

Mead Valley Commerce Center (PPT220050) NOISE AND VIBRATION ANALYSIS COUNTY OF RIVERSIDE

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LIST OF ABBREVIATED TERMS

(1)	Reference
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L _{eq}	Equivalent continuous (average) sound level
L _{max}	Maximum level measured over the time interval
MARB/IPA	March Air Reserve Base/Inland Port Airport
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Mead Valley Commerce Center
REMEL	Reference Energy Mean Emission Level
RC ALUCP	Riverside County Airport Land Use Compatibility Policy
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Mead Valley Commerce Center development ("Project"). The Project site is located south of Cajalco Road between Decker Road and Seaton Avenue in the County of Riverside. The Project is proposed to consist of the development of a 1,003,510 square foot warehouse building and an active park of up to 14.94 acres. This noise study has been prepared to satisfy applicable County of Riverside noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

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

Analusia	Report	Significance Findings				
Analysis	Section	Unmitigated	Mitigated			
Off-Site Traffic Noise	7	Less Than Significant	-			
Operational Noise	9	Potentially Significant	Less Than Significant			
Project Construction Noise		Less Than Significant	-			
Nighttime Concrete Pour	10	Less Than Significant	-			
Construction Vibration	10	Less Than Significant	-			
Blasting		Less Than Significant	-			

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Although not required to address a *potentially significant* impact, the following measures would further reduce construction noise impacts:

MM-NOI-1 Hours of Construction. All construction activities shall comply with Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), limiting construction activities to the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May

MM-NOI-2 Construction Noise Abatement. Prior to the issuance of each grading permit and building permit, the applicant shall provide evidence that the subject plans contain the following requirements and restrictions:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards).
- All stationary construction equipment shall be placed in such a manner so that the emitted noise is directed away from any sensitive receivers.





- Construction equipment staging areas shall be located at the greatest feasible distance between the staging area and the nearest sensitive receivers.
- The construction contractor shall limit equipment and material deliveries to the same hours specified for construction equipment for **MM-NOI-1**.
- Electrically powered air compressors and similar power tools shall be used, when feasible, in place of diesel equipment.
- No music or electronically reinforced speech from construction workers shall be allowed within 500 feet of the property line of a residential use or sensitive receptor.

MM-NOI-3 Blasting Activities. Prior to approval of any grading permits that require blasting activities and a blasting permit, the Project Applicant shall prepare and submit for County of Riverside review and approval of a Blasting Noise and Vibration Monitoring and Abatement Plan. All blasting activities shall be designed to meet the regulatory construction noise and vibration thresholds in compliance with applicable regulations of the Riverside County Sheriff's Department, the U.S. Bureau of Mines, the California Division of Occupational Safety and Health (Cal-OHSA), the Department of Homeland Security, and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF).



1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Mead Valley Commerce Center ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise, vibration and blasting impacts.

1.1 SITE LOCATION

The proposed Project is located south of Cajalco Road between Decker Road and Seaton Avenue in the County of Riverside, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project Applicant proposes the development of a 1,003,510 square foot warehouse building and an active park of up to 14.94 acres. The total Project site is 57.6 acres on APNs 317-080-003 through -008, -013 through -014, -019 through -023, -027 through -029 and 317-090-002 through -008. For purposes of analysis, the warehouse building has been evaluated assuming 852,984 square feet (or 85% of the overall building square footage) of high-cube fulfillment warehouse use and 150,526 square feet of high-cube cold storage warehouse use (remaining 15% of the overall building square footage). A preliminary site plan for the proposed Project is shown on Exhibit 1-B.

Construction is expected to commence in September 2024 and would last through December 2025 and will include demolition, site preparation, grading, crushing/blasting, building construction, paving, and architectural coating. To support the Project development, there will be grading, trenching, and paving for off-site improvements associated with roadway construction and utility installation for the Project. It is expected that these off-site improvements will be constructed within the existing public right-of-way (ROW) on Decker Road, Seaton Avenue, Cajalco Road and Rider Street. The General Plan and MVAP designate the Project site for "Commercial Retail (CR)" land uses with Rural Community – Very Low-Density Residential (VLDR) uses. The General Plan states that the Commercial Retail land use designation is intended for local and regional serving retail and service uses at an allowable Floor Area Ratio (FAR) of 0.20-0.35 (4). The Rural Community – Very Low-Density Residential (VLDR) land use designation is intended for single-family detached residences on large parcels of 1 to 2 acres with limited agriculture and animal keeping. Implementation of the Project will require an amendment to the General Plan Land Use designation and Zoning designation of the Project Site.





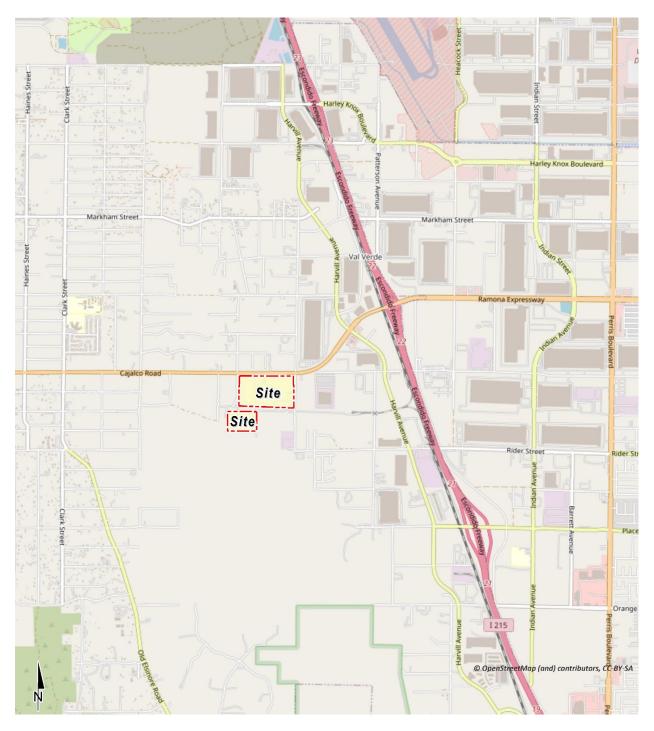
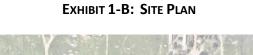
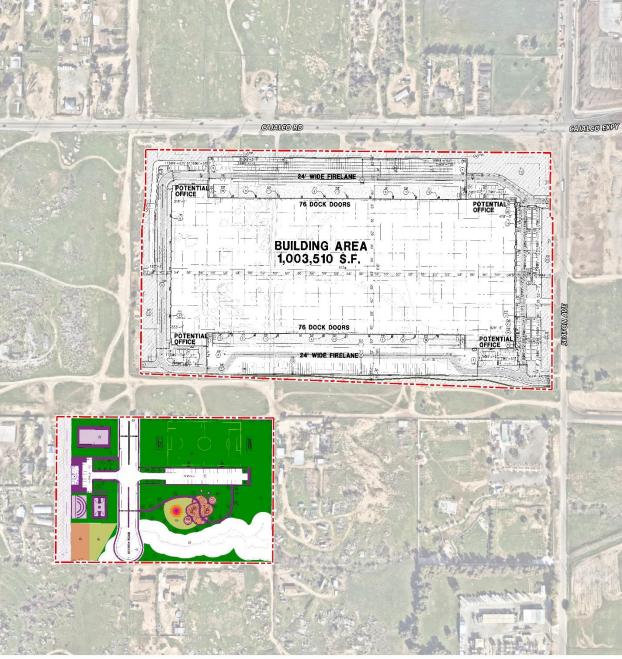


EXHIBIT 1-A: LOCATION MAP







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2 FUNDAMENTALS

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

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140	\mathbf{X}		
NEAR JET ENGINE		130	INTOLERABLE OR		
		120	DEAFENING	HEARING LOSS	
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110			
LOUD AUTO HORN		100			
GAS LAWN MOWER AT 1m (3 ft)		90			
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80			
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60			
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		DISTURBANCE	
QUIET SUBURBAN NIGHTTIME	LIBRARY	30			
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0			

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

2.1 RANGE OF NOISE

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

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

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 Shielding

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

2.4 NOISE CONTROL

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

2.5 Noise Barrier Attenuation

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



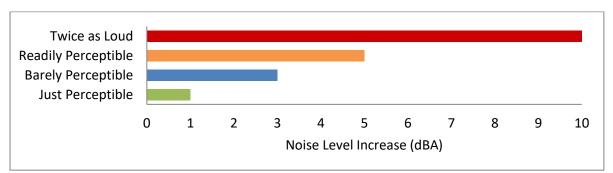
2.6 LAND USE COMPATIBILITY WITH NOISE

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

2.7 COMMUNITY RESPONSE TO NOISE

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

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







2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.



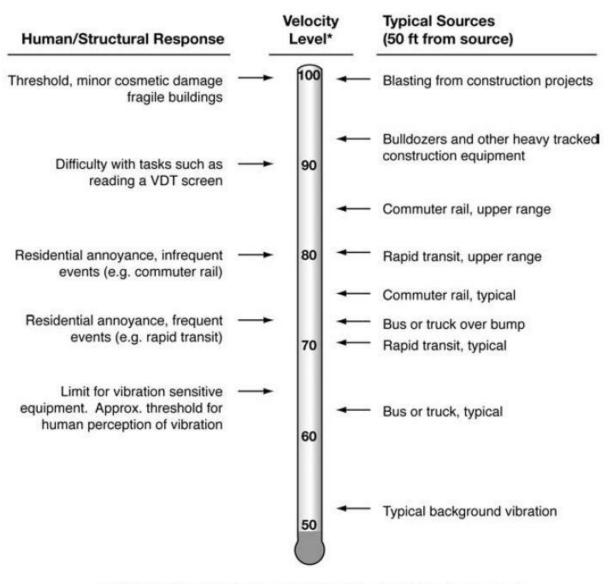


EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

* RMS Vibration Velocity Level in VdB relative to 10⁻⁶ inches/second

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



3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (9) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 COUNTY OF RIVERSIDE GENERAL PLAN NOISE ELEMENT

The County of Riverside has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of the County of Riverside from excessive exposure to noise. (10) The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect County of Riverside residents from excessive noise, the Noise Element contains the following policies related to the Project:

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



- Passive Recreation Uses
- Places of Worship
- N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
- *N* 4.1 *Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:*
 - a. 45 dBA 9-minute L_{eq} between 10:00 p.m. and 7:00 a.m.;
 - b. 65 dBA 9-minute L_{eq} between 7:00 a.m. and 10:00 p.m.
- N 13.1 Minimize the impacts of construction noise on adjacent uses within acceptable standards.
- N 13.2 Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.
- N 13.3 Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the [County] for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:
 - *i.* Temporary noise attenuation fences;
 - *ii.* Preferential location and equipment; and
 - *iii.* Use of current noise suppression technology and equipment.
- N 14.1 Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.
- N 16.3 Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches/second over a range of 1 to 100 Hz.

To ensure noise-sensitive land uses are protected from high levels of noise (N 1.1), Table N-1 of the Noise Element identifies guidelines to evaluate proposed developments based on exterior and interior noise level limits for land uses and requires a noise analysis to determine needed mitigation measures if necessary. The Noise Element identifies residential use as a noise-sensitive land use (N 1.3) and discourages new development in areas with transportation related levels of 65 dBA CNEL or greater existing ambient noise levels. To prevent and mitigate noise impacts for its residents (N 1.5), County of Riverside requires exterior noise attenuation measures for sensitive land use exposed to transportation related noise levels higher than 65 dBA CNEL. In addition, the County of Riverside had adopted an interior noise level limit of 45 dBA CNEL (N 14.1).

Policy N 4.1 of the Noise Element sets a stationary-source exterior noise limit to not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. To prevent high levels of construction noise from impacting noise-



sensitive land uses, policies N 13.1 through 13.3 identify construction noise mitigation requirements for new development located near existing noise-sensitive land uses. (10)

3.2.1 LAND USE COMPATIBILITY GUIDELINES

The noise criteria identified in the County of Riverside Noise Element (Table N-1) are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the County with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The Land Use Compatibility for Community Noise Exposure matrix describes categories of compatibility and not specific noise standards. Non-noise sensitive warehouse/industrial use of the Project is considered normally acceptable with unmitigated exterior noise levels of less than 75 dBA CNEL based on the Industrial, Manufacturing, Utilities, Agriculture land use compatibility criteria shown on Exhibit 3-A. The proposed Park is considered normally acceptable with unmitigated exterior noise levels of less than 70 dBA CNEL. Noise sensitive residential designated land uses in the Project study area are considered normally acceptable with exterior noise levels below 60 dBA CNEL, and conditionally acceptable with exterior noise levels of up to 70 dBA CNEL. For conditionally acceptable exterior noise levels, of up to 80 dBA CNEL for Project warehouse/industrial use land uses, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. (10)

3.3.2 COUNTY OF RIVERSIDE STATIONARY NOISE STANDARDS

The County of Riverside has set stationary-source hourly average L_{eq} exterior noise limits to control loading dock activity, parking lot vehicle activities, roof-top air conditioning units, trash enclosure activity, truck movements, sports field activities, basketball court activity, dog park activity, and outdoor play area associated with the development of the proposed Mead Valley Commerce Center. The County considers noise generated using motor vehicles to be a stationary noise source when operated on private property such as at a loading dock. These facility-related noises, as projected to any portion of any surrounding property containing a *habitable dwelling*, *hospital*, *school*, *library or nursing home*, must not exceed the following worst-case noise levels.

Policy N 4.1 of the County of Riverside General Plan Noise Element sets a stationary-source average L_{eq} exterior noise limit not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. (10)

The County of Riverside County Code Section 9.52.040 *General sound level standards* (included in Appendix 3.1) summarizing Ordinance No. 847 *Regulating Noise* identify lower, more restrictive exterior noise level standards, which for the purpose of this report, are used to evaluate potential Project-related operational noise level limits instead of the higher General Plan exterior noise level standards previously identified. The County of Riverside County Code identifies residential exterior noise level limits of 55 dBA L_{eq} during the daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to



7:00 a.m., commercial exterior noise level limits of 65 dBA Leq during the daytime hours, and 55 dBA Leq during the noise-sensitive nighttime hours, and public facility exterior noise level limits of 65 dBA L_{eq} during the daytime hours, and 45 dBA L_{eq} during the noise-sensitive nighttime hours. (11).

LAND USE CATEGORY	COMMUNITY	(NOI	ISE EX	POSURI	E LEVEI	Ldn or	CNEL, dBA
	5	55	60	65	70	75	80
Desta des		I	-1	1	1	1	1
Residential-Low Density Single Family, Duplex, Mobile	Homos	r					
Single Family, Duplex, Mobile	nomes	-	T				
Residential-Multiple Family		-	-				
1	1			- C.			
							-
Transient Lodging-Motels, Ho	otels	r –	-				
			-	1			
Schools, Libraries, Churches,	Usenitals	I					
Nursing Homes	nospitais,	I I	1				
turing nomes							
Auditoriums, Concert Halls, A	Amphitheaters						
	-				T	-	
2							
Sports Arena, Outdoor Specta	itor Sports						
						1	1
Playgrounds, Neighborhood P	arks	I			-		
i mygrounds, i teignoor nood i							
Golf Courses, Riding Stables,	Water Recreation,	r	-		-		_
Cemeteries						T	
Office Buildings, Businesses, G	Commorcial	I	_				
and Professional	commercial,	1	T	1		-	
and Trofessionar							
Industrial, Manufacturing, Ut	tilities,						
Agriculture							
					-		
Legend:			1	1	1	1	
Normally Acceptable:	Conditionally Acceptable:		rmally Unac		amanally	Clearly U	nacceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without	New construction or development should be undertaken only after a detailed analysis of the and the set	be di	scouraged. If no	development should w construction or d led analysis of the n	evelopment	generally no	ction or development should t be undertaken. Construction
of normal conventional construction, without any special noise insulation requirements.	the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but	redu	ction requirement	ted analysis of the r its must be made wi res included in the	th needed	acceptable w	e the indoor environment ould be prohibitive and the ronment would not be usable.
Source: California Office of Noise Control	with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy	Outd	loor areas must b	e shielded.	en en	oundoor chvi	romment would not be usable.

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

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



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

3.3 CONSTRUCTION NOISE STANDARDS

The County of Riverside does not establish quantitative construction noise standards, instead the County has established limits to the hours of construction activities. Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]) indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (11) Neither the County's General Plan nor the County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes.

Previously approved County of Riverside noise impact analysis reports prepared by Urban Crossroads, Inc. relied on a less restrictive 85 dBA L_{eq} construction noise level threshold adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). (12) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (12)

To prevent long periods of exposure to high noise levels, the Occupational Safety and Health Administration (OSHA) requires hearing protection be provided by employers in workplaces where the noise levels may, endanger the hearing of their employees, such as construction equipment operators. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (13) The noise analysis prepared by Urban Crossroads, Inc. does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (14)



Therefore, Urban Crossroads, Inc. continues to evaluate other agencies construction noise level limits to find a more appropriate threshold for assessing environmental impacts.

Initially, we reviewed Caltrans guidance as a state agency often cited as reference in CEQA documents, according to Caltrans guidance, construction noise impacts shall not exceed 86 dBA L_{max} at 50 feet from the job site activities between the hours of 9:00 p.m. to 6:00 a.m. (15) Equipment and operations are usually at or less than that level, except for blasting, pile drivers (impact or vibratory), hoe rams, pavement breakers for crack-and-seat operations, and other impact equipment. (2) The Caltrans guidance also suggests that detailed discussions of typical construction equipment noise levels are probably not necessary unless the project involves unusually sensitive receptors or nighttime work or if the project is controversial. (2) Since this limitation is only associated with nighttime activities and does not address the noise level at the point of concern, e.g., a residence, the Caltrans construction criteria was similarly not considered as the appropriate threshold for environmental review.

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

Therefore, to evaluate whether the Project will generate potentially significant short-term noise levels at nearby noise sensitive residential receiver locations, a daytime exterior construction noise level of 80 dBA L_{eq} is used as a reasonable threshold to assess construction noise level impacts based on the FTA detailed analysis construction noise criteria with a nighttime exterior construction noise level of 70 dBA L_{eq}. (8 p. 179)

3.4 CONSTRUCTION VIBRATION STANDARDS

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



construction of the Mead Valley Commerce Center, vibration-generating activities are appropriately evaluated against standards established under the Municipal Code if such standards exist. However, the County of Riverside does not identify specific construction vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (16 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

3.5 CONSTRUCTION BLASTING STANDARDS

The construction of the proposed Project will include blasting of hard rock areas, which is a major source of potential noise and vibration impacts to nearby residential receivers. Since the County of Riverside General Plan and County Code of Ordinances do not identify specific construction noise level limits for blasting activities, the Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Code of Federal Regulations (CFR) Airblast Limits (30 CFR 816.67[b]) are used. Section 816.2 of Title 30 of the CFR indicates that the blasting regulations are intended to ensure that all surface mining activities are conducted in a manner which preserves and enhances environmental and other values in accordance with the Act. (2)

While the OSMRE regulates mining activities, the blasting activities at the Project site represent surface mining activities which, to satisfy California Environmental Quality Act (CEQA) guidelines, must demonstrate that they do not adversely affect the existing environment. Therefore, the OSMRE blasting regulations are applied to the blasting activities anticipated at the Project site. For mining operations, which require larger blasts than that of the Project, the lowest noise level threshold identified in the CFR is a maximum noise level 129 dBA L_{max} for blasting activity measured at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area. (17) The L_{max} threshold used in the noise analysis is suitable for single-event noise levels, such as blasting activities, since other noise regulations in L_{eq} (energy average), for example, average out a reference noise level over a given time period which reduces the single-event noise level over a longer period of time. The L_{max} , therefore, allows for the shorter-duration single-event noise levels to be evaluated against an appropriate threshold.

3.6 MARCH AIR RESERVE BASE/INLAND PORT AIRPORT LAND USE COMPATIBILITY

The March Air Reserve Base/Inland Port Airport (MARB/IPA) runway is located approximately 1.7 miles northeast of the Project site. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project. Policy 4.1.5 *Noise Exposure for Other Land Uses* of the RC ALUCP requires that land uses demonstrate compatibility with the acceptable noise levels on Table 2B. The Table 2B *Supporting Compatibility Criteria: Noise* matrix is shown on Exhibit 3-B and indicates that the Project's industrial land uses experience *clearly acceptable* exterior noise levels below 60 dBA CNEL. *Normally acceptable* noise levels for industrial land use range from 60 to 65 dBA CNEL.



Marginally acceptable noise levels at industrial land uses range from 65 to 70 dBA CNEL. (13) The Project Park uses are considered *clearly acceptable* with exterior noise levels of up to 55 dBA CNEL, *conditionally acceptable* with exterior noise levels between 55-65 dBA CNEL and *marginally acceptable* with exterior noise levels above 65 dBA CNEL.

