	7.5	10.7	9.9	9.9	11.9	12.7	12.5	7.3	4.3	7.1	0.6	4.1	4.2	1.5	4.9	4.2	3.4	2.4	1.3	-2.2	-5.2	-10.9	-17.6	-24.5	-34.9
Vac	Ldn	19.7	-7.9	-5.5	0.8	4.0	6.2	9.3	8.4	8.3	10.1	11.4	11.1	5.8	2.6	5.4	-0.9	1.9	2.2	1.0	4.5	3.7	2.8	1.7	0.5	-3.1	-6.1	-11.8	-18.4	-25.3	-35.7
Vac	Ldn	21.5	-7.6	-5.0	1.6	5.1	7.5	10.8	10.1	10.2	12.2	13.6	13.4	8.2	5.0	7.9	1.8	4.7	5.2	2.6	5.6	4.3	2.9	1.6	0.0	-4.0	-7.6	-14.0	-21.5	-29.6	-41.5
Vac	Ldn	20.7	-8.2	-5.6	0.9	4.3	6.7	10.0	9.2	9.3	11.2	13.0	12.7	7.4	4.2	7.0	1.1	3.5	4.1	1.8	4.8	3.4	2.0	0.6	-1.0	-4.9	-8.5	-14.8	-22.4	-30.5	-42.3
Vac	Ldn	20.2	-8.6	-6.1	0.4	3.9	6.2	9.5	8.7	8.7	10.7	12.6	12.3	7.0	3.8	6.5	0.7	2.8	3.6	1.2	4.3	2.9	1.4	0.1	-1.5	-5.5	-9.0	-15.4	-23.0	-31.1	-43.1
Vac	Ldn	20.0	-8.8	-6.3	0.2	3.6	5.9	9.2	8.4	8.4	10.3	12.4	12.1	6.7	3.5	6.2	1.2	3.1	3.8	1.2	4.2	2.8	1.4	0.0	-1.5	-5.4	-9.0	-15.5	-23.3	-31.6	-43.8
Receiver 'R4	Fl G	dB(A)	Ldn 59.9 dB(A)		Sigma(Ldn) 0.0 dB(A)																										
	Ldn															-32.2															
	Ldn															-33.0															
	Ldn															-32.3															

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Ldn	20.7					16.6			8.2			16.1			13.3			3.0			-3.1			-14.8			-32.2			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Ldn	15.4					11.1			2.9			10.7			8.6			-1.3			-6.9			-18.6			-35.3			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Ldn	8.3					6.4			-4.4			2.4			-5.3			-18.5			-24.5			-38.1			-57.5			
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Ldn	-2.8					-6.0			-16.9			-6.5			-15.2			-34.2			-52.1			-74.8			-96.9			
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Ldn	13.7					8.8			0.0			10.1			6.2			-5.0			-11.6			-24.1			-42.8			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Ldn	36.8					20.8			24.0			34.5			31.5			22.2			8.8			-10.3			-35.0			

QQ 33-070 Northridge Mall Salinas
Contribution spectra - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Source	Time slice	Sum dB(A)	25Hz dB(A)	31.5Hz dB(A)	40Hz 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)
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Ldn	59.9					36.2			42.4			50.8			54.7			54.6			53.3			44.7			26.1			
Turbine	Ldn	29.5				-3.8	3.3	10.3	11.5	14.3	18.0	12.8	11.9	11.1	8.6	7.7	9.8	12.1	13.9	17.0	18.0	17.9	16.0	20.8	21.0	19.6	18.4	15.3	7.7	-0.4	-12.5
Turbine	Ldn	30.5				-2.2	4.9	11.8	13.0	15.6	16.5	10.9	9.8	12.4	10.0	8.2	11.5	12.5	13.1	16.3	17.8	18.6	16.2	22.1	22.5	21.4	20.6	18.4	11.9	5.4	-4.7
Vac	Ldn	19.7	-8.7	-6.3	0.0	3.3	5.4	8.5	7.6	7.5	9.3	10.2	9.8	4.4	1.1	4.8	-1.8	0.6	0.7	5.0	9.0	8.3	7.3	5.7	3.4	-1.8	-6.6	-13.7	-21.3	-29.2	-40.6
Vac	Ldn	19.1	-9.4	-7.1	-0.8	2.4	4.6	7.6	6.6	6.4	8.2	9.5	9.1	3.7	0.3	4.3	-2.3	-0.2	0.0	4.9	8.9	8.2	7.2	5.6	3.2	-2.0	-6.9	-14.2	-22.0	-30.0	-41.7
Vac	Ldn	24.3	-7.6	-5.1	1.4	4.8	7.2	10.4	9.7	9.7	11.7	12.0	11.8	6.4	3.2	6.5	-0.4	2.7	2.7	-0.1	4.1	3.3	17.5	16.7	15.6	11.9	8.3	1.5	-7.1	-17.0	-31.2
Vac	Ldn	30.8	-6.2	-3.4	3.4	7.1	9.9	13.7	13.5	14.2	16.9	17.5	18.1	13.7	11.4	15.1	8.6	13.8	14.3	18.2	22.4	22.0	21.6	20.8	19.7	15.9	12.4	5.7	-2.4	-11.4	-24.5
Vac	Ldn	35.0	-3.3	-0.3	6.7	10.7	13.7	17.7	17.7	18.7	21.7	21.8	22.8	18.8	17.0	22.2	16.1	21.8	22.8	21.1	25.3	25.1	24.8	24.2	23.4	20.1	17.2	11.5	4.6	-2.7	-13.5
Vac	Ldn	22.2	-9.4	-6.8	-0.2	3.3	5.7	9.0	7.9	8.0	10.0	11.5	11.3	6.1	2.9	7.5	0.3	3.2	3.5	9.6	13.6	12.8	11.8	10.1	7.7	2.0	-4.5	-14.9	-27.2	-38.5	-53.2
Vac	Ldn	20.6	-9.5	-7.0	-0.4	3.0	5.4	8.7	7.5	7.6	9.6	11.2	11.0	5.7	2.5	7.2	0.0	2.2	2.3	6.5	10.4	9.6	8.5	6.8	4.4	-1.2	-7.4	-17.2	-27.6	-37.9	-52.3
Vac	Ldn	21.0	-9.5	-7.0	-0.5	3.0	5.4	8.7	7.5	7.6	9.5	11.3	11.0	5.8	2.5	7.0	-0.2	1.9	6.3	6.5	11.2	10.4	9.3	7.6	5.1	-0.6	-6.8	-16.5	-27.1	-37.2	-51.2
Vac	Ldn	20.8	-9.4	-6.9	-0.4	3.1	5.5	8.8	7.6	7.7	9.6	11.4	11.1	5.8	2.5	7.1	-0.1	1.7	6.2	6.4	10.4	9.6	8.6	7.0	4.7	-0.7	-6.6	-16.4	-26.8	-36.6	-50.3
Vac	Ldn	25.3	-8.8	-6.0	0.9	4.7	7.5	11.3	10.5	11.2	14.0	14.8	15.3	10.7	8.2	12.3	5.5	10.7	12.4	11.5	15.3	14.7	13.8	12.5	10.6	5.3	-0.6	-10.1	-21.2	-33.2	-49.8
Vac	Ldn	23.9	-8.9	-6.1	0.7	4.5	7.2	10.8	9.9	10.4	12.8	13.6	13.8	8.8	5.9	10.3	3.3	7.6	10.0	10.0	13.9	13.3	12.4	11.2	9.3	3.6	-2.7	-13.2	-25.4	-37.7	-53.8
Vac	Ldn	28.6	-3.5	-0.8	5.9	9.5	12.1	15.6	14.5	14.9	17.1	18.1	18.1	12.9	9.9	15.0	7.8	11.4	14.4	15.0	18.9	18.3	17.5	16.2	14.3	8.6	2.0	-8.8	-21.2	-33.4	-49.0
Vac	Ldn	22.6	-9.2	-6.5	0.1	3.7	6.2	9.6	8.5	8.7	10.9	12.3	12.2	7.0	3.8	7.8	0.6	3.8	8.0	9.1	13.1	12.5	11.6	10.4	8.5	2.7	-4.0	-14.8	-27.2	-38.9	-54.1
Vac	Ldn	20.2	-9.2	-6.7	-0.1	3.3	5.7	9.0	7.9	7.9	9.9	11.6	11.3	6.0	2.7	7.2	0.0	1.9	6.3	4.4	8.0	7.1	5.8	4.0	1.5	-3.9	-9.4	-17.6	-26.5	-35.8	-49.3
Vac	Ldn	33.3	-4.9	-1.9	5.1	9.1	12.1	16.1	16.0	17.0	19.9	19.6	20.5	16.5	14.7	19.6	14.1	20.1	21.4	19.6	23.8	23.5	23.1	23.1	22.0	18.4	15.0	8.5	0.7	-7.9	-20.4
Vac	Ldn	18.5	-9.9	-7.6	-1.3	1.9	4.1	7.1	6.0	5.8	7.5	8.8	8.4	3.0	-0.3	3.7	-3.5	-1.5	-1.5	4.4	8.5	7.8	6.6	5.0	2.4	-3.1	-8.5	-16.1	-24.2	-32.8	-45.2
Vac	Ldn	17.0	-10.0	-7.7	-1.4	1.8	3.9	7.0	5.9	5.7	7.5	8.9	8.5	3.1	-0.2	3.8	-3.4	-1.5	-1.5	-4.0	-0.1	-0.5	-1.1	-1.8	-2.9	-6.4	-9.7	-16.0	-23.6	-31.9	-44.0
Vac	Ldn	18.0	-9.9	-7.5	-1.2	2.0	4.1	7.2	6.1	6.0	7.7	9.2	8.7	3.3	0.0	4.0	-2.4	-0.5	-0.3	2.0	6.0	5.4	4.4	3.0	1.0	-3.7	-8.0	-14.9	-22.7	-30.9	-42.8
Vac	Ldn	20.1	-8.9	-6.3	0.2	3.7	6.1	9.4	8.4	8.4	10.4	11.9	11.6	6.3	3.0	7.4	0.2	2.2	2.0	2.9	6.4	5.4	3.9	2.1	-0.4	-5.5	-10.3	-17.6	-25.9	-35.0	-48.2
Vac	Ldn	21.6	-8.4	-5.7	0.9	4.4	6.8	10.2	9.3	9.4	11.5	12.6	12.4	7.2	4.1	8.3	1.5	4.6	7.5	6.0	9.7	8.8	7.6	5.9	3.5	-1.8	-7.2	-15.2	-24.0	-33.2	-46.4
Vac	Ldn	22.9	-7.8	-5.0	1.6	5.3	7.9	11.3	10.6	10.9	13.2	13.8	13.8	8.7	5.8	9.7	2.9	6.9	8.8	7.0	10.6	9.7	8.5	6.8	4.5	-0.6	-5.6	-13.3	-21.9	-31.1	-44.3
Vac	Ldn	26.5	-7.2	-4.4	2.5	6.3	9.1	12.9	12.5	13.2	15.9	16.7	17.2	12.7	10.3	14.0	7.5	12.7	13.7	11.4	15.0	14.2	13.2	13.6	11.8	7.4	3.2	-4.2	-13.0	-22.6	-36.2