	CNEL (dB)					
Land Use Category	50–55	55–60	60–65	65–70	70–75	
Residential *						
single-family, nursing homes, mobile homes	++	0	_			
multi-family, apartments, condominiums	++	+	0			
Public						
schools, libraries, hospitals	+	ο	_			
churches, auditoriums, concert halls	+	0	о	_		
transportation, parking, cemeteries	++	++	++	+	0	
Commercial and Industrial						
offices, retail trade	++	+	ο	0	_	
service commercial, wholesale trade, warehousing, light industrial	++	++	+	0	0	
general manufacturing, utilities, extractive industry	++	++	++	+	+	
Agricultural and Recreational						
cropland	++	++	++	++	+	
livestock breeding	++	+	0	0	_	
parks, playgrounds, zoos	++	+	+	0	_	
golf courses, riding stables, water recreation	++	++	+	0	0	
outdoor spectator sports	++	+	+	0	_	
amphitheaters	+	0	-			

EXHIBIT 3-B: RC ALUCP SUPPORTING COMPATIBILITY CRITERIA: NOISE

Land Use Acceptability

Interpretation/Comments

essentially no
ivities may ons upon
activities and n the h provide that windows scouraged.
ties. Noise nsulation and/or involve oided.
structural nd use should ed if outdoor
ns n t tha scc ties nsu and stru nd

* Subtract 5 dB for low-activity outlying airports (Chiriaco Summit and Desert Center)

Source: Riverside County Airport Land Use Compatibility Plan, Table 2B.



The 70, 65 and 60 dBA CNEL noise contour boundaries used to determine the potential aircraftrelated noise impacts at the Project site are found on Figure 6-9 of the *March Air Reserve Base 2018 Final Air Installations Compatible Uses Zones Study* and are presented on Exhibit 3-C of this report. (19) Based on the 2018 noise level contours for the MARB/IPA, the Project development area is located outside the 60 dBA CNEL noise level contour boundaries and the Project's industrial and park land uses are considered *clearly acceptable*.

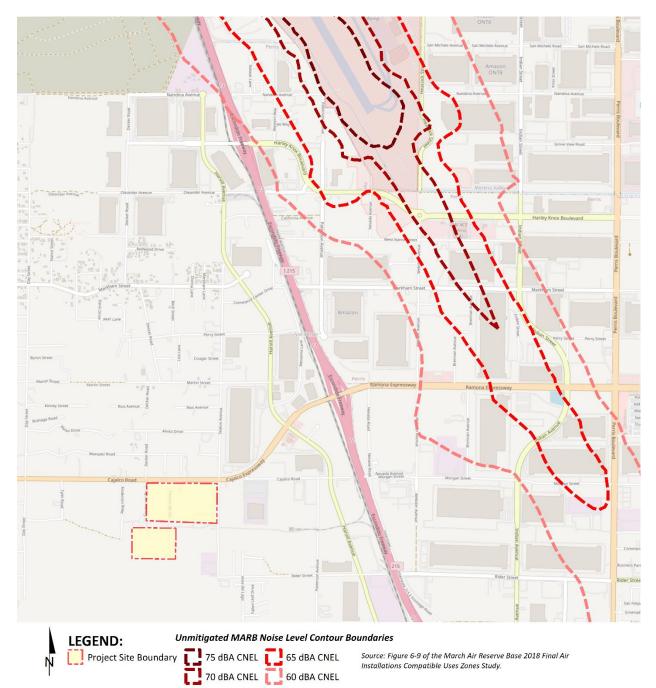


EXHIBIT 3-C: MARB/IPA FUTURE AIRPORT NOISE CONTOURS



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4 SIGNIFICANCE CRITERIA

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

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 Noise Level Increases (Threshold A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders a noise impact significant*. (18) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* noise level, the less acceptable the new noise level will typically be judged.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (19) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (18) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels

range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise sensitive uses. These levels of increases and their perceived acceptance at noise sensitive receiver locations are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (20 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The County of Riverside General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive warehouse/industrial land uses are 75 dBA CNEL. Noise levels greater than 75 dBA CNEL are considered *conditionally acceptable* per the *Land Use Compatibility for Community Noise Exposure*. (10)

To determine if Project-related traffic noise level increases are significant at off-site non-noisesensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 75 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the County of Riverside General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure normally acceptable* 75 dBA CNEL exterior noise level criteria.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.4, the vibration impacts originating from the construction of Mead Valley Commerce Center, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).



4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

The closest airport which would require additional noise analysis under CEQA Appendix G Guideline C is the MARB/IPA. As previously indicated in Section 3.6, the noise contour boundaries of MARB/IPA presented on Exhibit 3-C of this report show that the Project's industrial and park land uses are considered *normally acceptable* since the development area is located outside the 60 dBA CNEL contour. Therefore, the Project impacts are considered *less than significant,* and no further noise analysis is provided under CEQA Significance Criteria C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

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

Analysis	Receiving Land Use		Significance Criteria		
		Condition(s)	Daytime	Nighttime	
Off-Site Traffic	Noise- Sensitive ¹	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase		
		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase		
	Non-Noise- Sensitive ²	If ambient is > 75 dBA CNEL	≥ 3 dBA CNEL Project increase		
Operational	Noise- Sensitive	Residential Exterior Noise Level ³	55 dBA L _{eq}	45 dBA L _{eq}	
		Public Facility Exterior Noise Level ³	65 dBA L _{eq}	45 dBA L _{eq}	
		If ambient is < 60 dBA Leq ¹	\geq 5 dBA L _{eq} Project increase		
		If ambient is 60 - 65 dBA Leq ¹	\geq 3 dBA L _{eq} Project increase		
		If ambient is > 65 dBA Leq ¹	≥ 1.5 dBA L _{eq} Project increase		
Construction	Noise- Sensitive	Noise Level Threshold ⁴	80 dBA L _{eq}	70 dBA L _{eq}	
		Airblast Threshold ⁵	129 dBA L _{max}	n/a	
		Vibration Level Threshold ⁶	0.3 PPV (in/sec)		

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

¹ FICON, 1992.



² County of Riverside General Plan Noise Element, Table N-1.

³ County of Riverside General Plan Municipal Code, Section 9.52.040.

⁴ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

⁵ OSMRE and CFR lowest maximum Airblast Limit (30 CFR 816.67[b])

⁶ Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at seven locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Friday, April 21, 2023 and Wednesday, September 6, 2023. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (21)

5.2 NOISE MEASUREMENT LOCATIONS

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

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

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the equivalent or the energy average hourly sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

Location ¹	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
		Daytime	Nighttime	
L1	Located north of the site near the La Palapa Ranch building at 19451 Decker Rd.	65.1	61.5	69.3
L2	Located north of the site near the residence at 22840 Cajalco Rd.	75.2	75.2	81.9
L3	Located south of the site near the residence at 19701 Seaton Ave.	65.7	61.8	69.5
L4	Located south of the site near the Huong Sen Buddhist Temple at 19865 Seaton Avenue.	62.6	53.2	64.3
L5	Located southwest of the site near the residence at 22655 Cajalco Rd.	63.5	53.3	64.2
L6	Located west of the residence at 22761 Cajalco Rd.	65.1	56.9	66.1
L7	Located northeast the residence at 22683 Cajalco Rd.	62.2	59.9	67.1

TABLE 5-1: AMBIENT NOISE LEVEL MEASUREMENTS

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

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

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

Table 5-1 provides the equivalent noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.



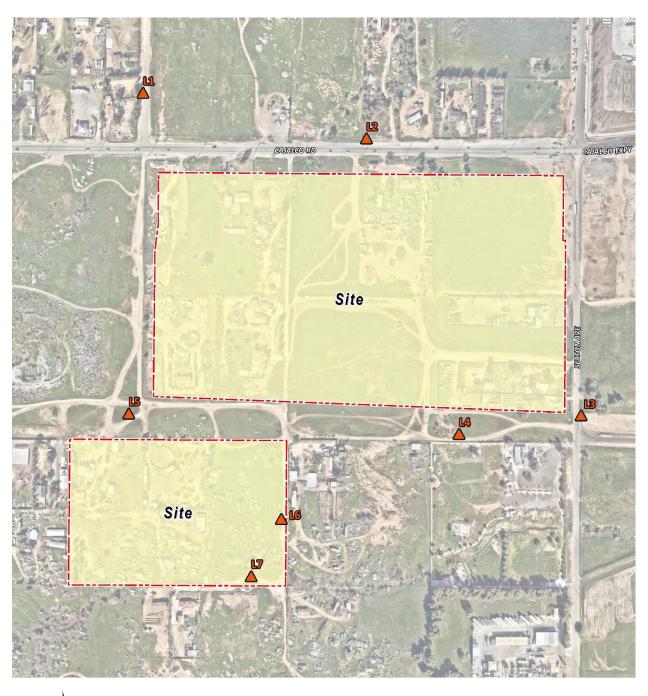


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

N LEGEND:



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6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with County of Riverside Noise Guidelines for Land Use Planning (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (22) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (23) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (24)

6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 13 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the County of Riverside General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on the *Mead Valley Commerce Center Traffic Analysis*, prepared by Urban Crossroads, Inc. for the following traffic scenarios (25).

- Existing (E)
- Existing plus Project (E+P)
- Existing plus Ambient Growth plus Cumulative (EAC) (2026) without Project Conditions
- Existing plus Ambient Growth plus Cumulative (EAPC) (2026) with Project Conditions
- Horizon Year (2045) without Project Conditions
- Horizon Year (2045) with Project Conditions

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic analysis. The



Project is anticipated to generate a net total of 2,448 two-way trips per day (actual vehicles) that includes 438 truck trips.

ID	Roadway	Segment	Classification ¹	Receiving Land Use ²	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Clark St.	n/o Cajalco Rd.	Secondary	Sensitive	50'	45
2	Clark St.	s/o Cajalco Rd.	Collector	Sensitive	37'	40
3	Seaton Av.	n/o Cajalco Rd.	Secondary	Sensitive	50'	45
4	Seaton Av.	s/o Cajalco Rd.	Secondary	Non-Sensitive	50'	45
5	Seaton Av.	n/o Rider St.	Secondary	Sensitive	50'	45
6	Harvill Av.	n/o Cajalco Rd.	Major	Non-Sensitive	59'	50
7	Harvill Av.	s/o Cajalco Rd.	Major	Non-Sensitive	59'	50
8	Cajalco Rd.	w/o Clark St.	Expressway	Sensitive	110'	55
9	Cajalco Rd.	w/o Day St.	Expressway	Sensitive	110'	55
10	Cajalco Rd.	w/o Decker Rd.	Expressway	Sensitive	110'	55
11	Cajalco Rd.	e/o Decker Rd.	Expressway	Sensitive	110'	55
12	Cajalco Rd.	e/o Seaton Av.	Expressway	Non-Sensitive	110'	55
13	Cajalco Rd.	e/o Harvill Av.	Expressway	Non-Sensitive	110'	55

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

¹ Mead Valley Commerce Center, Urban Crossroads, Inc.

² Based on a review of existing aerial imagery.

³ Distance to receiving land use is based upon the right-of-way distances.

			Average Daily Traffic Volur				nes1	
ID	Roadway	Segment	Existing	(2023)	EAC (2026)		HY (2	.045)
	,		Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Clark St.	n/o Cajalco Rd.	5,404	5,453	7,225	7,273	8,220	8,269
2	Clark St.	s/o Cajalco Rd.	8,366	8,432	10,368	10,434	11,404	11,470
3	Seaton Av.	n/o Cajalco Rd.	656	727	696	767	766	837
4	Seaton Av.	s/o Cajalco Rd.	1,398	2,869	1,484	2,955	1,632	3,103
5	Seaton Av.	n/o Rider St.	1,398	1,885	1,484	1,971	1,632	2,119
6	Harvill Av.	n/o Cajalco Rd.	9,765	9,991	26,387	26,613	29,026	29,252
7	Harvill Av.	s/o Cajalco Rd.	11,175	11,298	26,260	26,382	28,886	29,008
8	Cajalco Rd.	w/o Clark St.	18,885	19,315	26,993	27,423	29,693	30,122
9	Cajalco Rd.	w/o Day St.	21,942	22,486	33,217	33,761	36,538	37,083
10	Cajalco Rd.	w/o Decker Rd.	24,256	24,825	35,672	36,241	39,240	39,809
11	Cajalco Rd.	e/o Decker Rd.	27,611	28,704	39,233	40,325	43,156	44,248
12	Cajalco Rd.	e/o Seaton Av.	23,167	24,926	34,517	36,276	37,968	39,727
13	Cajalco Rd.	e/o Harvill Av.	23,947	25,357	50,399	51,810	55,439	56,850

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

¹ Mead Valley Commerce Center Traffic Analysis, Urban Crossroads, Inc.



To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Mead Valley Commerce Center Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

		Time of Day Splits ¹		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	76.64%	8.87%	14.49%	100.00%
Medium Trucks	83.26%	4.62%	12.12%	100.00%
Heavy Trucks	76.90%	5.17%	17.93%	100.00%

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

¹ Based on the February 15, 2023, 24-hour directional vehicle classification count collected on Harvill Avenue north of Cajalco Road (Mead Valley Commerce Center Traffic Analysis, Urban Crossroads, Inc.)

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

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification		Total % Traffic Flow ¹		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	86.56%	7.10%	6.34%	100.00%

¹Based on the February 15, 2023, 24-hour directional vehicle classification count collected on Harvill Avenue north of Cajalco Road (Mead Valley Commerce Center Traffic Analysis, Urban Crossroads, Inc.)

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.



				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Clark St.	n/o Cajalco Rd.	86.68%	7.03%	6.28%	100.00%
2	Clark St.	s/o Cajalco Rd.	86.67%	7.04%	6.29%	100.00%
3	Seaton Av.	n/o Cajalco Rd.	87.88%	6.40%	5.72%	100.00%
4	Seaton Av.	s/o Cajalco Rd.	82.00%	4.49%	13.51%	100.00%
5	Seaton Av.	n/o Rider St.	84.23%	5.79%	9.99%	100.00%
6	Harvill Av.	n/o Cajalco Rd.	86.65%	6.96%	6.40%	100.00%
7	Harvill Av.	s/o Cajalco Rd.	86.71%	7.02%	6.27%	100.00%
8	Cajalco Rd.	w/o Clark St.	86.52%	6.97%	6.51%	100.00%
9	Cajalco Rd.	w/o Day St.	86.60%	6.95%	6.45%	100.00%
10	Cajalco Rd.	w/o Decker Rd.	86.61%	6.96%	6.43%	100.00%
11	Cajalco Rd.	e/o Decker Rd.	86.85%	6.85%	6.31%	100.00%
12	Cajalco Rd.	e/o Seaton Av.	86.46%	6.69%	6.85%	100.00%
13	Cajalco Rd.	e/o Harvill Av.	86.36%	6.79%	6.85%	100.00%

TABLE 6-5: EXISTING WITH PROJECT VEHICLE MIX

 $^{\rm 1}$ Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-6: EAC 2026 WITH PROJECT VEHICLE MIX

				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Clark St.	n/o Cajalco Rd.	86.65%	7.05%	6.30%	100.00%
2	Clark St.	s/o Cajalco Rd.	86.65%	7.05%	6.30%	100.00%
3	Seaton Av.	n/o Cajalco Rd.	87.81%	6.44%	5.75%	100.00%
4	Seaton Av.	s/o Cajalco Rd.	82.14%	4.56%	13.30%	100.00%
5	Seaton Av.	n/o Rider St.	84.33%	5.84%	9.83%	100.00%
6	Harvill Av.	n/o Cajalco Rd.	86.60%	7.04%	6.36%	100.00%
7	Harvill Av.	s/o Cajalco Rd.	86.63%	7.06%	6.31%	100.00%
8	Cajalco Rd.	w/o Clark St.	86.53%	7.01%	6.46%	100.00%
9	Cajalco Rd.	w/o Day St.	86.59%	7.00%	6.41%	100.00%
10	Cajalco Rd.	w/o Decker Rd.	86.59%	7.00%	6.40%	100.00%
11	Cajalco Rd.	e/o Decker Rd.	86.77%	6.92%	6.32%	100.00%
12	Cajalco Rd.	e/o Seaton Av.	86.49%	6.82%	6.69%	100.00%
13	Cajalco Rd.	e/o Harvill Av.	86.46%	6.95%	6.59%	100.00%

 $^{\rm 1}$ Total of vehicle mix percentage values rounded to the nearest one-hundredth.

				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ² 100.00% 100.00% 100.00% 100.00% 100.00% 100.00% 100.00%
1	Clark St.	n/o Cajalco Rd.	86.64%	7.05%	6.30%	100.00%
2	Clark St.	s/o Cajalco Rd.	86.64%	7.06%	6.30%	100.00%
3	Seaton Av.	n/o Cajalco Rd.	87.71%	6.49%	5.80%	100.00%
4	Seaton Av.	s/o Cajalco Rd.	82.35%	4.69%	12.97%	100.00%
5	Seaton Av.	n/o Rider St.	84.48%	5.93%	9.58%	100.00%
6	Harvill Av.	n/o Cajalco Rd.	86.59%	7.05%	6.36%	100.00%
7	Harvill Av.	s/o Cajalco Rd.	86.62%	7.07%	6.31%	100.00%
8	Cajalco Rd.	w/o Clark St.	86.54%	7.02%	6.45%	100.00%
9	Cajalco Rd.	w/o Day St.	86.58%	7.01%	6.41%	100.00%
10	Cajalco Rd.	w/o Decker Rd.	86.59%	7.01%	6.40%	100.00%
11	Cajalco Rd.	e/o Decker Rd.	86.75%	6.94%	6.32%	100.00%
12	Cajalco Rd.	e/o Seaton Av.	86.50%	6.84%	6.66%	100.00%
13	Cajalco Rd.	e/o Harvill Av.	86.47%	6.96%	6.57%	100.00%

TABLE 6-7: HY 2045 WITH PROJECT VEHICLE MIX

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



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7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *the Mead Valley Commerce Center Traffic Analysis* prepared by Urban Crossroads, Inc. (25) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-6 present a summary of the exterior traffic noise levels for each traffic condition.

ID	Baad	Comment	Receiving	CNEL at Receiving		Distance to Contour Centerline (Feet	
	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Clark St.	n/o Cajalco Rd.	Sensitive	69.6	56	122	262
2	Clark St.	s/o Cajalco Rd.	Sensitive	72.1	RW	111	240
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.4	RW	75	161
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	63.7	75	162	350
5	Seaton Av.	n/o Rider St.	Sensitive	63.7	75	161	347
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	72.1	170	367	790
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	72.7	166	358	770
8	Cajalco Rd.	w/o Clark St.	Sensitive	71.9	166	358	771
9	Cajalco Rd.	w/o Day St.	Sensitive	72.5	314	677	1459
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	73.0	269	579	1248
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	73.5	269	579	1248
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	72.8	269	579	1248
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	72.9	269	579	1248

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

¹ Based on a review of existing aerial imagery.

 $^{\rm 2}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



ID	Road	Forment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
טו	Noau	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Clark St.	n/o Cajalco Rd.	Sensitive	69.6	RW	101	217	
2	Clark St.	s/o Cajalco Rd.	Sensitive	72.1	51	110	237	
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.5	RW	RW	54	
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	68.9	RW	91	196	
5	Seaton Av.	n/o Rider St.	Sensitive	66.2	RW	60	129	
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	72.2	82	178	383	
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	72.7	89	192	413	
8	Cajalco Rd.	w/o Clark St.	Sensitive	72.0	151	324	699	
9	Cajalco Rd.	w/o Day St.	Sensitive	72.7	166	358	770	
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	73.1	177	382	822	
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	73.7	193	417	898	
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	73.2	181	390	840	
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	73.3	183	395	851	

TABLE 7-2: EXISTING WITH PROJECT CONTOURS

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3:	EAC 2026 WITHOUT PROJECT CONTOURS
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ID	Road	Forment	Receiving	CNEL at Receiving		e to Contou nterline (Fe	
	NOAU	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Clark St.	n/o Cajalco Rd.	Sensitive	70.8	57	122	263
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.0	59	127	273
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.7	RW	RW	55
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	63.9	RW	RW	92
5	Seaton Av.	n/o Rider St.	Sensitive	63.9	RW	RW	92
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.4	157	339	730
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.4	157	338	728
8	Cajalco Rd.	w/o Clark St.	Sensitive	73.4	187	402	867
9	Cajalco Rd.	w/o Day St.	Sensitive	74.3	214	462	995
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	74.7	225	485	1044
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.1	240	516	1112
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	74.5	220	474	1021
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.2	283	610	1314

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



ID	Road	Forment	Receiving	CNEL at Receiving		ce to Contou nterline (Fe	
	KOAQ	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Clark St.	n/o Cajalco Rd.	Sensitive	70.8	57	122	264
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.0	59	127	273
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.8	RW	RW	56
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	69.0	RW	92	198
5	Seaton Av.	n/o Rider St.	Sensitive	66.3	RW	61	132
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.4	158	341	735
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.4	157	338	728
8	Cajalco Rd.	w/o Clark St.	Sensitive	73.6	190	409	881
9	Cajalco Rd.	w/o Day St.	Sensitive	74.4	217	468	1009
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	74.7	228	491	1057
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.2	243	523	1128
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	74.8	231	497	1072
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.4	292	629	1354

TABLE 7-4: EAC 2026 WITH PROJECT CONTOURS

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5:	HY 2045	WITHOUT	PROJECT	CONTOURS
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ID	Road	Sogment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)				
U	KUdu	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		
1	Clark St.	n/o Cajalco Rd.	Sensitive	71.4	62	133	287		
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.4	63	135	291		
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	61.1	RW	RW	59		
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	64.4	RW	RW	98		
5	Seaton Av.	n/o Rider St.	Sensitive	64.4	RW	RW	98		
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.8	168	361	778		
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.8	167	360	776		
8	Cajalco Rd.	w/o Clark St.	Sensitive	73.9	199	429	924		
9	Cajalco Rd.	w/o Day St.	Sensitive	74.8	229	492	1061		
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	75.1	240	516	1112		
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.5	255	550	1185		
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	74.9	234	505	1088		
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.6	302	650	1401		

¹ Based on a review of existing aerial imagery.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



ID	Road	Cormont	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)				
טו	Noau	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		
1	Clark St.	n/o Cajalco Rd.	Sensitive	71.4	62	133	287		
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.4	63	135	291		
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	61.2	RW	RW	60		
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	69.1	RW	94	203		
5	Seaton Av.	n/o Rider St.	Sensitive	66.6	RW	64	137		
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.8	169	363	782		
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.8	167	360	776		
8	Cajalco Rd.	w/o Clark St.	Sensitive	74.0	202	435	937		
9	Cajalco Rd.	w/o Day St.	Sensitive	74.8	231	498	1074		
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	75.1	242	522	1125		
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.6	259	557	1200		
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	75.2	245	528	1137		
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.8	310	668	1439		

TABLE 7-6: HY 2045 WITH PROJECT CONTOURS

¹ Based on a review of existing aerial imagery.