QQ 33-070 Northridge Mall Salinas
Assessed contribution level - 003 - 120 HP IDC Predator -

Source	Source type	Ldn dB(A)	
Receiver R1 Fl G dB(A) Ldn 51.5 dB(A) Sigma(Ldn) 0.0 dB(A)			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Area	49.3	
Vac	Point	40.5	
Vac	Point	36.2	
Vac	Point	35.6	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Area	35.5	
Vac	Point	34.5	
Vac	Point	34.2	
Vac	Point	33.8	
Vac	Point	33.2	
Vac	Point	33.1	
Vac	Point	32.8	
Vac	Point	32.7	
Vac	Point	32.5	
Vac	Point	32.4	
Vac	Point	32.3	
Vac	Point	32.1	
Vac	Point	32.0	
Vac	Point	32.0	
Vac	Point	31.9	
Vac	Point	31.7	
Vac	Point	31.6	
Vac	Point	31.5	
Vac	Point	31.5	
Vac	Point	31.3	
Turbine	Point	27.1	
Turbine	Point	24.7	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Area	11.9	
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Area	10.6	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Area	7.2	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Area	4.2	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Area	-2.0	
	Line	-20.6	
	Line	-22.1	
	Line	-23.7	
Receiver R2 Fl G dB(A) Ldn 51.5 dB(A) Sigma(Ldn) 0.0 dB(A)			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Area	47.5	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Area	42.8	
Vac	Point	39.2	
Vac	Point	34.9	
Vac	Point	34.9	
Vac	Point	34.8	
Vac	Point	34.8	
Vac	Point	34.8	

Source	Source type	Ldn dB(A)	
Vac	Point	34.7	
Vac	Point	34.7	
Vac	Point	34.6	
Vac	Point	34.6	
Vac	Point	34.5	
Vac	Point	34.5	
Vac	Point	34.5	
Vac	Point	34.3	
Vac	Point	34.3	
Vac	Point	34.0	
Vac	Point	34.0	
Vac	Point	33.9	
Vac	Point	33.8	
Vac	Point	33.8	
Vac	Point	33.6	
Vac	Point	32.1	
Turbine	Point	25.8	
Turbine	Point	25.7	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Area	11.9	
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Area	10.0	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Area	4.4	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Area	3.4	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Area	2.3	
	Line	-30.4	
	Line	-30.5	
	Line	-31.2	
Receiver R3 Fl G dB(A) Ldn 54.7 dB(A) Sigma(Ldn) 0.0 dB(A)			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Area	53.8	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Area	45.0	
Vac	Point	38.2	
Vac	Point	33.2	
Vac	Point	33.0	
Vac	Point	33.0	
Vac	Point	32.9	
Vac	Point	32.7	
Vac	Point	32.5	
Vac	Point	27.8	
Vac	Point	25.6	
Vac	Point	23.7	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Area	22.7	
Vac	Point	21.5	
Vac	Point	21.0	
Vac	Point	20.7	
Vac	Point	20.2	
Vac	Point	20.0	

Source	Source type	Ldn dB(A)	
Vac	Point	19.9	
Vac	Point	19.7	
Vac	Point	19.5	
Turbine	Point	18.7	
Vac	Point	18.7	
Vac	Point	18.4	
Vac	Point	18.4	
Turbine	Point	18.2	
Vac	Point	18.2	
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Area	15.2	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Area	9.8	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Area	8.9	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Area	7.5	
	Line	-27.0	
	Line	-27.1	
	Line	-28.5	
Receiver 'R4 Fl G dB(A) Ldn 59.9 dB(A) Sigma(Ldn) 0.0 dB(A)			
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Area	59.9	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Area	36.8	
Vac	Point	35.0	
Vac	Point	33.3	
Vac	Point	30.8	
Turbine	Point	30.5	
Turbine	Point	29.5	
Vac	Point	28.6	
Vac	Point	26.5	
Vac	Point	25.3	
Vac	Point	24.3	
Vac	Point	23.9	
Vac	Point	22.9	
Vac	Point	22.6	
Vac	Point	22.2	
Vac	Point	21.6	
Vac	Point	21.0	
Vac	Point	20.8	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Area	20.7	
Vac	Point	20.6	
Vac	Point	20.2	
Vac	Point	20.1	
Vac	Point	19.7	
Vac	Point	19.1	
Vac	Point	18.5	
Vac	Point	18.1	
Vac	Point	17.0	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Area	15.4	

QQ 33-070 Northridge Mall Salinas
Assessed contribution level - 003 - 120 HP IDC Predator -

Source	Source type	Ldn dB(A)	
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Area	13.7	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Area	8.3	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Area	-2.8	
	Line	-32.2	
	Line	-32.3	
	Line	-33.0	

QQ 33-070 Northridge Mall Salinas
Octave spectra of the sources in dB(A) - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Name	Source type	I or A m,m²	Li dB(A)	Rw dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	DO-Wall dB	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
	Line	78.81			0.0	19.0	0.0	0.0	0					19.0					
	Line	65.50			0.0	18.2	0.0	0.0	0					18.2					
	Line	80.41			0.0	19.1	0.0	0.0	0					19.1					
001 - 120 HP IDC Predator - Standard Tunnel-Facade 01	Area	195.68	88.4	57.0	39.6	62.5	0.0	0.0	3	1112_Facade 01	55.4	49.3	60.0	55.0	42.8	36.7	26.4	14.1	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 02	Area	28.49	90.8	57.0	41.6	56.1	0.0	0.0	3	1113_Facade 02	49.1	43.3	53.4	49.0	37.5	31.6	21.4	9.5	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 03	Area	195.68	88.4	57.0	39.6	62.5	0.0	0.0	3	1115_Facade 03	55.4	49.3	60.0	55.0	42.8	36.7	26.4	14.2	
001 - 120 HP IDC Predator - Standard Tunnel-Facade 04	Area	21.03	82.8	57.0	35.6	48.8	0.0	0.0	3	1116_Facade 04	39.9	33.3	47.3	40.1	21.9	6.4	-12.7		
001 - 120 HP IDC Predator - Standard Tunnel-Roof 01	Area	205.38	88.3	57.0	39.5	62.6	0.0	0.0	0	1105_Roof 01_	55.5	49.5	60.2	55.2	43.0	36.9	26.6	14.3	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 01	Area	16.75	82.8	0.0	82.8	95.0	0.0	0.0	3	1117_Transmissive area 01	68.3	75.9	92.3	91.0	82.0	70.3	54.7	37.5	
001 - 120 HP IDC Predator - Standard Tunnel-Transmissive area 02	Area	9.29	90.9	0.0	90.9	100.6	0.0	0.0	3	1114_Transmissive area 02	74.2	82.4	94.6	96.3	93.8	91.8	84.7	70.9	
Turbine	Point				86.7	86.7	0.0	0.0	0	Carwash: Vacutech Turbine	61.4	71.6	68.5	65.9	69.8	73.6	80.2	83.4	79.1
Turbine	Point				86.7	86.7	0.0	0.0	0	Carwash: Vacutech Turbine	61.4	71.6	68.5	65.9	69.8	73.6	80.2	83.4	79.1
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2

QQ 33-070 Northridge Mall Salinas
Octave spectra of the sources in dB(A) - 003 - 120 HP IDC Predator - Standard: Outdoor SP

Name	Source type	I or A m,m²	Li dB(A)	Rw dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	DO-Wall dB	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2
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Vac	Point				81.0	81.0	0.0	0.0	0	Carwash: Vacutech - in car	62.4	69.2	75.8	72.6	71.3	73.2	72.6	67.8	59.2

Appendix C:

Equipment Reference Data

INTERNATIONAL DRYING
CORPORATION

STEALTH PREDATOR DRYING SYSTEM

THE FIRST "ULTRA QUIET" DRYING SYSTEM

- ✔Patent pending Reverse flow technology
- ✔Producers construced from 304 surgical stainless steel
- ✔Over 11,000 cubic feet per minute (CFM) per 10HP motor
- ✔Meets or exceeds most U.S. and International sound regulations
- ✔Sound & Performance studies done in reverberant sound room ISO 3741:2010, 3747:2010