 $^{\rm 2}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Analysis prepared by Urban Crossroads, Inc. However, the analysis of existing off-site traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2026 conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 60.4 to 73.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions ranging from 60.5 to 73.7 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases range from 0.0 to 5.2 dBA CNEL on the study area roadway segments.

7.3 EAC 2026 TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Existing plus Ambient Growth Plus Cumulative (EAC) without Project conditions CNEL noise levels. The EAC without Project exterior noise levels range from 60.7 to 76.4 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the EAC with Project conditions will range from 60.8 to 76.4 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases range from 0.0 to 5.1 dBA CNEL.



7.4 HORIZON YEAR 2045 TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the HY 2045 without Project conditions CNEL noise levels. The HY 2045 without Project exterior noise levels range from 61.1 to 76.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the HY 2045 with Project conditions will range from 61.2 to 76.8 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases range from 0.0 to 4.7 dBA CNEL.



10	Deed	Comment	Receiving		EL at Receiv nd Use (dB/	-	Incremental Noise Level Increase Threshold ²		
ID	Road	Segment	Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?	
1	Clark St.	n/o Cajalco Rd.	Sensitive	69.6	69.6	0.0	1.5	No	
2	Clark St.	s/o Cajalco Rd.	Sensitive	72.1	72.1	0.0	1.5	No	
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.4	60.5	0.1	3.0	No	
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	63.7	68.9	5.2	n/a	No	
5	Seaton Av.	n/o Rider St.	Sensitive	63.7	66.2	2.5	3.0	No	
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	72.1	72.2	0.1	n/a	No	
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	72.7	72.7	0.0	n/a	No	
8	Cajalco Rd.	w/o Clark St.	Sensitive	71.9	72.0	0.1	1.5	No	
9	Cajalco Rd.	w/o Day St.	Sensitive	72.5	72.7	0.2	1.5	No	
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	73.0	73.1	0.1	1.5	No	
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	73.5	73.7	0.2	1.5	No	
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	72.8	73.2	0.4	n/a	No	
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	72.9	73.3	0.4	n/a	No	

TABLE 7-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

"n/a" Per the County of Riverside General Plan Noise Element Table N-1, unmitigated normally acceptable exterior noise levels of less than 75 dBA CNEL are considered less than significant and a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.



	Deed	6 - mart	Receiving		EL at Receiv nd Use (dB/	-	Incremental Noise Level Increase Threshold ²		
ID	Road	Segment	Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?	
1	Clark St.	n/o Cajalco Rd.	Sensitive	70.8	70.8	0.0	1.5	No	
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.0	73.0	0.0	1.5	No	
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	60.7	60.8	0.1	3.0	No	
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	63.9	69.0	5.1	n/a	No	
5	Seaton Av.	n/o Rider St.	Sensitive	63.9	66.3	2.4	3.0	No	
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.4	76.4	0.0	3.0	No	
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.4	76.4	0.0	3.0	No	
8	Cajalco Rd.	w/o Clark St.	Sensitive	73.4	73.6	0.2	1.5	No	
9	Cajalco Rd.	w/o Day St.	Sensitive	74.3	74.4	0.1	1.5	No	
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	74.7	74.7	0.0	1.5	No	
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.1	75.2	0.1	1.5	No	
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	74.5	74.8	0.3	n/a	No	
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.2	76.4	0.2	3.0	No	

 TABLE 7-8: EAC 2026 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

"n/a" Per the County of Riverside General Plan Noise Element Table N-1, unmitigated normally acceptable exterior noise levels of less than 75 dBA CNEL are considered less than significant and a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.



	Deed	6 - mart	Receiving		EL at Receiv nd Use (dB/	-	Incremental Noise Level Increase Threshold ²		
ID	Road	Segment	Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?	
1	Clark St.	n/o Cajalco Rd.	Sensitive	71.4	71.4	0.0	1.5	No	
2	Clark St.	s/o Cajalco Rd.	Sensitive	73.4	73.4	0.0	1.5	No	
3	Seaton Av.	n/o Cajalco Rd.	Sensitive	61.1	61.2	0.1	3.0	No	
4	Seaton Av.	s/o Cajalco Rd.	Non-Sensitive	64.4	69.1	4.7	n/a	No	
5	Seaton Av.	n/o Rider St.	Sensitive	64.4	66.6	2.2	3.0	No	
6	Harvill Av.	n/o Cajalco Rd.	Non-Sensitive	76.8	76.8	0.0	3.0	No	
7	Harvill Av.	s/o Cajalco Rd.	Non-Sensitive	76.8	76.8	0.0	3.0	No	
8	Cajalco Rd.	w/o Clark St.	Sensitive	73.9	74.0	0.1	1.5	No	
9	Cajalco Rd.	w/o Day St.	Sensitive	74.8	74.8	0.0	1.5	No	
10	Cajalco Rd.	w/o Decker Rd.	Sensitive	75.1	75.1	0.0	1.5	No	
11	Cajalco Rd.	e/o Decker Rd.	Sensitive	75.5	75.6	0.1	1.5	No	
12	Cajalco Rd.	e/o Seaton Av.	Non-Sensitive	74.9	75.2	0.3	n/a	No	
13	Cajalco Rd.	e/o Harvill Av.	Non-Sensitive	76.6	76.8	0.2	3.0	No	

 TABLE 7-9: HY 2045 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

"n/a" Per the County of Riverside General Plan Noise Element Table N-1, unmitigated normally acceptable exterior noise levels of less than 75 dBA CNEL are considered less than significant and a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.



8 SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, outpatient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential Project noise levels, 12 receiver locations were identified. This includes the nearest off-site existing noise sensitive receiver locations R1 to R6, ON7 to ON10 representing future on-site Project receivers within Seaton Park, and BIO11 to BIO12 describing the adjacent habitat area. To the extent this analysis considers impacts in relation to future receivers within Seaton Park and potential biological receivers within the adjacent habitat areas, it does so for informational purposes to show compliance with County regulations. Impacts of the environment on a project are excluded from CEQA unless the project itself "exacerbates" such impacts. (26) As such, any impact on the receivers within the Project is not an impact under CEQA. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive La Palapa Ranch building at 19451 Decker Road, approximately 322 feet northwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 22840 Cajalco Road, approximately 229 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R2 is placed at the building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 19701 Seaton Avenue approximately 167 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R3 is placed at the building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.



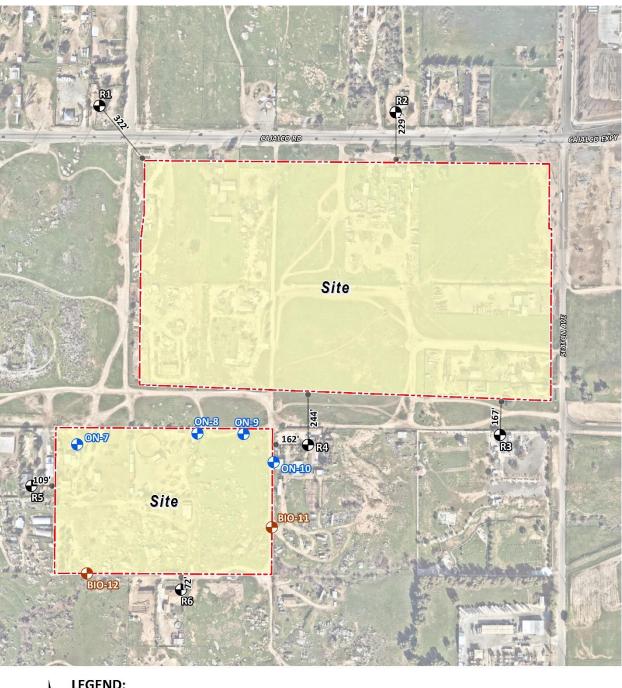


EXHIBIT 8-A: RECEIVER LOCATIONS

LEGEND:

Site Boundary On-Site Receiver Location ─● Distance from receiver to Project site boundary (in feet) Receiver Locations

N



- R4: Location R4 represents the existing noise sensitive residence at 22761 Cajalco Road, approximately 162 feet east and 244 feet south of the Project site. Receiver R4 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing noise sensitive residence west of 19754 Anderson Road, approximately 109 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence west of 22683 Cajalco Road, approximately 72 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R6 is placed at the building façade. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- ON7: Location ON7 represents the future receiver at the Seaton Park sports field.
- ON8: Location ON8 represents the future receiver at the Seaton Park soccer field sideline.
- ON9: Location ON9 represents the future receiver at the Seaton Park soccer field sideline.
- ON10: Location ON10 represents the future receiver within Seaton Park.
- BIO11: Location BIO11 represents the limits of construction near the adjacent habitat area east of the Project site.
- BIO12: Location BIO12 represents the limits of construction near the adjacent habitat area south of the Project site.



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9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed Mead Valley Commerce Center Project. Exhibit 9-A of the Noise Study includes over 73 individual noise sources to conservatively describe the potential worst-case noise environment.

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. Consistent with similar warehouse uses, the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, parking lot vehicle activities, roof-top air conditioning units, trash enclosure activity, truck movements, sports field activities, basketball court activity, dog park activity, and outdoor play area.

9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, parking lot vehicle activities, roof-top air conditioning units, trash enclosure activity, truck movements, sports field activities, basketball court activity, dog park activity, and outdoor play area all operating at the same time. These sources of noise activity will likely vary throughout the day.

9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (21)



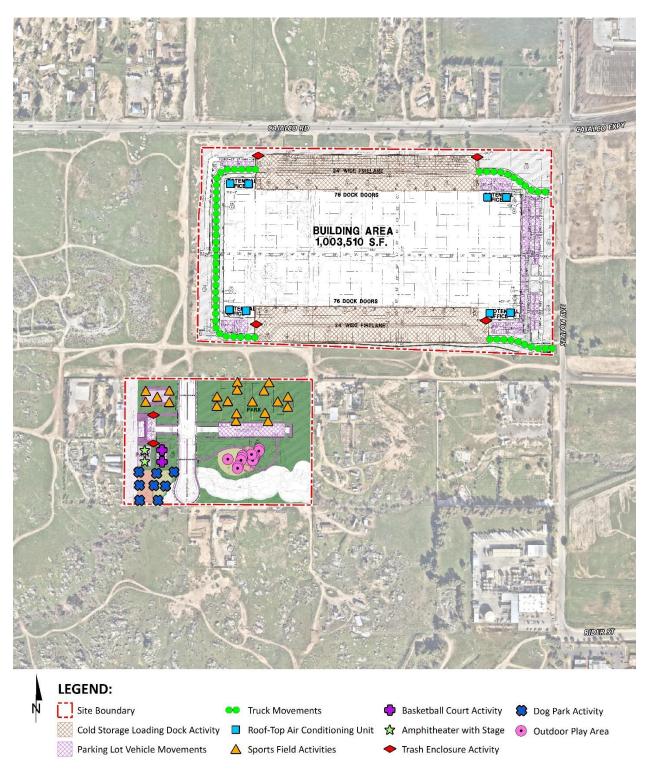


EXHIBIT 9-A: UNMITIGATED OPERATIONAL NOISE SOURCE LOCATIONS



Reference	Noise Source		n./ ur ¹	Reference Noise Level	Sound Power
Noise Source	Height (Feet)	Day	Night	(dBA L _{eq}) @ 50 Feet	Level (dBA)²
Cold Storage Loading Dock Activity	8'	60	60	65.7	111.5
Dry Goods Loading Dock Activity	8'	60	60	62.8	103.4
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	30	57.3	89.0
Truck Movements	8'	60	60	59.8	93.2
Sports Field Activities	5'	60	0	61.4	94.0
Basketball Court Activity	5'	60	0	52.0	83.7
Dog Park Activity	3'	60	0	42.8	74.4
Amphitheater with Stage	8'	60	0	66.8	98.4
Outdoor Play Area	5'	60	0	49.4	81.1

 TABLE 9-1:
 REFERENCE NOISE LEVEL MEASUREMENTS

¹Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

² Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

9.2.2 COLD STORAGE LOADING DOCK ACTIVITY

The reference cold storage loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers, this reference noise level conservatively assumes that all loading dock activity is associated with cold storage facilities, even though only 15 percent cold storage is anticipated. (25) The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{ea} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.3 DRY GOODS LOADING DOCK ACTIVITY

The reference dry goods loading dock activities are intended to describe the typical operational noise source levels associated with the Project. This includes truck idling, deliveries, backup



alarms, unloading/loading, docking including a combination of tractor trailer semi-trucks, twoaxle delivery trucks, and background forklift operations. At a uniform reference distance of 50 feet, Urban Crossroads collected a reference noise level of 62.8 dBA L_{eq}. The loading dock activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of activity. The reference noise level measurement includes employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine, idling, air brakes noise, in addition to on-going idling of an already docked truck. Loading dock activity is estimated during all the daytime, evening, and nighttime hours.

9.2.4 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of a warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due to cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.5 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise level is 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

9.2.6 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building.





9.2.7 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represent multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

9.2.8 SPORTS FIELD ACTIVITIES

To represent the potential noise level impacts associated with the Project's Park activities, a reference noise level measurement was collected at a girls' youth U10 soccer game with coaches shouting instructions, and parents speaking on cell phones and background noise levels from kids playing on swing sets and people cheering and clapping. At the uniform reference distance of 50 feet, the reference sports field activity noise level is 61.4 dBA Leq. The playground activities are estimated to occur for 60 minutes during the peak hour conditions.

9.2.9 BASKETBALL COURT ACTIVITY

To describe the potential noise levels associated with the Project's basketball courts, a reference noise level measurement was collected by Urban Crossroads, Inc. The reference noise level measurement includes children playing on one half of a full basketball court, and adults playing basketball on the other half. Using a uniform reference distance of 50 feet, the reference basketball court activity noise level is 52.0 dBA L_{eq}. Noise associated with basketball court activity is expected to last for 60 minutes per hour during all daytime hours from 7:00 a.m. to 10:00 p.m.

9.2.10 DOG PARK ACTIVITIES

To describe the potential noise level impacts associated with the Project's dog park, Urban Crossroads, Inc. collected a reference noise level measurement representing both large and small dogs with people talking, dogs running, playing fetch, chasing each other, growling, barking, and owners talking on cell phones. At a uniform distance of 50 feet from the noise source, a reference noise level of 42.8 dBA L_{eq} is used. The noise associated with dog park activity is expected to last for 60 minutes per hour during all daytime hours from 7:00 a.m. to 10:00 p.m.

9.2.11 AMPHITHEATER WITH STAGE

Urban Crossroads, Inc. collected sample (reference) noise level measurements of at an outdoor Revelation Classic Jazz Band. The noise level measurements collected a uniform distance of 50 feet from the noise source, a live band performance produced a reference noise level of 66.8 dBA L_{eq} .

9.2.12 OUTDOOR PLAY AREA

To represent the potential noise level impacts associated with the Project's Outdoor Play Areas, a reference noise level measurement is expected to reflect the noise level activities within the water fountain and playground equipment area. Using the uniform reference distance of 50 feet,



the reference outdoor play area activity noise level is 49.4 dBA L_{eq} . The playground activities are estimated to occur for 60 minutes during the peak hour conditions.

9.3 CADNAA NOISE PREDICTION MODEL

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

While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs including the planned screenwall used to estimate the Project operational noise levels presented in this section.

9.4 UNMITIGATED PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, parking lot vehicle activities, roof-top air conditioning units, trash enclosure activity, truck movements, sports field activities, basketball court activity, dog park activity, and outdoor play area, Urban Crossroads, Inc. calculated the unmitigated operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the unmitigated Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 50.2 to 57.6 dBA L_{eq}. Table 9-3 shows the unmitigated Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels during the nighttime hourly noise levels are expected to range from 47.0 to 56.5 dBA L_{eq}. The Seaton Park noise source activities will be limited to the daytime hours with no nighttime use. The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.



Noise Coursel	Operational Noise Levels by Receiver Location (dBA Leq)											
Noise Source ¹	R1	R2	R3	R4	R5	R6	ON7	ON8	ON9	ON10	BIO11	BIO12
Cold Storage Loading Dock Activity	49.5	56.4	53.8	56.4	46.7	47.9	48.7	54.8	56.6	54.8	51.4	46.6
Dry Goods Loading Dock Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parking Lot Vehicle Movements	24.5	23.9	31.5	27.6	32.1	27.6	34.8	33.1	31.4	30.6	29.4	28.6
Roof-Top Air Conditioning Units	30.7	31.5	33.9	30.8	28.1	28.3	30.2	33.7	32.6	30.9	29.5	27.8
Trash Enclosure Activity	32.5	35.2	36.0	34.5	41.3	34.6	46.7	38.9	37.5	35.1	33.5	38.4
Truck Movements	34.5	35.9	44.0	33.7	31.6	30.8	34.3	37.5	35.0	33.3	31.7	30.4
Sports Field Activities	38.3	26.3	41.3	50.8	50.3	48.3	_2	_2	_2	_2	50.8	47.8
Basketball Court Activity	18.4	8.0	18.4	24.1	33.7	30.3	_2	_2	_2	_2	26.2	36.5
Dog Park Activity	18.8	9.2	19.2	24.4	34.2	32.5	_2	_2	_2	_2	26.9	51.9
Amphitheater with Stage	33.1	22.6	32.7	38.1	51.0	43.8	_2	_2	_2	_2	40.0	51.3
Outdoor Play Area	23.3	12.5	26.1	33.8	31.7	39.4	_2	_2	_2	_2	38.9	34.7
Total (All Noise Sources)	50.2	56.5	54.6	57.6	54.8	52.3	51.1	55.0	56.7	54.9	54.5	56.2

TABLE 9-2: UNMITIGATED DAYTIME PROJECT OPERATIONAL NOISE LEVELS

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

² On-site receiver locations are included to describe the noise levels from the warehouse building to Seaton Park. Noise source activities from Seaton Park are not included in the overall operational noise level totals.



Nation Courses1			C	peration	al Noise	Levels by	Receiver	Location	(dBA Leo	q)		
Noise Source ¹	R1	R2	R3	R4	R5	R6	ON7	ON8	ON9	ON10	BIO11	BIO12
Cold Storage Loading Dock Activity	49.5	56.4	53.8	56.4	46.7	47.9	_2	_2	_2	_2	51.4	46.6
Dry Goods Loading Dock Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Parking Lot Vehicle Movements	23.9	23.8	31.3	23.5	19.9	19.2	_2	_2	_2	_2	21.4	18.7
Roof-Top Air Conditioning Units	28.3	29.1	31.5	28.4	25.7	25.9	_2	_2	_2	_2	27.1	25.4
Trash Enclosure Activity	28.5	31.2	32.0	30.5	37.3	30.6	_2	_2	_2	_2	29.5	34.4
Truck Movements	34.5	35.9	44.0	33.7	31.6	30.8	_2	_2	_2	_2	31.7	30.4
Sports Field Activities	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Basketball Court Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Dog Park Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Amphitheater with Stage	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Outdoor Play Area	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Total (All Noise Sources)	49.7	56.5	54.3	56.4	47.3	48.1	_2	_2	_2	_2	51.5	47.0

TABLE 9-3: UNMITIGATED NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

² On-site receiver locations are included to describe the noise levels from the warehouse building to Seaton Park. Noise source activities from Seaton Park are not included in the overall operational noise level totals. Seaton Park does not include nighttime receivers with park activities limited to the daytime hours.



9.5 UNMITIGATED PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the unmitigated Project-only operational noise levels are evaluated against exterior noise level thresholds based on the County of Riverside exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-4 shows the unmitigated operational noise levels associated with Mead Valley Commerce Center will exceed the County of Riverside daytime and nighttime exterior noise level standards. Therefore, the unmitigated operational noise impacts are considered *potentially significant* and operational noise mitigation measures are required to satisfy the County of Riverside exterior noise level standards.

Receiver	Project Op Noise Levels	perational s (dBA Leq) ²		l Standards Leq) ³	Noise Level Standards Exceeded? ⁴		
Location	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	50.2	49.7	55	45	No	Yes	
R2	56.5	56.5	55	45	Yes	Yes	
R3	54.6	54.3	55	45	No	Yes	
R4	57.6	56.4	55	45	Yes	Yes	
R5	54.8	47.3	55	45	No	Yes	
R6	52.3	48.1	55	45	No	Yes	
ON7	51.1	_5	65	_5	No	No	
ON8	55.0	_5	65	_5	No	No	
ON9	56.7	_5	65	_5	No	No	
ON10	54.9	_5	65	_5	No	No	
BIO11	54.5	51.5	_6	_6	_6	_6	
BIO12	56.2	47.0	_6	_6	_6	_6	

TABLE 9-4: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 8-A for the receiver locations.

² Proposed Project unmitigated operational noise levels as shown on Tables 9-2 and 9-3.