SCAN ME

CALL US ANYTIME
(+1) 815 477 4911

EMAIL US
info@internationaldrying.com

FIND US
Internationaldrying.com

VISIT US
International Drying Corporation
160 Chicago St
Cary, IL 60013

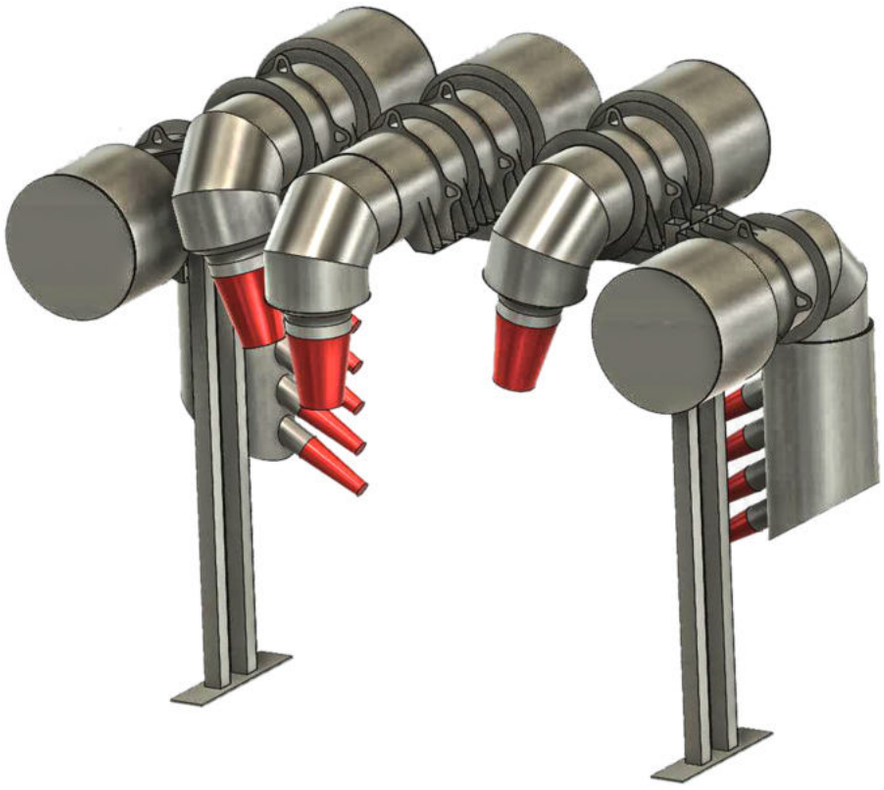
Stealth Predator Ultra-Quiet Drying System Specifications

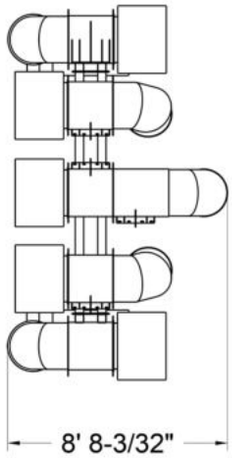
30HP System - Total Sound 60Hz		80HP System - Total Sound 60Hz	
Q = sound source			
65	dBA at Q=1, 30 feet	69.4	dBA at Q=1, 30 feet
61.8	dBA at Q=1, 45 feet	66.5	dBA at Q=1, 45 feet
60.2	dBA at Q=1, 55 feet	64.9	dBA at Q=1, 55 feet

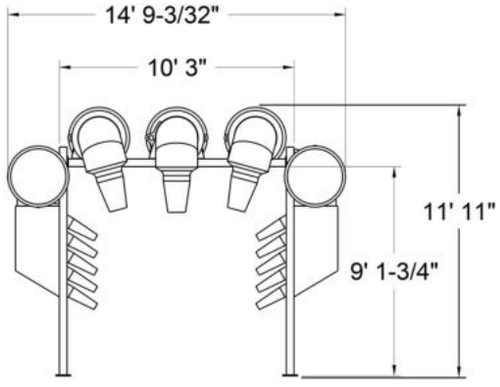
Meets OSHA Sound Exposure Requirements

✓ **The Stealth Predator features patent pending "Reverse flow air technology" which creates the first "Ultra-Quiet Dryer" and is the most powerful Ultra Quiet Dryer ever designed.**

Model uses 140 HP System







INTERNATIONAL DRYING CORPORATION

SPECIFICATIONS

15′ 2″ Bay Width
12′ 0″ Ceiling Height
96″ Standard Clearance

Closed cell foam nozzles available in red, blue, black

Ducts-Stainless Steel
Molded Aluminum Impellors
Stainless Steel Motor Housings

Slotted flanges for adjustability of air outlet and air intake direction

D. L. ADAMS ASSOCIATES
acoustics | performing arts | technology

1536 Ogden Street
Denver, CO 80218
www.dlaa.com
303.455.1900

August 11, 2016

Ms. Cheryl Dobie
Aerodry Systems, LLC
P.O. Box 907
Broomfield, Colorado 80038

Re: Aerodry – Spectral Sound Measurements (DLAA #16-131) Summary Report

Dear Cheryl,

The following is a summary of the blower sound level measurements taken at the site on August 4, 2016. Attached is Table 1 which is a summary of the 1/3 octave band sound measurements taken at the site.

We measured a variety of configurations with various model numbers that correspond to different groupings of dryers. The system sizes ranging from 45 HP to 120 HP consisted of configurations utilizing 1 and 2 overhead towers and 1 set of 6-outlet side columns..

Measurements were taken in ANSI-standard 1/3-octave bands between 25 Hertz (Hz) and 20,000 Hz. The blowers were located as shown in Figure 1. Sound measurements were taken outside the building at four distances: 1m, 20', 50', and 90' from the exterior edge of the building at centerline of the opening as shown in Figure 1.

Table 1 (enclosed) summarizes the measurements taken at the four measurement locations under six different operating conditions as described below Table 1.

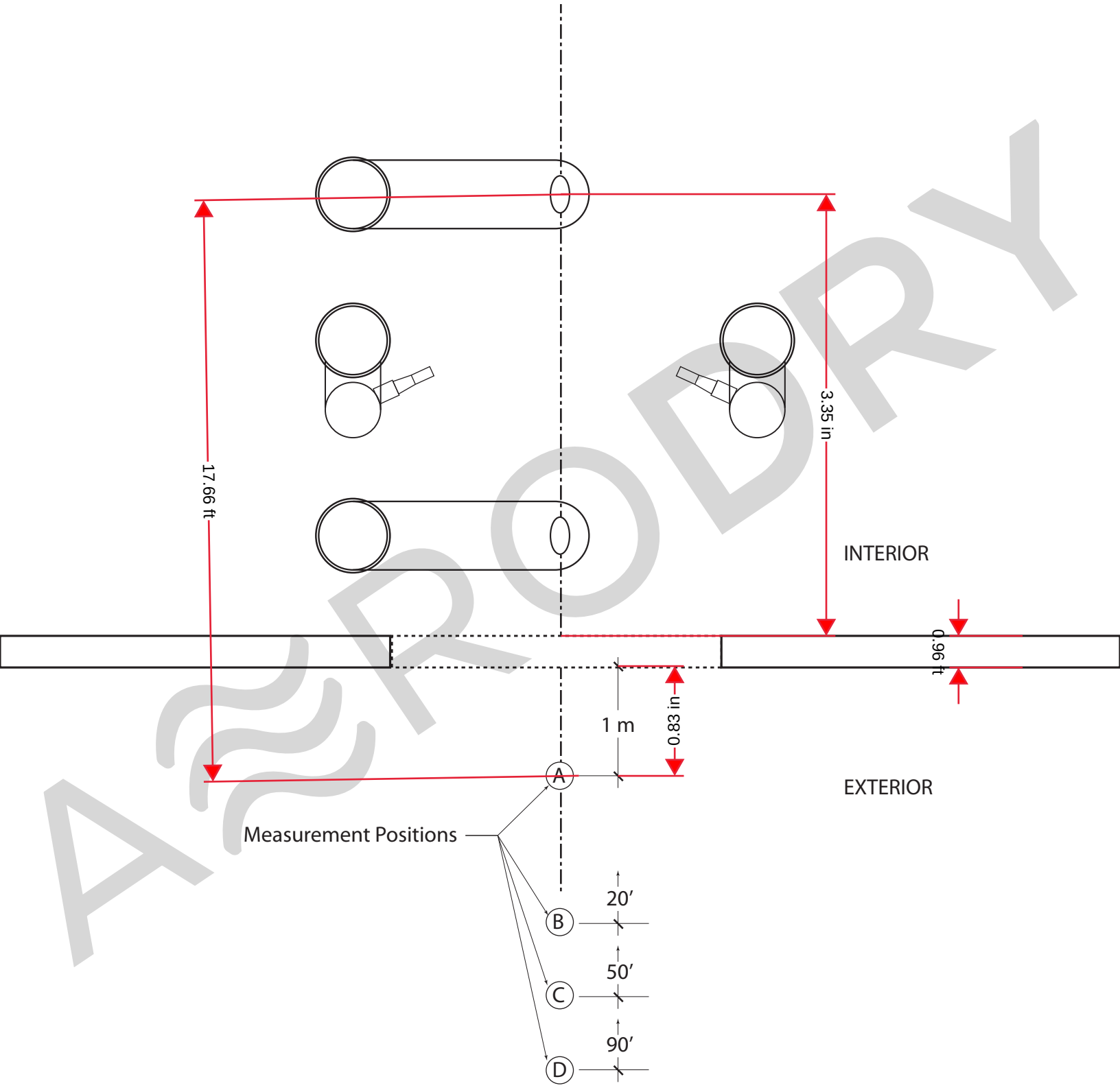
Measurements were taken with a Larson Davis Model 831 Type 1 sound level meter and a PCB Piezotronics Model 377B02 condensing microphone. Immediately prior to measuring, the sound level meter's calibration was checked and recorded. Calibration was again verified at the conclusion of the measurements. All of our equipment has been calibrated within the recommended time period set by the manufacturer. Documentation verifying measurement calibration compliance is available upon request,

If you have any questions, please call me.