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

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

⁵ Seaton Park does not include nighttime receivers with park activities limited to the daytime hours.

⁶ Project operational noise levels provided for informational purposes.

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

9.6 MITIGATED PROJECT OPERATIONAL NOISE LEVELS

To satisfy the County of Riverside exterior noise level standards, no cold storage activity is permitted in the loading area and a minimum 14-foot-high noise barrier is required for the loading dock areas as shown on Exhibit 9-B. Tables 9-5 and 9-6 present mitigated Project operational noise levels.



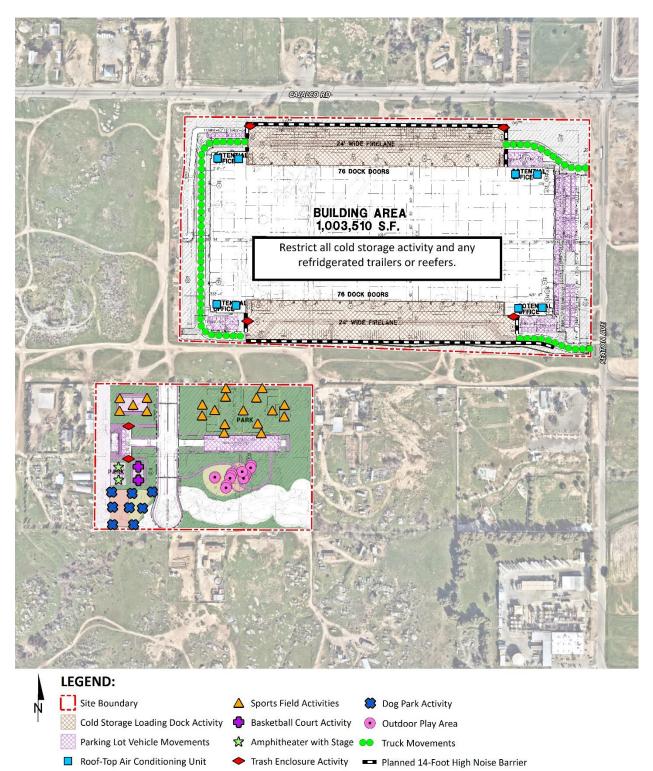


EXHIBIT 9-B: OPERATIONAL NOISE MITIGATION MEASURES



Notes Coursel			C	peration	al Noise	Levels by	Receiver	Location	dBA Le	q)		
Noise Source ¹	R1	R2	R3	R4	R5	R6	ON7	ON8	ON9	ON10	BIO11	BIO12
Cold Storage Loading Dock Activity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Goods Loading Dock Activity	37.1	41.6	39.6	41.6	34.6	34.6	36.9	40.8	41.6	40.4	37.5	33.9
Parking Lot Vehicle Movements	24.3	17.9	27.5	26.4	32.1	27.4	34.7	33.0	31.1	30.3	29.2	28.5
Roof-Top Air Conditioning Units	30.7	31.5	33.9	30.8	28.1	28.3	30.2	33.7	32.6	30.9	29.5	27.8
Trash Enclosure Activity	25.7	22.3	26.6	31.4	41.2	34.4	46.7	38.8	33.7	32.3	31.7	38.2
Truck Movements	34.1	34.1	41.1	31.5	31.3	30.0	34.1	37.3	34.1	31.9	30.1	29.8
Sports Field Activities	38.3	26.3	41.3	50.8	50.3	48.3	_2	_2	_2	_2	50.8	47.8
Basketball Court Activity	18.4	8.0	18.4	24.1	33.7	30.3	_2	_2	_2	_2	26.2	36.5
Dog Park Activity	18.8	9.2	19.2	24.4	34.2	32.5	_2	_2	_2	_2	26.9	51.9
Amphitheater with Stage	33.1	22.6	32.7	38.1	51.0	43.8	_2	_2	_2	_2	40.0	51.3
Outdoor Play Area	23.3	12.5	26.1	33.8	31.7	39.4	_2	_2	_2	_2	38.9	34.7
Total (All Noise Sources)	42.7	42.9	46.2	51.7	54.1	50.5	47.7	44.7	43.5	42.2	51.7	55.7

TABLE 9-5: MITIGATED DAYTIME PROJECT OPERATIONAL NOISE LEVELS

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

² On-site receiver locations are included to describe the noise levels from the warehouse building to Seaton Park. Noise source activities from Seaton Park are not included in the overall operational noise level totals.

Nation Courses1			C	peration	al Noise	Levels by	Receiver	Location	(dBA Le	q)		
Noise Source ¹	R1	R2	R3	R4	R5	R6	ON7	ON8	ON9	ON10	BIO11	BIO12
Cold Storage Loading Dock Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Dry Goods Loading Dock Activity	37.1	41.6	39.6	41.6	34.6	34.6	_2	_2	_2	_2	37.5	33.9
Parking Lot Vehicle Movements	23.7	17.7	27.0	19.0	19.4	18.1	_2	_2	_2	_2	19.9	17.9
Roof-Top Air Conditioning Units	28.3	29.1	31.5	28.4	25.7	25.9	_2	_2	_2	_2	27.1	25.4
Trash Enclosure Activity	21.7	18.3	22.6	27.4	37.2	30.4	_2	-2	_2	_2	27.7	34.2
Truck Movements	34.1	34.1	41.1	31.5	31.3	30.0	_2	_2	_2	_2	30.1	29.8
Sports Field Activities	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Basketball Court Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Dog Park Activity	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Amphitheater with Stage	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Outdoor Play Area	0.0	0.0	0.0	0.0	0.0	0.0	_2	_2	_2	_2	0.0	0.0
Total (All Noise Sources)	39.4	42.5	43.8	42.4	40.0	37.4	_2	_2	_2	_3	38.9	38.1

TABLE 9-6: MITIGATED NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

² On-site receiver locations are included to describe the noise levels from the warehouse building to Seaton Park. Noise source activities from Seaton Park are not included in the overall operational noise level totals. Seaton Park does not include nighttime receivers with park activities limited to the daytime hours.



Using the reference noise levels to represent the mitigated Project operations Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site. The mitigated operational noise level calculations are included in Appendix 9.2. Table 9-5 shows the mitigated Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 42.2 to 55.7 dBA L_{eq}. Table 9-6 shows the mitigated Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 37.4 to 43.8 dBA L_{eq}. The Seaton Park noise source activities will be limited to the daytime hours with no nighttime use.

9.7 MITIGATED PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the mitigated Project-only operational noise levels are evaluated against exterior noise level thresholds based on the County of Riverside exterior noise level standards at the existing nearby noise-sensitive receiver locations. Table 9-7 shows that the mitigated operational noise levels associated with Project will not exceed the County of Riverside daytime and nighttime exterior noise level standards at the existing nearby noise-sensitive receiver locations. Therefore, the mitigated operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

Receiver Location ¹	Project Operational Noise Levels (dBA Leq) ²		Noise Level Standards (dBA Leq) ³		Noise Level Standards Exceeded? ⁴		
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	42.7	39.4	55	45	No	No	
R2	42.9	42.5	55	45	No	No	
R3	46.2	43.8	55	45	No	No	
R4	51.7	42.4	55	45	No	No	
R5	54.1	40.0	55	45	No	No	
R6	50.5	37.4	55	45	No	No	
ON7	47.7	_5	65	_5	No	No	
ON8	44.7	_5	65	_5	No	No	
ON9	43.5	_5	65	_5	No	No	
ON10	42.2	_5	65	_5	No	No	
BIO11	51.7	38.9	_6	_6	_6	_6	
BIO12	55.7	38.1	_6	_6	_6	_6	

TABLE 9-7: MITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 8-A for the receiver locations.

² Proposed Project unmitigated operational noise levels as shown on Tables 9-2 and 9-3.

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

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

⁵ Seaton Park does not include nighttime receivers with park activities limited to the daytime hours.

⁶ Project operational noise levels provided for informational purposes.

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

9.8 PROJECT OPERATIONAL NOISE LEVEL INCREASES

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

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-8 and 9-9, respectively. As indicated on Table 9-8, the Project will generate a daytime operational noise level increase ranging from 0.0 to 0.3 dBA L_{eq} at the nearest receiver locations. Table 9-9 shows that the Project will generate a nighttime operational noise level increase ranging from 0.0 to 0.5 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases will not exceed the operational noise level increase significance criteria presented in Table 4-1, and, therefore, the increases at the sensitive receiver locations will be *less than significant*.

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	42.7	L1	65.1	65.1	0.0	1.5	No
R2	42.9	L2	75.2	75.2	0.0	1.5	No
R3	46.2	L4	62.6	62.7	0.1	5.0	No
R4	51.7	L6	65.1	65.3	0.2	1.5	No
R5	54.1	L5	63.5	64.0	0.5	5.0	No
R6	50.5	L7	62.2	62.5	0.3	5.0	No

TABLE 9-8: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

 $^{\rm 1}$ See Exhibit 8-A for the receiver locations.

² Total Project mitigated daytime operational noise levels as shown on Table 9-5.

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

 $^{\rm 6}$ The noise level increase expected with the addition of the proposed Project activities.

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



Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	39.4	L1	61.5	61.5	0.0	5.0	No
R2	42.5	L2	75.2	75.2	0.0	1.5	No
R3	43.8	L4	53.2	53.7	0.5	5.0	No
R4	42.4	L6	56.9	57.0	0.1	5.0	No
R5	40.0	L5	53.3	53.5	0.2	5.0	No
R6	37.4	L7	59.9	59.9	0.0	5.0	No

TABLE 9-9: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

¹ See Exhibit 8-A for the receiver locations.

² Total Project nighttime mitigated operational noise levels as shown on Table 9-6.

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

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





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10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the on-site construction noise source activity including the off-site roadway and utility improvements in relation to the nearest sensitive receiver locations previously described in Section 8. According to Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (11)

10.1 CONSTRUCTION NOISE LEVELS

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

- Demolition
- Site Preparation
- Grading
- Rock Crushing
- Building Construction
- Paving
- Architectural Coating

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (27) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.



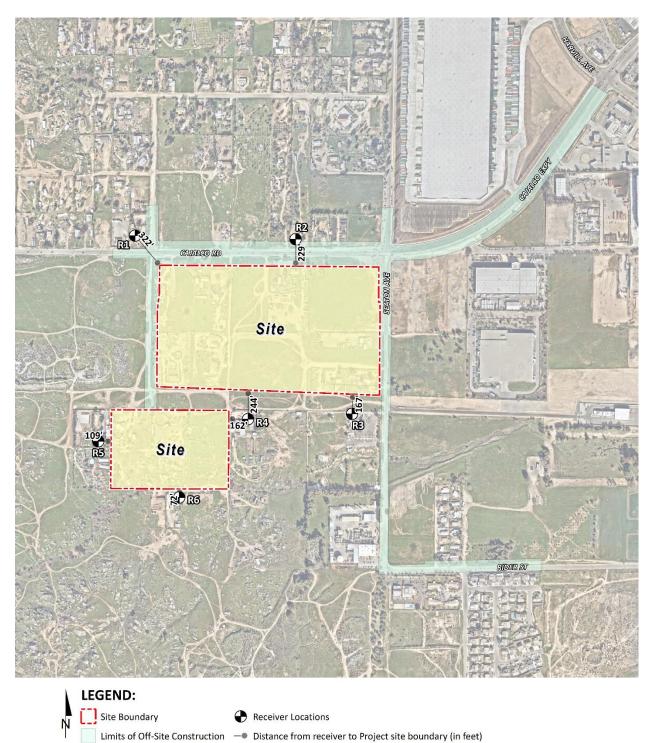


EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS



10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 46.2 to 66.0 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model calculations.

Construction Stage	Reference Construction Equipmnet ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})	Composite Reference Noise Level (dBA L _{eq}) ²	Reference Power Level (dBA L _w) ³	
	Concrete Saw	83			
Demolition	Grapple (on backhoe)	83	86.8	118.4	
	Gradall	79			
<u></u>	Tractor	80			
Site Preparation	Backhoe	74	84.0	115.6	
reputation	Grader	81			
	Scraper	80			
Grading	Excavator	77	83.3	114.9	
	Dozer	78			
_	Impact Hammer (hoe ram)	83			
Rock Crushing	Front End Loader	75	83.9	115.6	
Crushing	Dump Truck	72			
	Crane	73			
Building Construction	Generator	78	80.6	112.2	
construction	Front End Loader	75			
	Paver	74			
Paving	Dump Truck	72	77.8	109.5	
	Roller	73			
	Man Lift	68			
Architectural Coating	Compressor (air)	74	76.2	107.8	
Coating	Generator (<25kVA)	70			

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

¹ FHWA Road Construction Noise Model.

² Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

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



	Construction Noise Levels (dBA Leq)								
Receiver Location ¹	Demolition	tion Site Grading Rock Building Pavin		Paving	Architectural Coating	Highest Levels ²			
R1	56.8	54.0	53.3	53.9	50.6	47.8	46.2	56.8	
R2	59.6	56.8	56.1	56.7	53.4	50.6	49.0	59.6	
R3	60.1	57.3	56.6	57.2	53.9	51.1	49.5	60.1	
R4	63.6	60.8	60.1	60.7	57.4	54.6	53.0	63.6	
R5	64.4	61.6	60.9	61.5	58.2	55.4	53.8	64.4	
R6	66.0	63.2	62.5	63.1	59.8	57.0	55.4	66.0	

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

² Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 10-3:	PROJECT SITE	CONSTRUCTION	NOISE LEVEL	COMPLIANCE
--------------------	---------------------	--------------	--------------------	------------

Dession	Construction Noise Levels (dBA L _{eq})						
Receiver Location ¹	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴				
R1	56.8	80	No				
R2	59.6	80	No				
R3	60.1	80	No				
R4	63.6	80	No				
R5	64.4	80	No				
R6	66.0	80	No				

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

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

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

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



10.5 OFF-SITE ROADWAY AND UTILITY IMPROVEMENTS CONSTRUCTION NOISE ANALYSIS

To support the Project development, there will be grading, trenching, and paving for off-site improvements associated with roadway construction and utility installation for the Project. It is expected that these off-site improvements will be constructed within the existing public right-of-way (ROW) on Decker Road, Seaton Avenue, Cajalco Road and Rider Street. The loudest phase of construction associated with off-site roadway and utility improvements would likely be grading/excavation activities, which would generate similar noise levels compared to the grading/excavation phase of the proposed project's on-site construction activities previously outlined on Table 10-1.

It is expected that the off-site construction activities would not take place at any one location for more than four days due to the nature of the linear construction activity. Construction noise from this off-site work would, therefore, be relatively short-term and the noise levels would be reduced as construction work moves linearly along the selected alignment and farther from sensitive uses. Although not required to address a *potentially significant* impact, the following noise abatement measures would further reduce construction noise impacts from the Project construction and the off-site roadway and utility Improvements.

- All construction activities shall comply with Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), limiting construction activities to the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (11)
- 2. Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards).
- 3. All stationary construction equipment shall be placed in such a manner so that emitted noise is directed away from any sensitive receivers.
- 4. Construction equipment staging areas shall be located at the greatest feasible distance between the staging area and the nearest sensitive receivers.
- 5. The construction contractor shall limit equipment and material deliveries to the same hours specified for construction equipment (between the hours of 6:00am to 6:00pm during the months of June through September and 7:00am to 6:00pm during the months of October through May).
- 6. Electrically powered air compressors and similar power tools shall be used, when feasible, in place of diesel equipment.
- 7. No music or electronically reinforced speech from construction workers shall be allowed.

With the implementation of these construction noise abatement measures, the potential impacts from the Project and construction and off-site roadway and utility Improvements would be reduced. Therefore, the off-site roadway and utility improvement construction activities will be *less than significant.*



10.6 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the hours permitted by Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), the Project Applicant will be required to obtain authorization for nighttime work from the County of Riverside. Any nighttime construction noise activities are evaluated against the FTA nighttime exterior construction noise level threshold of 70 dBA Leq for noise sensitive residential land use (8 p. 179).

10.6.1 NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS

To estimate the noise levels due to nighttime concrete pouring activities, sample reference noise level measurements were taken during a nighttime concrete pouring at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling.

To describe the nighttime concrete pour noise levels associated with the construction of the Mead Valley Commerce Center, this analysis relies on reference sound pressure level of 67.7 dBA L_{eq} at 50 feet representing a sound power level of 100.3 dBA L_w . While the Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA L_w is used to describe the expected Project nighttime concrete pour noise activities.

10.6.2 NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 10-4, the noise levels associated with the nighttime concrete pour activities are estimated to range from 34.4 to 40.5 dBA $L_{eq.}$ The analysis shows that the unmitigated nighttime concrete pour activities will satisfy the FTA 70 dBA L_{eq} nighttime residential noise level threshold at all the nearest noise sensitive receiver locations. Therefore, the noise impacts due to Project construction nighttime concrete pour noise activity are considered *less than significant* at all receiver locations with prior authorization for nighttime work from the County of Riverside. Appendix 10.2 includes the CadnaA nighttime concrete pour noise calculations.



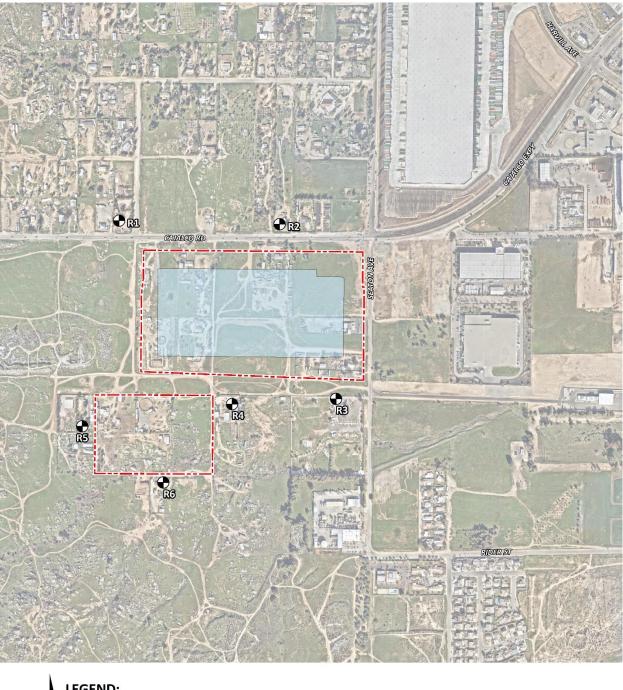


EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS





Receiver Location ¹	Concrete Pour Construction Noise Levels (dBA L _{eq})						
	Exterior Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴				
R1	36.9	70	No				
R2	40.5	70	No				
R3	39.5	70	No				
R4	40.4	70	No				
R5	34.4	70	No				
R6	34.5	70	No				

TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

² Nighttime Concrete Pour noise model inputs are included in Appendix 10.2.

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

 $^{\rm 4}$ Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.7 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

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

TABLE 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 72 to 322 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.005 to 0.043 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise



sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

	Distance to Const.		Typical		on Vibratior n/sec) ³	1 Levels		Thresholds	Thresholds
Location ¹	Activity (Feet) ²	Small bulldozer	Jack- hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level	PPV (in/sec)⁴	Exceeded? ⁵
R1	322'	0.000	0.001	0.002	0.002	0.005	0.005	0.3	No
R2	229'	0.000	0.001	0.003	0.003	0.008	0.008	0.3	No
R3	167'	0.000	0.002	0.004	0.005	0.012	0.012	0.3	No
R4	162'	0.000	0.002	0.005	0.005	0.013	0.013	0.3	No
R5	109'	0.000	0.004	0.008	0.010	0.023	0.023	0.3	No
R6	72'	0.001	0.007	0.016	0.018	0.043	0.043	0.3	No

TABLE 10-6: PROJECT CONSTRUCTION VIBRATION LEVELS

¹Construction noise source and receiver locations are shown on Exhibit 10-A.

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

³ Based on the Vibration Source Levels of Construction Equipment (Table 10-5).

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

⁵ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

10.8 BLASTING NOISE ANALYSIS

Project construction blasting will be limited to the four areas shown on Exhibit 10-C. A blasting contractor would be required to complete all blasting-related activities in compliance with applicable regulations of the Riverside County Sheriff's Department, the U.S. Bureau of Mines, the California Division of Occupational Safety and Health (Cal-OHSA), the Department of Homeland Security, and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). As required by law a licensed blasting contractor would be responsible for performing and supervising all blasting activities, including the following:

- Drill pattern design;
- Pre-blast inspection;
- Loading of explosives;
- Pre-blast notifications and warning signaling;
- Blasting safety procedures;
- Blasting site security;
- Post-blast inspections and re-entry procedures; and
- Blast log and history.