Sincerely,

Mick Barnhardt
Senior Consultant

Encl: Figure 1; Table 1



Dryer Configuration

D. L. ADAMS ASSOCIATES
acoustics | performing arts | technology
1536 Ogden Street Denver, Colorado 80218
303/455-1900 FAX 303/455-9187

Aerodry

scale: 1/4" = 1' - 0"

Figure 1

8-11-16 | Project No. 16-161 | Drawn by MBB

TABLE 1: Sound Measurement Summary (in dB)

		1/3 Octave Band Frequency																													
Location	**Condition**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**	**dBA**
A	Condition 1	75	75	76	79	79	78	73	72	76	73	67	75	83	81	66	65	66	65	66	65	65	62	60	59	57	56	55	52	47	39	**82**
B	Condition 1	63	67	69	70	74	67	66	61	64	62	60	64	76	71	55	57	55	56	54	56	54	51	51	50	48	46	45	42	36	29	**74**
C	Condition 1	60	61	60	64	68	65	62	61	59	57	54	59	68	64	50	50	48	50	49	49	48	45	44	43	40	37	34	30	24	16	**67**
D	Condition 1	57	55	57	61	62	63	64	56	53	52	49	55	64	58	45	46	45	45	45	44	43	40	39	37	34	30	27	22	16	10	**62**
A	Condition 2	69	73	74	76	79	80	80	74	74	77	73	68	73	81	81	74	66	69	67	67	66	66	63	62	61	59	58	56	53	49	**81**
B	Condition 2	65	65	68	70	74	70	66	64	65	63	58	66	73	71	60	57	57	57	57	56	57	53	52	51	49	47	46	43	38	30	**73**
C	Condition 2	60	60	62	64	69	66	61	61	59	58	53	60	67	65	59	52	51	52	51	50	50	47	45	44	41	39	36	32	26	17	**67**
D	Condition 2	61	57	59	64	64	62	59	58	54	54	49	55	62	59	46	48	47	47	47	46	46	41	41	39	36	32	29	23	16	9	**62**
A	Condition 3	76	76	77	78	80	82	74	76	78	73	71	75	84	80	68	67	69	68	69	67	68	64	63	63	60	59	57	54	51	44	**83**
B	Condition 3	65	67	68	70	74	73	66	64	66	63	59	67	77	72	59	58	57	56	57	56	56	54	53	52	49	47	46	42	37	29	**75**
C	Condition 3	61	62	63	64	69	68	61	60	61	59	55	62	70	65	51	52	51	52	51	50	50	47	46	45	42	39	36	32	26	17	**68**
D	Condition 3	59	58	58	60	63	65	58	58	55	53	51	56	65	60	45	47	46	46	47	45	45	43	41	39	35	32	28	23	16	9	**63**
A	Condition 4	74	75	76	80	81	80	75	76	78	75	69	72	80	84	73	67	71	69	69	68	68	65	64	62	61	59	57	55	50	42	**84**
B	Condition 4	65	65	68	72	75	73	68	66	66	65	59	63	72	74	63	59	58	59	59	59	58	56	54	53	51	49	48	45	39	31	**74**
C	Condition 4	61	62	62	66	70	67	63	61	61	60	55	59	65	67	58	52	51	53	53	52	51	49	47	46	43	41	38	34	28	19	**68**
D	Condition 4	58	57	59	63	64	64	60	58	56	55	52	54	60	62	58	49	47	48	49	48	46	44	42	41	37	34	30	25	18	11	**63**
A	Condition 5	77	77	79	80	84	84	77	79	81	76	73	74	81	83	73	69	73	71	72	71	71	67	66	66	63	62	60	58	54	46	**85**
B	Condition 5	68	69	71	72	77	75	69	67	68	65	61	67	75	75	64	61	60	60	61	61	60	57	56	56	53	51	50	47	42	34	**76**
C	Condition 5	63	63	63	66	72	70	63	62	63	61	57	61	67	68	60	54	54	55	54	54	53	50	49	48	45	42	40	36	30	21	**69**
D	Condition 5	59	59	60	62	64	66	61	61	58	56	51	56	62	63	54	49	49	49	50	49	48	45	44	42	38	35	32	26	19	11	**64**
A	Condition 6	76	76	78	79	82	82	75	77	79	74	72	76	83	81	75	68	70	69	69	68	69	65	64	63	61	59	58	55	51	43	**84**
B	Condition 6	66	68	69	71	76	74	67	65	67	64	60	68	76	72	63	59	57	58	59	58	58	55	54	53	50	49	47	44	39	31	**75**
C	Condition 6	62	62	62	64	71	69	62	60	61	59	56	61	68	64	55	53	52	52	52	51	51	48	47	46	42	39	37	33	27	18	**68**
D	Condition 6	58	58	58	62	63	65	60	59	58	55	51	55	63	60	50	48	46	47	48	47	46	44	41	40	36	32	29	24	17	10	**63**

Location A: 1 meter from exterior door opening
Location B: 20 feet from exterior door opening
Location C: 50 feet from exterior door opening
Location D: 90 feet from exterior door opening

Condition 1: Model A45
Condition 2: Model A60
Condition 3: Model A60+
Condition 4: Model A90
Condition 5: Model A120
Condition 6: Model A75

Results are exclusive to the Advantage Drying System manufactured by Aerodry Systems, LLC. Use and interpretation for other equipment models or brands is expressly prohibited. Aerodry Systems, LLC is an independent, certified WBE.

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

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Chandler, AZ 85249
p. (602) 774-1950

CA Office
1197 Los Angeles Ave, Ste C-256
Simi Valley, CA 93065
p. (805) 426-4477

Project: SuperStar Car Wash Chula Vista
Site Location: 1555 W Warner Rd, Gilbert, AZ 85233
Date: 4/5/2018
Field Tech/Engineer: Robert Pearson
Source/System: Vacutec System

Location: Vac Bay 1
Sound Meter: NTi XL2 **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-sec duration
Meteorological Cond.: 80 degrees F, 2 mph wind

Site Observations:
Clear sky, measurements were performed within 1.5ft of source. Measurements were performed while the vacuum was positiioned at three (3) different positions. Holstered, unholstered and inside a car. This data is utilized for acoustic modeling purposes and represents an average sound level at a vacuum station.

Table 1: Summary Measurement Data

Source	System	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
Vacutech (Holstered)	Vacuum	63.3	9	17	22	29	31	35	40	41	44	43	46	48	47	49	51	51	51	52	53	52	52	50	52	53	50	47	47	48	45	39	30
Vacutech (Unholstered)	Vacuum	80.7	6	19	22	28	34	37	40	43	47	46	48	48	48	49	54	55	58	58	62	65	68	70	74	75	73	69	67	65	63	60	55
Vacutech (Inside Car)	Vacuum	69.6	16	28	31	38	42	45	49	51	52	55	60	61	57	55	59	53	55	56	54	57	57	57	57	57	55	54	51	48	46	42	36
Average Level*	Vacuum	76.3	13	24	28	34	38	41	45	47	49	51	56	57	53	52	56	54	56	56	59	61	64	66	69	70	68	64	62	60	58	55	50

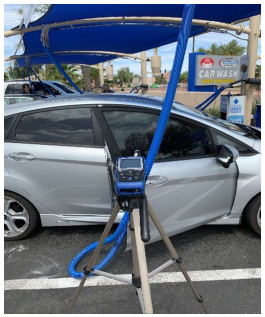
* Refers to the logarithmic average of all measurements. This measurement represents an average of the multiple vacuum positions.

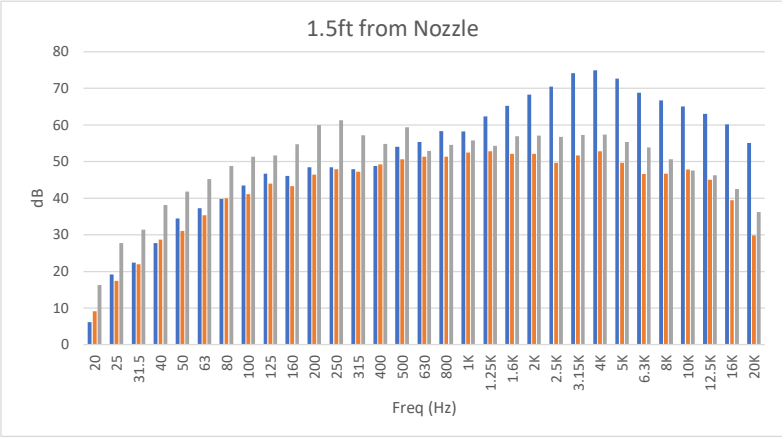
Figure 1: Example Measurement Position

Figure 1: Holstered

Figure 2: Unholstered

Figure 3: Inside Car





SOUND LEVEL METER READINGS

MODEL: FT-DD-T340HP4 (40hp VACSTAR TURBINE VACUUM PRODUCER)

READING ONE: 73 DB-A, 3 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING TWO: 69 DB-A, 10 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING THREE: 54 DB-A, 20 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING FOUR: 38 DB-A, 30 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

NOTE: THESE READINGS WERE TAKEN OUTSIDE IN THE OPEN ON A CONCRETE SLAB.

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

Project: Sound Library

Job Number: 0000-2020-02

Site Address/Location: Parking lot

Date: 09/18/2018

Field Tech/Engineer: Robert Pearson

Source/System: 2009 Hyundai Sonata

General Location: Measured @ 3'

Sound Meter: NTi XL2 **SN:** A2A-05967-E0

Settings: A-weighted, slow, 1-sec, 10-sec duration

Meteorological Cond.: 90 degrees F, 0 mph wind

Site Observations:

Clear sky, measurements were performed at 3ft of source.

Leq	Lmin	Lmax
58.7	0.0	0.0

Ln 2	Ln 8	Ln 25	Ln 50	Ln 90	Ln 99
0.0	0.0	0.0	0.0	0.0	0.0

Table 1: Summary Measurement Data

Source/System	Overall Source	Overall	3rd Octave Band Data (dBA)																														
		dB(A)	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
2009 Hyundai Sonata	Car Idle	58.7	13.0	32.0	15.0	21.0	36.0	37.0	39.0	37.0	41.0	38.0	44.0	39.0	41.0	45.0	45.0	49.0	47.0	47.0	48.0	46.0	49.0	50.0	47.0	45.0	42.0	39.0	37.0	34.0	32.0	30.0	29.0

Figure 1: Car Idle - Hyundai Sonata