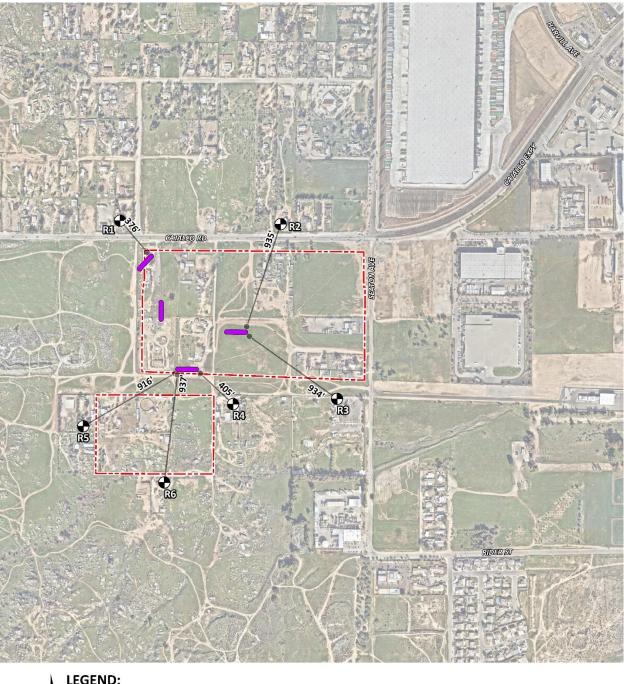


EXHIBIT 10-C: CONSTRUCTION BLASTING LOCATIONS





Pattern blasting involves drilling holes in a pre-designed pattern. The depth and spacing of holes are controlled to provide the maximum fracture with the minimum amount of ground shaking. Blasting patterns typically consist of drill holes between two and five inches in diameter. The depth of the drill holes would be determined by the blasting contractor and is specific to each application. Blasting patterns on construction sites typically range from three feet by three feet to 12 feet by 12 feet. The Blasting Engineer would control blasting-induced vibration and noise. General control measures include:

- Stemming shall be of uniform size in order to ensure consistency between individual shots;
- The weight of explosives used per delay shall be determined by adherence to the Scaled Distance Equation;
- Independent delays shall be used for each blast hole to control vibration; and
- Blasting shall not take place when wind velocity equals or exceeds 15 miles per hour. A licensed blasting contractor will determine wind speed using a recording anemometer located a minimum of ten feet above ground level.

In addition, ground vibrations and air overpressure shall be monitored during each blast for compliance with the limits by the U.S. Bureau of Mines. Following each blast, seismographs shall be checked to ensure that the blasting has not exceeded relevant standards. The relevant standards are as follows:

- Pursuant to 30 CFR Ch. VII, §816.67(b)(1)(i) of U.S. Bureau of Mines publication RI8485, airblasts shall not exceed 133 dB at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area.
- Pursuant to 30 CFR Ch. VII, §816.67(d)(2)(i) of U.S. Bureau of Mines publication RI8508, the maximum ground vibration shall not exceed the limits in said section at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area.

To evaluate the potential noise levels from blasting activities during Project construction, the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) reference noise level of 94.1 dBA L_{max} is used at a reference distance of 50 feet. (27) Each blast represents a point-source of noise which attenuates at a rate of 6 dB for each doubling of distance from the source. The closest residential homes to the Project construction area are represented by receiver location R1 located approximately 376 feet northwest of the nearest blasting area. With the distance attenuation from the closest blasting activities, the unmitigated noise levels at nearby receiver locations are expected to range from 70.5 to 78.5 dBA L_{max} based on the RCNM reference noise levels shown on Table 10-7. However, since the type of blasting techniques planned within the Project site were unknown at the time of this analysis, the noise levels presented at the nearby sensitive receiver locations represent the worst-case conditions based on the RCNM reference noise level. Appendix 10.4 includes the detailed CadnaA blasting noise calculations.



The County of Riverside General Plan and County Code of Ordinances do not identify specific construction noise level limits for blasting activities. Therefore, the OSMRE and CFR lowest maximum Airblast Limit (30 CFR 816.67[b]) of 129 dBA L_{max} at nearby sensitive uses is used in this analysis as discussed in Section 3.5. (17) Based on the reference blasting noise level, the closest residential receiver will experience noise levels of 78.5 dBA L_{max} over the course of the blast, which will likely occur for only a few seconds. While some blasting noise may be noticeable by nearby residents, the single-event, temporary noise levels generated by the blast will not exceed the OSMRE and the CFR standards for airblasts. Therefore, the noise levels due to blasting activities will result in a *less than significant* noise impact.

Receiver Location ¹	Distance to Blasting Activity (Feet)	Blasting Construction Noise Level (dBA Lmax) ²
R1	376	78.5
R2	935	74.3
R3	934	70.5
R4	405	76.7
R5	916	73.3
R6	937	72.1

TABLE 10-7: BLASTING CONSTRUCTION NOISE LEVELS

¹Blasting construction noise source and receiver locations are shown on Exhibit 10-C. ²Based on FHWA Roadway Construction Noise Model reference noise level of 94 dBA Lmax. CadnaA noise model calculations are included in Appendix 10.4.

10.9 BLASTING VIBRATION IMPACTS

Blasting operations can have unacceptable noise and vibration impacts if not conducted correctly. Excessive levels of structural vibration due to ground vibration from blasting can cause substantial damage to structures. A blasting contractor would be required to complete all blasting-related activities in compliance with applicable regulations of the Riverside County Sheriff's Department, the U.S. Bureau of Mines, the California Division of Occupational Safety and Health (Cal-OHSA), the Department of Homeland Security, and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), which have many requirements for the safe handling, use, and storage of explosives and recommend various measures and controls, including, but not limited to monitoring and reporting of each blast to verify no damage has occurred at nearby structures, notifications to surrounding neighbors, limitations on the amounts and times blast may occur. Detonating as little as 25 pounds of explosives may be perceived up to 500 feet from a charge. Therefore, without vibration controls and measures, blasting could exceed thresholds at the areas near existing residential homes surrounding the Project site, shown on Exhibit 10-C. Noise-1 would mitigate potential vibration impacts. With the implementation of the identified vibration controls blasting activities at sensitive receivers would be *less than significant*.



10.9.1 BLASTING VIBRATION MITIGATION MEASURES

The following practices would reduce any vibration level impacts produced by the proposed blasting activities at the nearby noise-sensitive residential land uses. Prior to approval of any grading permits that require blasting activities and a blasting permit, the Project Applicant shall prepare and submit for County of Riverside review and approval of a Blasting Noise and Vibration Monitoring and Abatement Plan ("Noise and Vibration Abatement Plan"). The required Noise and Vibration Abatement Plan shall include the following requirements:

- Blast Plan and Conceptual Blast Designs:
 - Blasting should only be performed during hours as specified by the County of Riverside
 - Outline controlled blasting techniques and procedures to control and monitor flyrock, airblast, and ground vibration.
 - Flyrock mitigation measures may include soil cover, leaving alluvial materials in place over materials to be blasted, and/or blast mats. Crushed rock (i.e., 3/8") should be used for stemming materials; drill cuttings are not acceptable. The stemming materials should be tamped in-place.
 - Design should be based on "scaled distance" criteria (i.e., defined as the distance in feet between a blast drill hole and the structure of concern, divided by the square root of the explosives loading per delay period in pounds-units are in feet per pound1/2). The scaled distance chosen for the initial design should be supported by statistical analysis indicating the resulting ground vibration will be less than the criteria set for the project. The scaled distance used for production blasts may be modified based on the results of the test blast(s) but should be conservative enough to produce vibration and airblast levels within the project specifications.
 - One or more test blasts should be performed in an area outside of critical distance of residential structures or other improvements of concern (i.e., at least 500 feet away).
 - The project blasting plan should include procedures regarding submittal of blast reports and record keeping.
 - It should be noted that the blast designs are general and will need to be modified during the project based on actual conditions encountered in the field and the results of site-specific blasting.
 - Blasting safety measures and procedures to notify property owners that blasting will occur.
 - It is the responsibility of the blasting contractor to control blasting induced vibration and noise.
 - If specified vibration limits are exceeded, blasting operations shall cease immediately and a revised blasting plan shall be submitted to the County. Blasting shall not resume until a revised blasting plan has been reviewed and the Contractor has expressed in writing the conditions that will be applied to further blasting work.
- Monitoring Specifications:



- Name and qualifications of the person(s) responsible for monitoring and reporting blast vibrations.
- All blasting, including secondary blasting, associated with the project shall be monitored with portable seismograph and airblast instrumentation.
- The use of a minimum of two portable seismographs for monitoring peak ground vibration and air-overpressure should be used for each blast. One seismograph should be placed at the closest residential structure.
- The vibration equipment and its use shall conform fully to the standards developed by the Vibration Section of the International Society of Explosive Engineers (ISEE). For all blasts, the Noise and Vibration Abatement Plan shall require monitoring of ground motion and air overpressure at the nearest residential properties or other structure of concern.
- A minimum trigger level for monitoring of 0.05 in/s for ground motion and 120 dB for air-overpressure should be specified.
- Air-blasts should not exceed 133 dB at any residence.
- Maximum ground vibration should not exceed the limits as outlined in the U.S. Bureau of Mines publication R18507.
- Reporting Specifications:
 - Regular reporting of blasting and measurements should be submitted to the project engineer and shall include a copy of the instrument/software-generated blast monitoring report at each instrument location that includes measured peak particle velocity in inches per second, peak air-overpressure in linear-scale decibels, and vibration and air-overpressure event plots, with date and time of event recording.
- Pre-Blast Surveys:
 - Prior to commencement of any blasting, a pre-blast survey of the conditions of all existing property and aboveground utilities located within 300 feet of any potential blasting areas shall be conducted, or as specified by the County of Riverside, whichever is a lesser distance.
 - The pre-blast survey should be conducted by a third-party company with a minimum of five years of experience performing pre-blast and similar type surveys.
 - The pre-blast survey shall include a photographic record of all visible and accessible structures, facilities, utilities, or other improvements. If property owners refuse surveys, provide copies of certified-mail letters documenting attempts to provide the survey.
 - The required surveys shall include a description of the interior and exterior condition of the various structures examined. Descriptions shall include the locations of any cracks, damage, or other existing defects and shall include information needed to identify and describe the defect, if any, and to evaluate the construction operations on the defect. Survey records shall include photos of all cracks and other damaged, weathered, or otherwise deteriorated structural conditions. If necessary, macro lenses



and flash illumination shall be used to ensure defects are shown clearly in the photographs. Photos shall contain an accurate date stamp. No blasting shall occur prior to completion of surveys of surrounding residential properties.

 Surveys shall be repeated at facilities or properties where damage concerns have been expressed by individual residents, property owners, or other concerned parties. Details of any observed changes to surveyed structures and documenting photos shall be reported and submitted.

Project grading and blasting contractors shall be required to ensure compliance with the Noise and Vibration Abatement Plan requirements and shall permit periodic inspection of the construction site by County of Riverside staff or its designee to confirm compliance. The requirements of the Noise and Vibration Abatement Plan also shall be specified in bid documents issued to prospective construction contractors. Riverside County shall review all monitoring reports to ensure compliance with the Noise and Vibration Abatement Plan and shall have the authority to stop all blasting activities on site if it is determined that blasting activities are not being conducted in conformance with Noise and Vibration Abatement Plan.



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12 CERTIFICATION

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

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EDUCATION

Master of Science in Civil and Environmental Engineering California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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



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APPENDIX 3.1:

COUNTY OF RIVERSIDE MUNICIPAL CODE



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Chapter 9.52 NOISE REGULATION

Sections:

9.52.010 Intent.

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

(Ord. 847 § 1, 2006)

9.52.020 Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

- A. Facilities owned or operated by or for a governmental agency;
- B. Capital improvement projects of a governmental agency;
- C. The maintenance or repair of public properties;
- D. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile;
- E. Public or private schools and school-sponsored activities;
- F. Agricultural operations on land designated "Agriculture" in the Riverside County general plan, or land zoned A-l (light agriculture), A-P (light agriculture with poultry), A-2 (heavy agriculture), A-D (agriculture-dairy) or C/V (citrus/vineyard), provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used during such operations, whether stationary or mobile;
- G. Wind energy conversion systems (WECS), provided such systems comply with the WECS noise provisions of Riverside County Ordinance No. 348;
- H. Private construction projects located one-quarter of a mile or more from an inhabited dwelling;
- I. Private construction projects located within one-quarter of a mile from an inhabited dwelling, provided that:
 - 1. Construction does not occur between the hours of six p.m. and six a.m. during the months of June through September, and
 - 2. Construction does not occur between the hours of six p.m. and seven a.m. during the months of October through May;
- J. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven a.m. and eight p.m.;

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- K. Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems;
- L. Heating and air conditioning equipment;
- M. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare;
- N. The discharge of firearms consistent with all state laws.

(Ord. 847 § 2, 2006)

9.52.030 Definitions.

As used in this chapter, the following terms shall have the following meanings:

"Audio equipment" means a television, stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.

"Decibel (dB)" means a unit for measuring the relative amplitude of a sound equal approximately to the smallest difference normally detectable by the human ear, the range of which includes approximately one hundred thirty (130) decibels on a scale beginning with zero decibels for the faintest detectable sound. Decibels are measured with a sound level meter using different methodologies as defined below:

- 1. "A-weighting (dBA)" means the standard A-weighted frequency response of a sound level meter, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear for moderate sounds.
- 2. "Maximum sound level (L_{max})" means the maximum sound level measured on a sound level meter.

"Governmental agency" means the United States, the state of California, Riverside County, any city within Riverside County, any special district within Riverside County or any combination of these agencies.

"Land use permit" means a discretionary permit issued by Riverside County pursuant to Riverside County Ordinance No. 348.

"Motor vehicle" means a vehicle that is self-propelled.

"Motor vehicle sound system" means a stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.

"Noise" means any loud, discordant or disagreeable sound.

"Occupied property" means property upon which is located a residence, business or industrial or manufacturing use.

"Off-highway vehicle" means a motor vehicle designed to travel over any terrain.

"Public or private school" means an institution conducting academic instruction at the preschool, elementary school, junior high school, high school, or college level.

"Public property" means property owned by a governmental agency or held open to the public, including, but not limited to, parks, streets, sidewalks, and alleys.

"Sensitive receptor" means a land use that is identified as sensitive to noise in the noise element of the Riverside County general plan, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.

"Sound-amplifying equipment" means a loudspeaker, microphone, megaphone or other similar device.

(Supp. No. 79)

"Sound level meter" means an instrument meeting the standards of the American National Standards Institute for Type 1 or Type 2 sound level meters or an instrument that provides equivalent data.

(Ord. 847 § 3, 2006)

9.52.040 General sound level standards.

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

GENERAL PLAN	GENERAL PLAN LAND USE	GENERAL PLAN LAND USE DESIGNATION	DENSITY	MAXIMU	M DECIBEL
FOUNDATION	DESIGNATION	NAME		7 am—	10 pm—
COMPONENT				10 pm	7 am
Community	EDR	Estate Density	2 AC	55	45
Development		Residential			
	VLDR	Very Low Density Residential	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	MDR	Medium Density Residential	2—5	55	45
	MHDR	Medium High Density Residential	5—8	55	45
	HDR	High Density Residential	8—14	55	45
	VHDR	Very High Density Residential	14—20	55	45
	H'TDR	Highest Density Residential	20+	55	45
	CR	Retail Commercial		65	55
	СО	Office Commercial		65	55
	СТ	Tourist Commercial		65	55
	CC	Community Center		65	55
	LI	Light Industrial		75	55
	НІ	Heavy Industrial		75	75
	BP	Business Park		65	45
	PF	Public Facility		65	45
	SP	Specific Plan- Residential		55	45

TABLE 1
Sound Level Standards (Db L _{max})

Created: 2022-09-21 15:13:00 [EST]

			1	1	
		Specific Plan-		65	55
		Commercial			
		Specific Plan-Light		75	55
		Industrial			
		Specific Plan-Heavy		75	75
		Industrial			
Rural	EDR	Estate Density	2 AC	55	45
Community		Residential			
	VLDR	Very Low Density	1 AC	55	45
		Residential			
	LDR	Low Density	1/2 AC	55	45
		Residential			
Rural	RR	Rural Residential	5 AC	45	45
	RM	Rural Mountainous	10 AC	45	45
	RD	Rural Desert	10 AC	45	45
Agriculture	AG	Agriculture	10 AC	45	45
Open Space	С	Conservation		45	45
	СН	Conservation Habitat		45	45
	REC	Recreation		45	45
	RUR	Rural	20 AC	45	45
	W	Watershed		45	45
	MR	Mineral Resources		75	45

(Ord. 847 § 4, 2006)

9.52.050 Sound level measurement methodology.

Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section 9.52.080 of this chapter. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be re-verified. Sound level meters and calibration equipment shall be certified annually.

(Ord. 847 § 5, 2006)

9.52.060 Special sound sources standards.

The general sound level standards set forth in Section 9.52.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

- A. Motor Vehicles.
 - 1. Off-Highway Vehicles.
 - a. No person shall operate an off-highway vehicle unless it is equipped with a USDA-qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.
 - b. No person shall operate an off-highway vehicle unless the noise emitted by the vehicle is not more than ninety-six (96) dBA if the vehicle was manufactured on or after January 1, 1986 or is not more than one hundred one (101) dBA if the vehicle was manufactured before January 1, 1986. For purposes of this subsection, emitted noise shall be measured a distance of twenty (20) inches from the vehicle tailpipe using test procedures established by the Society of Automotive Engineers under Standard J-1287.
 - 2. Sound Systems. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of ten p.m. and eight a.m., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than one hundred (100) feet from the vehicle.
- B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and eight a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment.
- C. Audio Equipment. No person shall operate any audio equipment, whether portable or not, between the hours of ten p.m. and eight a.m. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than one hundred (100) feet from the equipment.
- D. Sound-Amplifying Equipment and Live Music. No person shall install, use or operate sound-amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control:
 - 1. Sound-amplifying equipment or live music is prohibited between the hours of ten p.m. and eight a.m.
 - 2. Sound emanating from sound-amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than two hundred (200) feet from the equipment or music.

(Ord. 847 § 6, 2006)

9.52.070 Exceptions.

Exceptions may be requested from the standards set forth in Section 9.52.040 or 9.52.060 of this chapter and may be characterized as construction-related, single-event or continuous-events exceptions.

(Supp. No. 79)

- A. Application and Processing.
 - 1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 2. Single-Event Exceptions. An application for a single-event exception shall be made to and considered by the planning director on forms provided by the planning department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 3. Continuous-Events Exceptions. An application for a continuous-events exception shall be made to the planning director on forms provided by the planning department and shall be accompanied by the appropriate filing fee. Upon receipt of an application for a continuous-events exception, the planning director shall set the matter for public hearing before the planning commission, notice of which shall be given as provided in Section 18.26c of Riverside County Ordinance No. 348. Notwithstanding the above, an application for a continuous-events exception that is associated with an application for a land use permit shall be processed concurrently with the land use permit in the same manner that the land use permit is required to be processed.
- B. Requirements for Approval. The appropriate decisionmaking body or officer shall not approve an exception application unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. In determining whether activities are detrimental to the health, safety or general welfare of the community, the appropriate decisionmaking body or officer shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If an exception application is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.
- C. Appeals. The director of building and safety's decision on an application for a construction-related exception is considered final. The planning director's decision on an application for a single-event exception is considered final. After making a decision on an application for a continuous-events exception, the appropriate decisionmaking body or officer shall mail notice of the decision to the applicant. Within ten (10) calendar days after the mailing of such notice, the applicant or an interested person may appeal the decision to the board of supervisors. Upon receipt of an appeal and payment of the appropriate appeal fee, the clerk of the board shall set the matter for hearing not less than five days nor more than thirty (30) days thereafter and shall give written notice of the hearing in the same manner as notice of the hearing was given by the appropriate hearing officer or body. The board of supervisors shall render its decision within thirty (30) days after the appeal hearing is closed.
- D. Effect of a Pending Continuous-Events Exception Application. For a period of one hundred eighty (180) days from the effective date of this chapter, no person creating any sound prohibited by this chapter shall be considered in violation of this chapter if the sound is related to a use that is operating pursuant to an approved land use permit, if an application for a continuous-events exception has been filed to sanction the sound and if a decision on the application is pending.

(Ord. 847 § 7, 2006)

9.52.080 Enforcement.

The Riverside County sheriff and code enforcement shall have the primary responsibility for enforcing this chapter; provided, however, the sheriff and code enforcement may be assisted by the public health department. Violations shall be prosecuted as described in Section 9.52.100 of this chapter, but nothing in this chapter shall

prevent the sheriff, code enforcement or the department of public health from engaging in efforts to obtain voluntary compliance by means of warnings, notices, or educational programs.

(Ord. 847.1 § 1, 2007: Ord. 847 § 8, 2006)

9.52.090 Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section 9.52.080 of this chapter when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter.

(Ord. 847 § 9, 2006)

9.52.100 Violations and penalties.

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

- A. For the first violation within a one hundred eighty (180) day period, the minimum mandatory fine shall be five hundred dollars (\$500.00).
- B. For the second violation within a one hundred eighty (180) day period, the minimum mandatory fine shall be seven hundred fifty dollars (\$750.00).
- C. For any further violations within a one hundred eighty (180) day period, the minimum mandatory fine shall be one thousand dollars (\$1,000.00) or imprisonment in the county jail for a period not exceeding six months, or both.

(Ord. 847 § 10, 2006)

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

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

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

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

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

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

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

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

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

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

	s	TABLE 1 SOUND LEVEL STANDARDS (Db	L _{max})		
GENERAL	GENERAL PLAN	GENERAL PLAN LAND		-	N DECIBEL VEL
PLAN FOUNDATION COMPONENT	LAND USE DESIGNATION	DESIGNATION NAME	DENSITY	7am- 10pm	10pm- 7am
	EDR	Estate Density Residential	2 AC	55	45
	VLDR	Very Low density	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	MDR	Medium Density Residential	25	55	45
	MHDR	Medium High Density	58	55	45
	HDR	High Density Residential	814	55	45
	VHDR	Very High Density	14-20	55	45
Community Development	H'TDR	Residential Highest Density Residential	20+	55	45
	CR	Retail Commercial		65	55
	СО	Office Commercial		65	55
	СТ	Tourist Commercial		65	55
	CC	Community Center		65	55
	LI	Light Industrial		75	55
	HI	Heavy Industrial		75	75
	BP	Business Park		65	45
	PF	Public Facility		65	45
		Specific Plan-Residential		55	45
		Specific Plan-		65	55
	SP	Specific Plan-Light		75	55
		Specific Plan-Heavy		75	75
Rural	EDR	Estate Density	2 ac	55	45
Community	VLDR	Very Low Density	1 ac	55	45
	LDR	Low Density Residential	1/2 ac	55	45
Rural	RR	Rural Residential	5 ac	45	45
	RM	Rural Mountainous	10 ac	45	45
	RD	Rural Desert	10 ac	-	
Agriculture		Agriculture		45	45
	AG	Conservation	10 AC	45	45
Open Space	С СН	Conservation Habitat		45	45
		Recreation Habitat		45	45
	REC	Rural	20.40	45	45
	RUR	Watershed	20 AC	45	45
	W MR	Mineral Resources		45 75	45 45

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

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

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

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

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

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

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

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

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

Section 8. ENFORCEMENT. The Riverside County Sheriff and Code Enforcement shall have the primary responsibility for enforcing this ordinance; provided, however, the Sheriff and Code Enforcement may be assisted by the Public Health Department. Violations shall be prosecuted as described in Section 10. of this ordinance, but nothing in this ordinance shall prevent the Sheriff, Code Enforcement or the Department of Public Health from engaging in efforts to obtain voluntary compliance by means of warnings, notices, or educational programs. Section 9. DUTY TO COOPERATE. No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section 8. of this ordinance when they are engaged in the process of enforcing the provisions of this ordinance. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this ordinance.

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

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

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

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

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

Adopted: 847 Item 3.19 of 04/04/2006 (Eff: 05/04/2006) Amended: 847.1 Item 3.4 of 06/19/2007 (Eff: 07/19/2007) This page intentionally left blank



APPENDIX 5.1:

STUDY AREA PHOTOS



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15091_L1_C 1.North 33, 50' 17.040000", 117, 16' 5.310000"



15091_L1_C 2.South 33, 50' 16.980000", 117, 16' 5.290000"



15091_L1_C 3.East 33, 50' 17.000000", 117, 16' 5.230000"



15091_L1_C 4.West 33, 50' 17.190000", 117, 16' 5.070000"



15091_L2_D 1.North 33, 50' 15.030000", 117, 15' 53.230000"



15091_L2_D 2.South 33, 50' 15.050000", 117, 15' 53.260000"



15091_L2_D 3.East 33, 50' 15.020000", 117, 15' 53.310000"



15091_L2_D 4.West 33, 50' 15.030000", 117, 15' 53.590000"



15091_L3_J 1.North 33, 50' 2.670000", 117, 15' 41.530000"



15091_L3_J 2.South 33, 50' 2.550000", 117, 15' 41.640000"



15091_L3_J 3.East 33, 50' 2.230000", 117, 15' 41.670000"



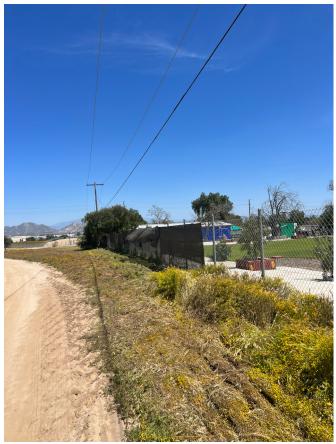
15091_L3_J 4.West 33, 50' 2.280000", 117, 15' 41.750000"



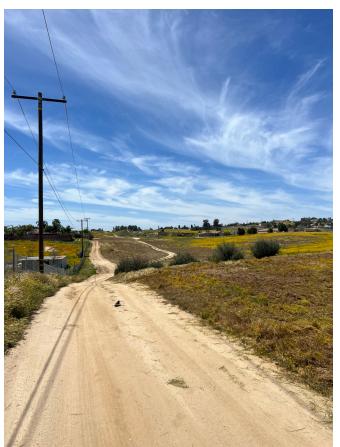
15091_L4_S 1.North 33, 50' 1.780000", 117, 15' 48.090000"



15091_L4_S 2.South 33, 50' 1.780000", 117, 15' 48.090000"



15091_L4_S 3.East 33, 50' 1.750000", 117, 15' 47.490000"



15091_L4_S 4.West 33, 50' 1.770000", 117, 15' 47.630000"



15091_L5_W 1.North 33, 50' 2.220000", 117, 16' 5.070000"



15091_L5_W 2.South 33, 50' 2.230000", 117, 16' 5.070000"



15091_L5_W 3.East 33, 50' 2.230000", 117, 16' 5.040000"



15091_L5_W 4.West 33, 50' 2.550000", 117, 16' 5.890000"



15596_L6_N 1.North 33, 49' 58.070000", 117, 15' 57.540000"



15596_L6_N 2.South 33, 49' 57.990000", 117, 15' 57.540000"



15596_L6_N 3.East 33, 49' 57.960000", 117, 15' 57.540000"



15596_L6_N 4.West 33, 49' 57.880000", 117, 15' 57.620000"



15596_L7_O 1.North 33, 49' 55.220000", 117, 15' 58.910000"



15596_L7_O 2.South 33, 49' 55.220000", 117, 15' 58.910000"



15596_L7_O 3.East 33, 49' 55.240000", 117, 15' 58.860000"



15596_L7_O 4.West 33, 49' 55.190000", 117, 15' 59.080000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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						24-Ho	ur Noise Le	evel Measu	urement S	ummary						
	Friday, Apri	-				L1 - Located			La Palapa Ra	anch	Meter:	Piccolo II				15091
Project:	Cajalco Rd.	& Seaton Ave	е.		Source:	building at 1	9451 Decker	Rd.							Analyst:	Z. Ibrahim
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85 (0															
a 80.0	ğ ————————————————————————————————————															
a 75.0 p 70.0																
85.0 80.0 75.0 70.0 65.0 65.0 1				0 9.		2	<mark> </mark>						0.2			
- 55.0	0 – v –	<u>о</u> 0		64.(64.7	61.9		8.8 62.1		<mark>62.0</mark>	8 0 8	61.9	<u> </u>	4	60.3 60.2	29.8
AJINOH	58.5	57.5 58.6	59.			9		28.	<u> </u>	2 <mark>9.</mark>	61.(58.0	9	28.7	28. 28.	<mark></mark>	23
⊥ 40.0 35.0																
	0	1 2	3	4 5	6	7 8	9 1	.0 11	12 1	.3 14	15 10	5 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	58.5	65.1	50.1	64.7	64.2	63.2	62.5	59.8	56.9	52.0	51.2	50.4	58.5	10.0	68.5
	1	57.5 58.6	65.0 66.4	51.3 52.9	64.5 65.7	63.7 64.9	62.0 63.1	61.1 62.0	58.5 59.3	55.9 56.9	52.4 53.9	52.0 53.5	51.5 53.1	57.5 58.6	10.0 10.0	67.5 68.6
Night	3	58.0	65.9	52.9	65.6	65.0	63.8	63.0	61.1	58.9	55.3	53.5 54.7	53.1	59.9	10.0	69.9
	4	63.0	68.2	58.4	67.7	67.1	66.2	65.6	63.9	62.4	59.5	59.1	58.6	63.0	10.0	73.0
	5	64.6	69.0	61.1	68.7	68.4	67.4	66.7	65.3	64.2	62.2	61.8	61.3	64.6	10.0	74.6
	6	64.7	69.7	61.1	69.4	69.0	67.7	67.0	65.3	64.1	62.0	61.6	61.2	64.7	10.0	74.7
	7 8	61.9 72.5	68.3	57.7	68.0	67.5	65.8	64.6 79.8	62.4	60.9	58.7	58.3	57.9 57.3	61.9 72.5	0.0	61.9
	° 9	68.3	83.5 77.7	57.1 52.1	83.3 77.4	83.0 77.1	81.5 75.8	79.8	66.3 68.3	60.7 61.4	58.1 55.0	57.7 53.5	57.5	68.3	0.0 0.0	72.5 68.3
	10	58.8	68.7	50.8	68.1	66.9	64.0	62.2	58.9	56.6	52.5	51.8	51.1	58.8	0.0	58.8
	11	62.1	70.7	51.6	70.2	69.5	67.7	66.7	62.8	58.8	53.7	52.8	51.8	62.1	0.0	62.1
	12	61.8	71.0	50.3	70.2	69.8	68.6	67.3	61.5	57.2	52.5	51.6	50.6	61.8	0.0	61.8
Devi	13	62.0	73.9	51.0	72.5	70.7	67.3	66.2	62.3	57.8	53.0	52.1	51.3	62.0	0.0	62.0
Day	14 15	59.5 61.6	68.0 71.8	51.0 49.9	67.5 70.8	66.9 69.6	65.4 67.7	64.3 66.5	60.1 62.2	55.8 57.3	52.4 52.0	51.8 51.2	51.2 50.2	59.5 61.6	0.0 0.0	59.5 61.6
	15	58.0	66.8	49.1	66.4	65.8	64.1	62.5	58.4	54.8	51.2	50.3	49.4	58.0	0.0	58.0
	17	61.9	71.1	51.5	70.7	70.0	68.3	67.0	62.1	57.8	53.6	52.7	51.8	61.9	0.0	61.9
	18	58.7	66.4	52.1	65.9	65.3	63.5	62.1	59.3	57.2	53.9	53.2	52.4	58.7	0.0	58.7
	19	70.2	81.4	51.9	81.0	80.1	77.8	76.6	66.1	57.9	53.8	53.0	52.2	70.2	5.0	75.2
	20 21	58.4 60.3	65.9 66.8	52.6 55.0	65.4 66.6	64.7 66.1	62.9 64.5	61.6 63.2	58.9 60.8	57.2 59.2	54.0 56.3	53.5 55.7	52.8 55.2	58.4 60.3	5.0 5.0	63.4 65.3
	21	60.3	65.1	55.0	64.8	64.4	63.4	63.2	60.8	59.2	56.6	55.7	55.2	60.3	10.0	70.2
Night	23	59.8	65.3	54.7	65.0	64.5	63.4	62.7	60.8	59.1	56.2	55.5	54.9	59.8	10.0	69.8
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour		(dBA)
Day	Min	58.0	65.9	49.1	65.4	64.7	62.9	61.6	58.4	54.8	51.2	50.3	49.4	CNEL	Daytime	Nighttime
Energy	Max Average	72.5 65.1	83.5 Ave	57.7 rage:	83.3 70.9	83.0 70.2	81.5 68.3	79.8 67.0	68.3 62.0	61.4 58.0	58.7 54.0	58.3 53.3	57.9 52.5		(7am-10pm)	(10pm-7am,
	Min	57.5	65.0	50.1	64.5	63.7	62.0	61.1	58.5	55.9	52.0	51.2	50.4	69.3	65.1	61.5
Night	Max	64.7	69.7	61.1	69.4	69.0	67.7	67.0	65.3	64.2	62.2	61.8	61.3			01.5
Energy	Average	61.5	Ave	rage:	66.2	65.7	64.5	63.7	61.7	59.8	56.7	56.1	55.6			



						24-Ho	ur Noise Le	evel Measu	urement S	ummary						
	Friday, Apri	-				L2 - Located	north of the	site near the	residence at	t 22840	Meter:	Piccolo II				15091
Project:	Cajalco Rd.	& Seaton Av	e.		Source:	Cajalco Rd.									Analyst:	Z. Ibrahim
							Hourly L _{eq} (IBA Readings	(unadjusted)							
85.0	0															
85.0 80.0 75.0 70.0 10 65.0 10 65.0	0									_						
5 70.0	0 0		8.	76.5	78.3	76.9	<u>6.4</u>	75.0		5.3	<mark></mark>		5.3 5.8	2.2	5.1	4.4
60.0 ت		71.1	!∺ ≈				±'`±'			× _ 2 _	2 <mark>- 2</mark> 2	! <u></u>				^
1 b 55.0 i 50.0 i 50.0 i 45.0 i 45.0 i 40.0	ğ — —				+-		+							+- +-		
H 40.0	$\breve{o} =$						+ $+$					\mp \mp		- -		
35.0	0 ++ 0	1 2	3	4 5	6	7 8	9 1	.0 11	12 1	.3 14	15 10	5 17	18 19	20	21 22	23
	0	1 2	5	+ J	0	, 0	5 1		eginning	.5 14	15 1	5 17	10 15	20	21 22	25
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	71.9	80.6	55.3	80.2	79.8	78.1	77.1	72.9	67.5	58.4	56.9	55.5	71.9	10.0	81.9
	1 2	71.1 72.5	80.6 82.7	52.0 52.6	80.4 82.3	79.9 81.8	78.2 79.4	76.9 78.0	71.1 72.5	64.7 66.0	53.9 54.9	52.8 53.5	52.1 52.7	71.1 72.5	10.0 10.0	81.1 82.5
Night	3	73.8	82.5	57.4	82.2	81.8	80.0	78.8	75.0	69.5	59.9	58.7	57.6	73.8	10.0	83.8
	4	76.5	83.3	62.9	83.0	82.7	81.5	80.7	78.0	74.7	66.2	64.4	63.1	76.5	10.0	86.5
	5 6	77.7 78.3	83.2 84.1	67.0 67.8	82.9 83.8	82.5 83.4	81.7 82.2	81.2 81.5	79.2 79.6	76.8 77.6	70.4 71.2	68.8 69.5	67.3 68.1	77.7 78.3	10.0 10.0	87.7 88.3
	7	78.3	83.4	67.5	83.8	83.4	82.2	79.6	79.6	77.6	70.5	69.5	67.8	78.3	0.0	76.4
	8	76.9	82.5	67.6	82.3	81.9	80.9	80.2	78.1	76.2	70.9	69.5	67.8	76.9	0.0	76.9
	9	76.4	83.6	65.7	83.2	82.7	81.0	79.8	77.4	75.3	69.1	67.4	66.0	76.4	0.0	76.4
	10 11	76.3 75.0	86.5 81.2	65.6 65.8	85.9 80.9	84.8 80.4	81.8 79.1	79.8 78.4	76.3 76.2	73.9 74.0	68.8 68.9	67.6 67.5	65.9 66.1	76.3 75.0	0.0 0.0	76.3 75.0
	11	75.2	81.2	65.2	81.5	80.4 80.9	79.1	78.5	76.3	74.0	68.7	67.1	65.5	75.2	0.0	75.2
	13	74.8	82.0	66.7	81.6	80.9	79.0	77.9	75.6	73.8	69.7	68.4	67.0	74.8	0.0	74.8
Day	14	72.3	78.5	63.1	78.2	77.8	76.5	75.6	73.4	71.5	66.3	64.9	63.5	72.3	0.0	72.3
	15 16	72.0 72.3	79.9 78.3	63.3 63.9	79.5 78.0	78.5 77.5	76.0 76.0	74.8 75.1	72.7 73.3	70.9 71.6	66.2 67.1	64.9 65.6	63.6 64.2	72.0 72.3	0.0 0.0	72.0 72.3
	10	75.4	80.9	67.3	80.5	80.0	78.9	78.2	76.5	74.7	70.6	69.1	67.5	75.4	0.0	75.4
	18	75.3	80.3	67.3	80.0	79.6	78.5	78.0	76.4	74.8	70.6	69.2	67.6	75.3	0.0	75.3
	19	75.8	81.9	66.6	81.6	81.1	79.8	79.1	77.1	74.7	70.1	68.6	66.8	75.8	5.0	80.8
	20 21	75.2 74.9	84.1 81.9	64.4 63.8	83.5 81.4	82.7 80.7	80.0 79.0	78.1 78.3	75.8 76.3	73.9 74.0	68.3 67.3	66.5 65.6	64.6 64.3	75.2 74.9	5.0 5.0	80.2 79.9
Nicht	22	74.9	81.9	63.7	81.6	81.1	79.4	78.6	76.5	73.9	66.6	65.3	64.0	75.1	10.0	85.1
Night	23	74.4	82.3	60.5	81.9	81.4	79.6	78.5	75.9	72.3	63.9	62.3	60.9	74.4	10.0	84.4
Timeframe	Hour	L _{eq} 72.0	L _{max} 78.3	L _{min} 63.1	L1% 78.0	L2% 77.5	L5% 76.0	<i>L8%</i> 74.8	L25%	<i>L50%</i> 70.9	L90%	L95% 64.9	63.5	24-Hour	Leq (Daytime	(dBA) Nighttime
Day	Min Max	72.0	78.3 86.5	63.1 67.6	78.0 85.9	77.5 84.8	76.0 81.8	74.8 80.2	72.7 78.1	70.9	66.2 70.9	64.9 69.5	67.8	CNEL	(7am-10pm)	Nighttime (10pm-7am)
Energy	Average	75.2	Ave	rage:	81.4	80.8	79.1	78.1	75.9	73.9	68.9	67.4	65.9			
Night	Min	71.1	80.6	52.0	80.2	79.8	78.1	76.9	71.1	64.7	53.9	52.8	52.1	81.9	75.2	75.2
	Max Average	78.3	84.1 Ave	67.8 rage:	83.8 82.0	83.4 81.6	82.2 80.0	81.5 79.0	79.6 75.6	77.6	71.2 62.8	69.5 61.4	68.1 60.1			
Lincigy	A de lage	13.2	Ave	1450.	02.0	01.0	80.0	79.0	/3.0	/1.4	02.0	01.4	00.1			

						24-Ho	ur Noise Le	evel Meas	urement S	ummary						
	Friday, Apri Cajalco Rd.	l 21, 2023 & Seaton Ave	е.			L2 - Located Seaton Ave.	south of the	site near the	residence a	t 19701	Meter:	Piccolo II				15091 Z. Ibrahim
,	,						Hourly L _{eq} c	IBA Readings	(unadjusted)						,	
85.0 80.0	8															
Yap 75.0 70.0																
(Vgp) ¹⁰				5.2	66.2	67.0		<mark>x, x, _</mark>	4 1	67.3 2.9	64.6	2 0,	68.7	6	<mark>₹</mark>	
in 50.0	28.0	54.7	58.3	65.	9	67 67		62.1	<u> </u>		64. 64	<u>65</u>	68 68	<mark></mark>	60.4 60.1	60.1
± 40.0 35.0		_ ŭ Ľ														
	0	1 2	3	4 5	6	7 8	91	.0 11 Hour B	12 1 eginning	.3 14	15 1	5 17	18 19	20	21 22	23
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	58.0	70.2	51.0	69.8	68.9	65.0	61.3	54.4	52.9	51.6	51.4	51.1	58.0	10.0	68.0
	1	54.7 56.1	65.0 67.0	50.1	64.6	63.8	61.0 63.0	58.1 59.4	53.1 53.9	51.9 52.7	50.7	50.4 51.0	50.2 50.8	54.7 56.1	10.0 10.0	64.7
Night	2	58.3	69.2	50.7 53.0	66.6 68.8	65.7 68.0	65.1	62.2	53.9	52.7	51.3 53.5	51.0	50.8	58.3	10.0	66.1 68.3
	4	63.2	74.0	55.9	73.6	72.9	70.2	67.8	61.3	58.2	56.4	56.2	56.0	63.2	10.0	73.2
	5	65.2	75.5	58.9	75.0	74.2	71.8	70.0	63.8	60.6	59.4	59.2	59.0	65.2	10.0	75.2
	6	66.2	77.0	59.6	76.5	75.5	72.9	71.0	64.4	61.4	60.1	59.9	59.7	66.2	10.0	76.2
	7 8	65.3 67.0	75.6 78.4	55.3 52.8	75.2 78.1	74.5 77.5	72.1 75.6	70.6 73.4	64.8 62.6	58.9 56.8	55.9 53.7	55.7 53.2	55.4 52.9	65.3 67.0	0.0 0.0	65.3 67.0
	9	71.0	82.7	45.9	81.9	81.1	78.3	76.5	69.3	62.1	49.2	48.1	46.3	71.0	0.0	71.0
	10	64.8	78.5	45.3	78.1	76.8	72.2	68.6	59.6	52.2	47.1	46.1	45.5	64.8	0.0	64.8
	11	62.8	73.5	44.9	73.0	72.3	69.9	68.5	62.4	54.9	47.1	46.1	45.2	62.8	0.0	62.8
	12	63.4	76.1	41.7	75.1	74.0	70.8	68.8	61.2	52.1	43.2	42.5	41.9	63.4	0.0	63.4
Day	13 14	67.3 62.9	83.4 73.5	42.3 44.3	82.2 73.0	78.3 72.2	72.2 70.1	69.5 68.7	62.8 62.2	52.5 55.3	44.5 46.6	43.3 45.4	42.6 44.5	67.3 62.9	0.0 0.0	67.3 62.9
Day	14	64.6	73.5	44.3	73.0	73.3	70.1	70.1	65.0	58.0	40.0	47.6	44.3	64.6	0.0	64.6
	16	64.6	74.4	45.0	73.9	73.1	71.3	70.2	65.2	58.6	49.3	47.9	46.2	64.6	0.0	64.6
	17	65.0	76.6	47.8	76.1	74.9	72.1	70.6	63.8	55.3	49.3	48.7	48.0	65.0	0.0	65.0
	18	63.3	74.7	50.4	74.2	73.3	70.5	68.6	61.9	55.9	51.7	51.1	50.6	63.3	0.0	63.3
	19 20	68.7 60.9	79.2 72.1	52.0 50.1	78.7 71.8	78.2 71.0	76.5 68.5	75.1 66.3	67.1 58.4	59.7 53.7	53.2 50.9	52.8 50.6	52.2 50.2	68.7 60.9	5.0 5.0	73.7 65.9
	20	60.9	72.1	52.4	71.8	70.2	67.6	65.6	57.9	54.8	53.1	52.8	50.2	60.9	5.0	65.4
Night	22	60.1	70.7	55.0	70.3	69.5	66.7	64.3	57.8	56.5	55.5	55.3	55.1	60.1	10.0	70.1
	23 Hour	60.1	70.9	53.9	70.5 L1%	69.8 L2%	67.0 L5%	64.5 L8%	57.6 L25%	56.0 L50%	54.5 L90%	54.3 L95%	54.0 L99%	60.1	10.0	70.1 (dBA)
Timeframe	Hour Min	L _{eq} 60.4	L _{max} 71.3	L _{min} 41.7	71.0	70.2	67.6	L8% 65.6	57.9	52.1	43.2	42.5	41.9	24-Hour	Daytime	(авА) Nighttime
Day	Max	71.0	83.4	55.3	82.2	81.1	78.3	76.5	69.3	62.1	55.9	55.7	55.4	CNEL	(7am-10pm)	(10pm-7am)
Energy	Average	65.7		rage:	75.8	74.7	71.9	70.1	63.0	56.0	49.6	48.8	48.0	<u> </u>	<u> </u>	
Night	Min	54.7	65.0	50.1	64.6	63.8	61.0	58.1	53.1	51.9	50.7	50.4	50.2	69.5	65.7	61.8
Energy	Max Average	66.2 61.8	77.0 Ave	59.6 rage:	76.5 70.6	75.5 69.8	72.9 67.0	71.0 64.3	64.4 58.0	61.4 56.1	60.1 54.8	59.9 54.6	59.7 54.3			



						24-Ho	our Noise Le	evel Meas	urement S	Summary						
	Friday, Apri	-				L4 - Located			Huong Sen	Buddhist	Meter:	Piccolo II				15091
Project:	Cajalco Rd.	& Seaton Av	re.		Source:	Temple at 19			/	1					Analyst:	Z. Ibrahiı
							Hourly L _{eq} (IBA Readings	(unadjusted							
85.0 80.0 75.0 70.0 65.0 60.0 55.0	2															
a 75.0																
رور ہو 65.0 چ	5						- o									
60.0 °۔ 55.0 ح	3						<mark>- 69</mark>		- <u>N</u>				<mark>.69</mark>			
60.0 60.0 55.0 55.0 45.0 45.0 40.0	20.0	49.8	50.9	56.8	25.0	54.1		³ 58.2		57.3 57.9	58.5 58.5	26.7	20.6	49.4		52.4
± 40.0 35.0	Ď – ਯ –	- 49	S B	Q	ŭ	- <u>2</u>	i			"	Ū	i	- <u>2</u>	49	52.	22
55.0	0	1 2	3	4 5	6	7 8	9 1	.0 11		13 14	15 1	6 17	18 19	20	21 22	23
									eginning							
meframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L
	0	50.0 49.8	53.3 53.0	47.8 48.2	53.1 52.6	52.8 52.4	52.2 51.5	51.8 51.1	50.5 50.1	49.6 49.5	48.4 48.7	48.1 48.5	47.9 48.3	50.0 49.8	10.0 10.0	60.0 59.8
	2	50.7	53.4	49.0	53.1	52.9	52.3	52.0	51.1	50.5	49.5	49.3	49.1	50.7	10.0	60.
Night	3	50.9	53.5	49.4	53.2	52.9	52.4	52.1	51.3	50.7	49.8	49.7	49.5	50.9	10.0	60.
	4	56.8	67.3	51.0	66.8	66.3	63.9	62.8	54.1	52.6	51.5	51.3	51.1	56.8	10.0	66.
	5 6	54.8 55.0	56.6 58.2	53.7 53.7	56.4 58.0	56.2 57.7	55.9 56.7	55.6 56.0	55.1 55.1	54.7 54.7	54.1 54.1	53.9 54.0	53.8 53.8	54.8 55.0	10.0 10.0	64.8 65.0
	7	54.1	61.4	51.1	60.9	60.2	57.9	56.6	54.4	52.9	51.5	51.4	51.2	54.1	0.0	54.3
	8	66.9	78.7	50.0	78.2	77.5	75.7	74.5	57.8	52.8	50.6	50.4	50.1	66.9	0.0	66.9
	9 10	69.0 51.3	78.0 58.2	42.4 41.3	77.8 57.6	77.5 57.0	76.7 55.9	75.8 55.2	68.4 52.5	59.4 49.6	44.5 44.2	43.5 42.8	42.7 41.6	69.0 51.3	0.0 0.0	69.0 51.3
	10	58.2	67.2	39.8	66.5	65.9	64.8	63.8	59.1	53.2	44.2	42.0	41.0	58.2	0.0	58.
	12	61.2	71.4	40.2	70.9	70.5	69.7	68.0	59.7	53.1	44.6	42.8	40.8	61.2	0.0	61.
Davis	13	57.3	65.6	41.0	65.2	65.0	64.4	63.7	57.4	52.3	45.0	43.3	41.6	57.3	0.0	57.3
Day	14 15	57.9 58.5	67.1 67.8	42.8 40.6	66.6 66.8	66.3 66.1	64.6 64.8	63.9 64.1	58.2 60.5	53.0 51.6	46.4 43.0	44.9 41.9	43.3 40.8	57.9 58.5	0.0 0.0	57. 58.
	15	55.0	65.8	39.5	65.1	63.9	62.4	61.0	54.1	46.3	43.0	41.3	39.6	55.0	0.0	55.0
	17	56.7	67.8	43.4	67.0	66.1	63.6	62.4	56.5	46.8	44.3	43.9	43.5	56.7	0.0	56.
	18 19	50.6 69.5	60.2 80.7	45.5 47.1	59.7 80.4	58.7 79.9	55.8 77.2	53.4 74.9	50.2 67.9	48.7 57.8	46.5 48.2	46.1 47.7	45.6 47.2	50.6 69.5	0.0 5.0	50. 74.
	19 20	69.5 49.4	80.7 53.1	47.1 46.5	80.4 52.8	79.9 52.5	77.2 51.8	74.9 51.3	67.9 50.1	57.8 49.0	48.2 47.4	47.7 47.0	47.2 46.7	69.5 49.4	5.0	74. 54.
	21	50.6	54.8	48.1	54.4	54.1	53.1	52.5	51.2	50.1	48.7	48.5	48.2	50.6	5.0	55.
Night	22	52.2	54.4	50.9	54.2	54.1	53.5	53.2	52.5	52.0	51.2	51.1	50.9	52.2	10.0	62.
neframe	23 Hour	52.4 L _{eg}	55.7 L _{max}	50.4 L _{min}	55.4 L1%	55.0 L2%	54.5 L5%	54.1 L8%	52.9 L25%	52.2 L50%	50.9 L90%	50.7 L95%	50.5 L99%	52.4	10.0 Lea	62. (dBA)
Day	Min	49.4	53.1	- min 39.5	52.8	52.5	51.8	51.3	50.1	46.3	41.0	40.3	39.6	24-Hour CNEL	Daytime	Nightt
'	Max	69.5	80.7	51.1	80.4	79.9	77.2	75.8	68.4	59.4	51.5	51.4	51.2	CNEL	(7am-10pm)	(10pm-7
Energy	Average Min	62.6 49.8	53.0	erage: 47.8	66.0 52.6	65.4 52.4	<u>63.9</u> 51.5	62.7 51.1	57.2 50.1	51.8 49.5	46.0 48.4	45.1 48.1	44.2	64.3	62.6	53.
Night	Max	49.8 56.8	67.3	53.7	66.8	66.3	63.9	62.8	55.1	49.5 54.7	48.4 54.1	48.1 54.0	53.8	04.5	02.0	53.
Energy		53.2	Ave	erage:	55.9	55.6	54.8	54.3	52.5	51.8	50.9	50.7	50.5			_



							ur Noise Le									
	Friday, Apri					L5 - Located	southwest of	the site nea	r the resider	nce at 22655	Meter:	Piccolo II				15091
Project:	Cajalco Rd.	& Seaton Ave	е.		Source:	Cajalco Rd.									Analyst:	Z. Ibrahim
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0 2 80.0	0															
80.0 75.0 70.0 65.0 1 60.0																
B 70.0	ğ ———					<mark>ი</mark>										
، 65 و 60.0 ت						<mark>.2</mark>	<mark></mark>									
1 55.0 1 55.0 50.0 45.0 40.0				N			66.2	- u	- N - 2	o ∞	9.6	<u>.</u>	<mark>.99</mark>			
P 45.0	20.0	48.3	50.2	53.6	56.7	- <mark></mark>		57.	22	<mark>- 56.8</mark>	59. 53.	2 <mark></mark>	52.7	51.7	52.4 53.5	52.9
± 40.0 35.0		- 4 n						a — — — —							<u> </u>	
	0	1 2	3	4 5	6	7 8	9 1	.0 11		.3 14	15 10	5 17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	50.0	55.3	45.6	55.0	54.7	53.8	53.2	51.1	48.8	46.5	46.1	45.8	50.0	10.0	60.0
	1	48.3 50.4	52.2 53.8	46.0 48.1	51.8 53.6	51.4 53.3	50.6 52.6	50.2 52.2	48.9 51.1	47.9 50.1	46.6 48.7	46.3 48.5	46.1 48.2	48.3 50.4	10.0 10.0	58.3 60.4
Night	3	50.4	53.8	48.1	53.0	53.4	52.8	52.2	50.7	49.7	48.4	48.2	48.2	50.4	10.0	60.4
	4	53.6	56.2	51.2	56.0	55.9	55.5	55.3	54.4	53.4	51.8	51.6	51.3	53.6	10.0	63.6
	5	56.2	58.0	54.6	57.8	57.7	57.4	57.2	56.7	56.1	55.1	55.0	54.7	56.2	10.0	66.2
	6	56.7	59.2	55.2	58.9	58.7	58.2	57.9	57.1	56.5	55.6	55.5	55.3	56.7	10.0	66.7
	7 8	55.7 72.9	61.1	53.4	60.6	60.1	58.8	57.7	55.9	55.0	53.9	53.7	53.5	55.7	0.0	55.7
	8 9	66.2	84.4 75.4	53.4 45.2	84.2 75.2	83.7 74.9	82.4 73.0	80.3 72.2	62.2 65.9	56.3 57.5	53.9 47.7	53.7 46.1	53.5 45.4	72.9 66.2	0.0 0.0	72.9 66.2
	10	47.8	54.2	43.0	53.6	53.0	51.9	50.9	48.3	46.6	44.2	43.7	43.2	47.8	0.0	47.8
	11	57.5	66.7	41.4	66.1	65.3	64.1	62.7	58.8	51.9	42.6	42.1	41.6	57.5	0.0	57.5
	12	55.2	65.5	39.7	64.7	63.9	62.3	61.2	54.0	48.4	40.7	40.3	39.9	55.2	0.0	55.2
Davi	13	58.6	68.8	38.7	68.3	67.4	66.2	65.2	58.0	52.0	40.1	39.5	38.9	58.6	0.0	58.6
Day	14 15	56.8 59.6	66.3 70.1	41.7 43.2	65.8 69.7	65.2 69.3	64.1 67.6	62.5 65.9	57.5 58.6	48.8 51.0	43.2 45.2	42.6 44.3	41.9 43.6	56.8 59.6	0.0 0.0	56.8 59.6
	15	53.9	62.2	43.2	61.8	61.3	60.4	59.5	55.4	48.0	43.2	44.3	43.0	53.9	0.0	53.9
	17	59.7	70.6	45.9	69.5	68.3	67.0	65.5	59.5	53.3	47.2	46.6	46.0	59.7	0.0	59.7
	18	52.7	61.3	47.7	60.9	60.1	57.6	56.3	52.8	50.6	48.6	48.2	47.9	52.7	0.0	52.7
	19	66.4	76.0	48.6	75.8	75.7	74.6	72.9	63.5	52.3	49.5	49.2	48.8	66.4	5.0	71.4
	20 21	51.7 52.4	57.0 57.0	48.2 48.8	56.1	55.4	54.3 55.3	53.7 54.8	52.3 53.2	51.2 51.8	49.3	48.9 49.4	48.4 49.0	51.7 52.4	5.0 5.0	56.7 57.4
	21	52.4	61.2	48.8	56.5 60.3	56.1 59.6	55.3	54.8	53.2	51.8	49.8 50.7	<u>49.4</u> 50.4	<u>49.0</u> 50.1	52.4	10.0	63.5
Night	23	52.9	56.5	50.3	56.2	55.9	55.2	54.7	53.5	52.5	51.1	50.7	50.4	52.9	10.0	62.9
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour		(dBA)
Day	Min	47.8	54.2	38.7	53.6	53.0	51.9	50.9	48.3	46.6	40.1	39.5	38.9	CNEL	Daytime	Nighttime
,	Max Average	72.9 63.5	84.4	53.4 erage:	84.2 65.9	83.7 65.3	82.4 64.0	80.3 62.8	65.9 57.1	57.5 51.6	53.9 46.6	53.7 46.0	53.5 45.6		(7am-10pm)	(10pm-7am)
	Min	48.3	52.2	45.6	51.8	51.4	<u>64.0</u> 50.6	50.2	48.9	47.9	46.5	46.0	45.6	64.2	63.5	53.3
Night	Max	56.7	61.2	55.2	60.3	59.6	58.2	57.9	57.1	56.5	55.6	55.5	55.3	04.2	03.3	55.5
Energy	Average	53.3	Ave	erage:	55.9	55.6	54.9	54.4	53.0	51.9	50.5	50.2	50.0			



						24-Ho	ur Noise Le	evel Measu	urement S	ummary						
		/, Septembe & Seaton Av	-		Location: Source:	L6 - Located	near the resid	dence at 227	'61 Cajalco R	d.	Meter:	Piccolo II				15596 Z. Ibrahim
							Hourly L _{eq} a	IBA Readings	(unadjusted)							
85.0																
85.0 80.0 75.0 70.0 65.0 1 1 1																
65.0 60.0									.		70.1	68.3	6			
1 55.0 50.0 45.0 45.0) 	<u>ы</u> а	200	58.6 59.8	58.5	<mark>59.6</mark> 60.4		61.9	<mark> </mark>	61.7		5 <u> </u>	66.3		59.1	o
		50.5						+ -				+ +		+ $+$	2 <mark></mark>	54.9
35.0	0	1 2	3	4 5	6	7 8	9 1	0 11 Hour Be	12 1 eginning	3 14	15 10	5 17	18 19	20	21 22	23
meframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L
	0	50.9	58.2	45.1	57.7	57.1	54.9	54.2	52.0	49.5	45.9	45.5	45.2	50.9	10.0	60.9
	1 2	50.5 53.8	56.0 62.5	45.5 45.8	55.6 62.2	55.4 62.0	54.9 60.7	54.3 59.0	51.9 53.1	48.6 49.9	46.1 46.4	45.9 46.1	45.5 45.9	50.5 53.8	10.0 10.0	60.5 63.8
Night	3	56.0	62.6	48.4	62.4	62.1	61.0	60.3	57.3	53.9	49.4	48.9	48.5	56.0	10.0	66.0
-	4	58.6	66.6	51.4	66.3	65.7	63.7	62.5	59.4	56.3	52.6	52.0	51.5	58.6	10.0	68.6
	5	59.8	66.6	53.6	66.4	66.1	64.8	63.7	60.2	58.2	54.9	54.4	53.8	59.8	10.0	69.8
	6	58.5 59.6	63.1 68.6	53.7 54.5	62.8 68.2	62.6 67.4	61.9 64.5	61.5 62.6	59.7 59.7	57.6 57.7	54.7 55.2	54.3 55.0	53.8 54.6	58.5 59.6	10.0 0.0	68.5 59.6
	8	60.4	69.0	51.9	68.7	68.2	66.5	65.4	60.8	56.3	52.7	52.4	52.1	60.4	0.0	60.4
	9	57.7	63.4	51.3	63.0	62.5	61.8	61.4	59.3	55.9	52.6	52.0	51.5	57.7	0.0	57.7
	10	61.5	68.8	51.7	68.4	68.1	67.4	66.8	62.5	58.4	53.1	52.5	51.9	61.5	0.0	61.5
	11 12	61.9 63.4	70.6 73.4	50.3 50.6	70.4 72.9	69.9 72.3	68.8 70.4	67.6 68.8	61.7 63.0	56.3 58.9	51.9 52.7	51.2 51.8	50.5 50.9	61.9 63.4	0.0 0.0	61.9 63.4
	12	63.4 69.1	73.4	50.6	72.9 78.4	72.3	70.4	73.8	69.4	58.9 65.5	52.7	51.8	56.2	63.4 69.1	0.0	63.4
Day	14	61.7	70.4	49.7	69.7	69.1	67.4	66.1	62.8	59.3	51.7	50.7	49.9	61.7	0.0	61.7
	15	70.1	81.7	53.9	80.8	79.6	76.7	75.1	69.7	64.5	56.9	55.7	54.3	70.1	0.0	70.3
	16	68.1	78.4	53.6	77.3	76.2	74.0	72.8	68.6	64.2	56.4	55.4	54.0	68.1	0.0	68.3
	17 18	68.3 66.9	78.4 77.1	53.8 54.3	77.5 76.1	76.6 74.9	74.8 72.7	73.5 71.7	68.5 67.5	63.9 63.5	57.1 57.2	55.7 56.0	54.2 54.8	68.3 66.9	0.0 0.0	68.3 66.9
	19	60.3	67.6	51.0	67.2	66.8	65.8	64.9	61.3	57.6	52.9	52.1	51.2	60.3	5.0	65.
	20	60.9	75.6	48.4	74.5	72.9	67.2	62.6	56.0	53.2	49.7	49.2	48.6	60.9	5.0	65.9
	21	52.8	58.5	47.6	58.0	57.6	56.7	56.0	54.1	51.6	48.6	48.2	47.7	52.8	5.0	57.8
Night	22 23	59.1 54.9	70.1 60.2	48.8 49.2	68.6 60.0	68.1 59.7	66.2 59.0	64.4 58.4	57.7 55.9	53.7 53.8	50.2 50.2	49.5 49.7	48.9 49.3	59.1 54.9	10.0 10.0	69.1 64.9
meframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour	Leq	(dBA)
Day	Min	52.8	58.5	47.6	58.0	57.6	56.7	56.0	54.1	51.6	48.6	48.2	47.7	CNEL	Daytime	Nightti
, Energy	Max Average	70.1 65.1	81.7 Ave	55.6 erage:	80.8 71.4	79.6 70.6	76.7 68.7	75.1 67.3	69.7 63.0	65.5 59.1	59.1 53.9	57.7 53.0	56.2 52.2		(7am-10pm)	(10pm-7
	Min	50.5	56.0	45.1	55.6	55.4	54.9	54.2	51.9	48.6	45.9	45.5	45.2	66.1	65.1	56.
Night	Max	59.8	70.1	53.7	68.6	68.1	66.2	64.4	60.2	58.2	54.9	54.4	53.8		03.1	50.
Energy	Average	56.9	Ave	erage:	62.4	62.1	60.8	59.8	56.4	53.5	50.1	49.6	49.2			

						24-Ho	ur Noise Le	evel Meas	urement S	ummary						
	-	r, September & Seaton Av	-		Location: Source:	L7 - Located	near the resi	dence at 226	83 Cajalco R	d.	Meter:	Piccolo II				15596 Z. Ibrahi
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0 80.0 75.0 70.0 65.0 60.0 55.0																
g 70.0 65.0																
ο 60.0 Γ 55.0 55.0 45.0 45.0 40.0	57.4	54.3		58.5	64.9	61.6 60.7	62.8 62.8	60.7	60.4 60.4	60.4	62.5 60 8	62:9	62.3 63.1	61.7	60.0 <u>60.8</u>	60.6
± 40.0 35.0	0 ++		K				+									
	0	1 2	3	4 5	6	7 8	9 1	0 11 Hour Be	12 1 eginning	.3 14	15 1	6 17	18 19	20	21 22	23
neframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L
	0	57.4 54.3	64.3 60.5	50.9	63.7	63.0	61.8	61.0 57.9	58.4	56.0	52.3	51.8 49.5	51.1 48.9	57.4 54.3	10.0	67.
	1 2	54.3 59.1	69.4	48.7 49.1	60.0 68.0	59.6 67.4	58.6 66.1	64.9	55.5 58.1	52.9 53.7	49.9 50.4	49.5 49.9	48.9	54.3 59.1	10.0 10.0	64. 69.
Night	3	56.3	61.2	50.7	60.9	60.5	59.8	59.3	57.4	55.6	52.1	51.5	50.9	56.3	10.0	66
0	4	58.5	63.0	54.2	62.6	62.2	61.5	60.9	59.5	57.9	55.6	55.0	54.4	58.5	10.0	68
	5	58.4	64.1	54.5	63.2	62.6	61.5	60.9	59.0	57.8	55.6	55.1	54.6	58.4	10.0	68.
	6	64.9	75.1	56.3	73.8	73.0	70.9	69.6	65.1	61.3	57.8	57.3	56.5	64.9	10.0	74.
	7	61.6	71.0	53.3	70.2	69.3	67.3	65.8	62.2	58.5	54.5	54.0	53.5	61.6	0.0	61.
	8 9	60.7 62.8	70.0 69.5	55.7 52.9	68.6 69.3	67.2 69.0	64.7 68.4	63.3 67.8	61.2 64.5	59.4 58.9	56.8 53.6	56.4 53.4	55.9 53.0	60.7 62.8	0.0 0.0	60. 62.
	10	60.7	68.5	54.2	68.0	67.2	66.3	65.2	60.6	58.4	55.4	54.9	54.4	60.7	0.0	60.
	11	63.8	72.0	55.0	71.4	70.8	69.3	68.3	65.1	59.9	56.1	55.7	55.2	63.8	0.0	63.
	12	60.4	66.5	55.2	66.0	65.4	63.8	62.9	61.2	59.8	57.0	56.3	55.5	60.4	0.0	60.
	13	60.4	69.4	54.5	68.5	67.6	65.7	64.0	60.6	58.5	55.5	55.0	54.6	60.4	0.0	60.
Day	14	64.7	77.7	55.2	76.8	75.7	72.1	68.8	60.9	58.5	56.2	55.8	55.4	64.7	0.0	64.
	15 16	62.5 60.8	69.8 67.0	54.8 55.8	69.0 66.7	68.7 66.2	67.7 65.0	67.2 64.5	63.4 61.9	59.3 58.9	55.9 56.9	55.5 56.5	54.9 56.0	62.5 60.8	0.0 0.0	62. 60.
	16	62.9	67.0	55.8 57.0	69.2	68.8	68.0	67.5	63.9	58.9 60.7	58.0	50.5	56.0	62.9	0.0	62.
	18	62.3	66.8	58.7	66.2	65.7	65.0	64.5	63.1	61.8	59.8	59.4	58.9	62.3	0.0	62.
	19	63.1	71.8	58.4	70.7	69.9	67.9	66.5	63.1	61.5	59.3	59.0	58.6	63.1	5.0	68.
	20	61.7	67.4	57.5	67.0	66.3	65.1	64.5	62.7	60.8	58.8	58.3	57.7	61.7	5.0	66.
	21	60.8	66.2	55.7	65.7	65.4	64.4	63.7	61.7	60.0	56.9	56.4	55.8	60.8	5.0	65.
Night	22 23	60.0 60.6	66.8 65.9	55.2 54.9	66.1 65.5	65.3 65.0	63.8 64.4	62.9 63.8	60.8 61.7	59.0 59.6	56.4 56.3	55.9 55.7	55.4 55.1	60.0 60.6	10.0 10.0	70. 70.
eframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour		(dBA)
Day	Min	60.4	66.2	52.9	65.7	65.4	63.8	62.9	60.6	58.4	53.6	53.4	53.0	24-Hour CNEL	Daytime	Nightt
'	Max	64.7	77.7	58.7	76.8	75.7	72.1	68.8	65.1	61.8	59.8	59.4	58.9	CNEL	(7am-10pm)	(10pm-
Energy	Average	62.2		erage:	68.9	68.2	66.7	65.6	62.4	59.6	56.7	56.3	55.8	67.4	62.2	ГО
Night	Min Max	54.3 64.9	60.5 75.1	48.7 56.3	60.0 73.8	59.6 73.0	58.6 70.9	57.9 69.6	55.5 65.1	52.9 61.3	49.9 57.8	49.5 57.3	48.9 56.5	67.1	62.2	59
Energy	Average	59.9		erage:	64.9	64.3	63.1	62.4	59.5	57.1	57.8	57.3	50.5		_	



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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS



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	FHWA-RD	-77-108 HIGH	WAY NO	ISE PRED		IODEL (9	/12/20	021)		
	o: E e: Clark St. nt: n/o Cajalco	Rd.				Name: N lumber: 1		/alley Com	merce C	:
SITE	SPECIFIC IN	PUT DATA						L INPUTS	3	
Highway Data				Site Co	onditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	5,404 vehicle	s				Autos:	15		
Peak Hour	Percentage:	8.10%		N	ledium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	438 vehicles	6	E	leavy Tru	cks (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lai	ne Distance:	36 feet			hicleType		Dav	Evenina	Night	Daily
Site Data							76.6%	8.9%	14.5%	
Bar	rier Heiaht:	0.0 feet		1	Medium T	rucks:	83.3%	4.6%	12.1%	7.10%
Barrier Type (0-W		0.0			Heavy T	rucks:	76.9%	5.2%	17.9%	6.34%
Centerline Dis		50.0 feet		Noico	Source El	ovations	(in fo	of		
Centerline Dist.	to Observer:	50.0 feet		NOISE	Auto			eŋ		
Barrier Distance	to Observer:	0.0 feet		Madi	um Truck					
Observer Height (Above Pad):	5.0 feet			avy Truck			Grade Adj	ustment	0.0
Pa	d Elevation:	0.0 feet		110	avy much	3. 0.0		orado riaj	uounoni	0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent	t Distanc	e (in f	eet)		
F	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degree	s	Medi	um Truck					
	Right View:	90.0 degree	es	Hei	avy Truck	s: 46.7	'44			
FHWA Noise Mode	l Calculations	5								
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresn		Barrier Atte	en Ber	m Atten
Autos:	68.46	-6.05		0.31	-1.20		4.65	0.0		0.000
Medium Trucks:	79.45	-16.91		0.34	-1.20		4.87	0.0		0.000
Heavy Trucks:	84.25	-17.41		0.34	-1.20		-5.43	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	tenuation)					
ommingated Noise	Ectere (main							Ldn	CI	VEL
VehicleType	Leq Peak Hou			q Evening		Night			-	
VehicleType Autos:	Leq Peak Hou 61	.5	60.5	57.	.1	54.5		62.3		
VehicleType Autos: Medium Trucks:	Leq Peak Hou 61 61	.5 .7	60.5 61.0	57. 54.	1 5	54.5 53.9		62.3 62.0)	62.2
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 61 61 66	5 7 0	60.5 61.0 65.0	57. 54. 59.	1 5 3	54.5 53.9 59.9		62.3 62.0 67.3	1	62.2 67.5
VehicleType Autos: Medium Trucks:	Leq Peak Hou 61 61	5 7 0	60.5 61.0	57. 54.	1 5 3	54.5 53.9		62.3 62.0	1	62.2 67.5
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 61. 61. 66. 68.	5 7 0 4	60.5 61.0 65.0 67.4	57. 54. 59. 62.	1 5 3 2	54.5 53.9 59.9 61.8		62.3 62.0 67.3 69.3) ; ;	62.2 67.5 69.6
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 61. 61. 66. 68.	5 7 0 4 ntour (in feet)	60.5 61.0 65.0 67.4	57. 54. 59. 62. 70 dBA	1 5 3 2 65	54.5 53.9 59.9 61.8 dBA		62.3 62.0 67.3 69.3 0 dBA) ; ;	62.6 62.2 67.5 69.6 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 61. 61. 66. 68.	5 7 0 4 ntour (in feet)	60.5 61.0 65.0 67.4	57. 54. 59. 62.	1 5 3 2 2 65 5	54.5 53.9 59.9 61.8		62.3 62.0 67.3 69.3) ; ;	62.2 67.5 69.6

	FHWA-RD	-77-108 HIGH	NAY N	NOISE	PREDIC		IODEL (9/12/2	021)		
Scenario Road Name Road Segmen	e: Clark St.	Rd.					t Name: lumber:		Valley Corr	nmerce C	;
SITE S	PECIFIC IN	PUT DATA				1	NOISE	NODE		s	
Highway Data				S	ite Cond	ditions	(Hard =	10, Se	oft = 15)		
Average Daily T	raffic (Adt):	5,453 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	8.10%			Med	dium Tr	ucks (2)	Axles):	15		
	our Volume:	442 vehicles			Hea	avy Tru	cks (3+ /	Axles):	15		
	icle Speed:	45 mph		ν	ehicle N	lix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	76.6%	8.9%	14.5%	86.68%
Barr	rier Height:	0.0 feet					rucks:	83.3%	4.6%	12.1%	7.03%
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy T	rucks:	76.9%	5.2%	17.9%	6.289
Centerline Dist	t. to Barrier:	50.0 feet		Λ	loise So	urce E	levation	s (in f	eet)		
Centerline Dist. to	o Observer:	50.0 feet		-		Auto		000	,		
Barrier Distance to		0.0 feet			Mediun			297			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	iustment.	0.0
	d Elevation:	0.0 feet			ana Eau	inclan	t Distan	na lin	faati		
	d Elevation:	0.0 feet 0.0%		L	ane Equ	Auto		915	reet)		
ĸ	oad Grade: Left View:	-90.0 degree	c .		Mediur			726			
	Right View:	90.0 degree				y Truck		744			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fresr		Barrier Att		m Atten
Autos:	68.46	-6.01		0.31		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-16.91		0.34		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-17.41		0.34		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise			barriei	r attenu	uation)			-			
	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		VEL
Autos:	61.		60.5		57.2		54.5		62.3		62.
Medium Trucks:	61.		51.0		54.5		53.9		62.0		62.
Heavy Trucks: Vehicle Noise:	66. 68.		35.0 37.4		59.3 62.2		59.9 61.8		67.3 69.4		67. 69.
			07.4		02.2		01.0)	09.4	•	09.
Centerline Distance	e to Nolse Co	ntour (in feet)		70 d	BA	65	dBA		60 dBA	55	dBA
			dn:		45		98	1	210		453
		~	IEL:		47		101		217		468

Thursday, July 27, 2023

FHWA	RD-77-108 HIGH	IWAY NOI	SE PREDIC	TION MO	ODEL (9/12	2/2021)	
Scenario: EAC				Project I	Vame: Mea	d Valley Comr	nerce C
Road Name: Clark St.				Job Ni	mber: 150	91	
Road Segment: n/o Caja	lco Rd.						
SITE SPECIFIC	INPUT DATA					DEL INPUTS	
Highway Data			Site Con	ditions (Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt)	: 7,225 vehicl	es			Auto	os: 15	
Peak Hour Percentage	: 8.10%		Me	dium Tru	cks (2 Axle	s): 15	
Peak Hour Volume	: 585 vehicle	s	He	avy Truc	ks (3+ Axle	s): 15	
Vehicle Speed			Vehicle I	Mix			
Near/Far Lane Distance	: 36 feet			icleType	Day	Evening	Night Daily
Site Data					utos: 76.	•	14.5% 86.56
Barrier Height	: 0.0 feet		M	edium Tru	ucks: 83.	3% 4.6%	12.1% 7.10
Barrier Type (0-Wall, 1-Berm)			1	Heavy Tru	ucks: 76.	9% 5.2%	17.9% 6.34
Centerline Dist. to Barrier			Noiso Se		vations (ir	foot	
Centerline Dist. to Observer	: 50.0 feet		NUISE SC	Autos		i ieetj	
Barrier Distance to Observer	: 0.0 feet		Madiu	m Trucks	. 0.000		
Observer Height (Above Pad)	: 5.0 feet			vy Trucks		Grade Adiu	stment: 0.0
Pad Elevation	: 0.0 feet		Ticas	y mucks	. 0.004	endde maje	
Road Elevation	: 0.0 feet		Lane Eq	uivalent	Distance (I	in feet)	
Road Grade	0.0%			Autos	: 46.915		
Left View	-90.0 degre	es	Mediu	m Trucks	46.726		
Right View	90.0 degre	es	Heav	ry Trucks	46.744		
FHWA Noise Model Calculati	ons						
VehicleType REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	n Berm Atter
Autos: 68.			0.31	-1.20	-4.6		
Medium Trucks: 79.			0.34	-1.20	-4.8		
Heavy Trucks: 84.	25 -16.14		0.34	-1.20	-5.4	13 0.00	0.0
Unmitigated Noise Levels (wi	ithout Topo and	barrier at	tenuation)				
VehicleType Leq Peak F			r Evening	Leq N	•	Ldn	CNEL
	62.8	61.7	58.4		55.8	63.5	63
	62.9	62.3	55.7		55.1	63.2	63
	67.2	66.2	60.5		61.2	68.5	68
Vehicle Noise:	69.6	68.7	63.4		63.0	70.6	70
Centerline Distance to Noise	Contour (in feet	,					
			70 dBA	65 d		60 dBA	55 dBA
		Ldn:			118	255	54
		NEL:	55 57		118	263	56

Site Data Autos: 76.6% 8.9% 14.5% 88.65 Barrier Height: 0.0 feet Medium Trucks: 83.3% 4.6% 12.1% 7.05 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Meaium Trucks: 83.3% 4.6% 12.1% 7.05 Centerline Dist. to Diserver: 50.0 feet Noise Source Elevations (in feet) Autos: 0.000 Observer Height (Above Pad): 5.0 feet Noise Source Elevations (in feet) Autos: 0.000 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 46.726 Heavy Trucks: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -16.14 0.34 -1.20 -4.65 0.000 0.0 Medium Trucks: 62.8 61.8 58.4 52.8 63.6 65 Mediu		FHWA-RD	-77-108 HIGHW	AY NOIS	SE PREDI		NODEL (S	9/12/20)21)		
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 7,273 vehicles Autos:: 15 Peak Hour Percentage: 8,10% Autos:: 15 Peak Hour Volume: 589 vehicles Medium Trucks (2,44kes): 15 Vehicle Speed: 45 mph Heavy Trucks (3 + Axles): 15 Site Data Vehicle Type Day Evening Night Daily Site Data Generified Dist. 0.0 feet Heavy Trucks: 83.3% 4.6% 12.1% 7.05 Barrier Type (0-Wail, 1-Berm): 0.0 feet Autos:: 76.6% 8.9% 14.5% 66.30 Centerline Dist. to Dserver: 50.0 feet Autos:: 0.000 Medium Trucks: 2.297 Observer Height View: 90.0 degrees Right View: 90.0 degrees Medium Trucks: 46.726 Heavy Trucks: 46.746 0.31 -120 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -120 -4.65 0.000 0.0	Road Name	e: Clark St.	Rd.						/alley Com	merce C	;
Average Daily Traffic (Adt): 7,273 vehicles Autos: 15 Peak Hour Percentage: 8,10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 589 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 45 mph Medium Trucks (2 Axles): 15 Site Data Autos: 7,67% 8,9% 14,5% 86 Barrier Height: 0.0 feet Medium Trucks: 76,9% 5,2% 17,9% 6,30 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Darrier: 50.0 feet Medium Trucks: 76,9% 5,2% 17,9% 6,30 Centerline Dist. to Desriver: 50.0 feet Autos: 0.00 Medium Trucks: 8,04 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 0.00 Medium Trucks: 8,04 Feet Autos: 6,726 Pad Elevation:: 0.0 feet Autos: 6,726 Heavy Trucks: 46,726 Road Grade: 0.0% Distance Finite Road Fresnel Barrier		SPECIFIC IN	PUT DATA							5	
Peak Hour Percentage: 8.10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 589 vehicles Heavy Trucks (3 + Axles): 15 Vehicle Speed: 45 mph Vehicle Mix Day Evening Night Dail Site Data Autos: 76.6% 8.9% 14.5% 86.65 Barrier Height: 0.0 feet Autos: 76.6% 8.9% 12.1% 7.05 Barrier Distance to Observer: 50.0 feet Medium Trucks: 8.3.3% 4.6% 12.1% 7.05 Barrier Distance to Observer: 50.0 feet Autos: 0.000 Noise Source Elevations (in feet) 0.000 Centerline Dist. to Barrier: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Medium Trucks: 46.726 Heavy Trucks: 46.726 Road Grade: 0.00 degrees Finite Road Fresnel Barrier Atten Berrier Atten Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 </th <th>Highway Data</th> <th></th> <th></th> <th></th> <th>Site Col</th> <th>nditions</th> <th>(Hard =</th> <th>10, So</th> <th>ft = 15)</th> <th></th> <th></th>	Highway Data				Site Col	nditions	(Hard =	10, So	ft = 15)		
Peak Hour Volume: 589 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet Vehicle Type Day Evening Night Daily Site Data Vehicle Speed: 45 mph Autos: 76.6% 8.9% 14.5% 86.65 Barrier Height: 0.0 feet Barrier Type (0-Wail, 1-Berrn): 0.0 feet Medium Trucks: 7.05 Heavy Trucks: 7.05 Medium Trucks: 7.05 Medium Trucks: 2.297 Noise Source Elevations (in feet) Moise Source Elevations (in feet) Medium Trucks: 2.297 Observer Height View: -90.0 degrees Medium Trucks: 46.716 0.0 Medium Trucks: 46.716 0.0 Road Grade: 0.0% Lare Equivalent Distance (in feet) Medium Trucks: 46.716 0.00 0.0 Wehicle Type ReMedium Trucks: 7.265 0.34 -120 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -120 -4.67 0.000 0.0 Medium Trucks:	Average Daily	Traffic (Adt):	7,273 vehicles					Autos:			
Vehicle Speed: Near/Far Lane Distance: 45 mph 36 feet Vehicle Type Large Day Evening Night Day Site Data Autos: 76.6% 8.9% 14.5% 86.65 Barrier Height: 0.0 feet Medium Trucks: 33.3% 4.6% 12.1% 7.05 Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 33.3% 4.6% 12.1% 7.05 Barrier Dist. to Dserver: 50.0 feet Moles 0.00 Heavy Trucks: 76.9% 5.2% 17.9% 6.30 Centerline Dist. to Dserver: 0.0 feet Autos: 0.00 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 46.915 Medium Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0% Autos: 46.74 0.31 -120 -4.65 0.000 0.0 Medium Trucks: 67.26 -15.65 0.34 -1.20 -4.67 0.000 0.0 Medium Trucks: 67.2 61.8 58.4		•						,			
Near/Far Lane Distance: 36 feet Vehicle Wix Day Evening Night Daily Site Data Autos: 76.6% 8.9% 14.5% 86.65 Barrier Height: 0.0 feet Medium Trucks: 83.3% 4.9% 12.1% 7.05 Barrier Type (0-Wall, 1-Bern): 0.0 Centerline Dist. to Barrier: 50.0 feet Medium Trucks: 76.9% 5.2% 17.9% 6.30 Centerline Dist. to Dserver: 50.0 feet Autos: 0.000 Noise Source Elevations (in feet) 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0% Lane Equivalent Distance (in feet) Autos: 46.76 14.4% 44.76 VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Berrier Atten Autos: 68.46 4.76 0.31 -1.20 -4.65 0.000 0.0 Heavy Trucks: 79.45			589 vehicles		He	eavy Tru	icks (3+ A	xles):	15		
Site Data Venicle type Day Day <thday< th=""> Day Day</thday<>			45 mph		Vehicle	Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wail, 1-Berm): 0.0 Centerline Dist. to Barrier: 50.0 feet Barrier Distance to Observer: 0.0 feet Barrier Jbis to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 66.726 Medium Trucks: 7.05 Autos: 68.46 -4.76 0.31 -1.20 -4.65 Medium Trucks: 70.45 Medium Trucks: 70.46 Mutos: 68.46 -4.76 0.31 -120 -4.65 0.000 Medium Trucks: 84.25 -15.65 0.34 -120 -5.43 0.000 Medium Trucks: 82.57 55.1 63.2 63.2 Mediu	Near/Far Lar	ne Distance:	36 feet		Vel	nicleType	e	Day	Evening	Night	Daily
Barrier Type (I-Wall, 1-Berm): 0.0 feet Heavy Trucks: 76.9% 5.2% 17.9% 6.30 Centerline Dist to Diserver: 50.0 feet Autos: 0.00 Noise Source Elevations (in feet) Autos: 0.00 Diserver: 50.0 feet Autos: 0.00 Noise Source Elevations (in feet) Autos: 0.00 Diserver: 0.0 feet Autos: 0.00 Heavy Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 68.00 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 46.915 Heavy Trucks: 46.915 WeinicitYpe REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 68.46 -4.76 0.31 -120 -4.65 0.000 0.0 Medium Trucks: 67.25 -15.65 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topa and barrier attenuation) Leq Evening Leq Right Ldn CNEL <td>Site Data</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Autos:</td> <td>, 76.6%</td> <td>8.9%</td> <td>14.5%</td> <td>86.65</td>	Site Data						Autos:	, 76.6%	8.9%	14.5%	86.65
Barrier Type (0-Wall, 1-Bern): 0.0 Heavy Trucks: 76.9% 5.2% 17.9% 6.30 Centerline Dist. to Desriver: 50.0 feet Noise Source Elevations (in feet) Autos: 0.00 Noise Source Elevations (in feet) Autos: 0.00 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Autos: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 64.91 5.2% 17.9% 6.30 Road Elevation: 0.0 feet Autos: 8.004 Grade Adjustment: 0.0 Left View: 90.0 degrees Medium Trucks: 46.726 Medium Trucks: 46.744 FHWA Noise Model Calculations VenicieType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 68.46 -4.76 0.34 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -5.43 0.000 0.0 Ubmitigated Noise	Bar	rier Heiaht:	0.0 feet		N	ledium 7	rucks:	83.3%	4.6%	12.1%	7.05
Noise Source Formula Barrier Distance to Observer: 0.0 feet Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Autos: 0.000 Pad Elevation: 0.0 feet Autos: 0.000 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Calculations -90.0 degrees Medium Trucks: 46.726 WehiceType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.65 0.000 0.0 Unititigated Noise Levels (without Topo and barrier attenuation) Ueq Deay Leq Evening Leq Night Ldn CNEL Autos: 62.9 62.3 55.7 55.1 63.2 63.2 Medium Trucks: 69.6 68.7 6			0.0			Heavy 1	rucks:	76.9%	5.2%	17.9%	6.30
Centerline Dist. to Observer: 5.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 2.297 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 46.796 FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Atten Vehicle Type REMEL Traffic Flow Distance Finite Road -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.67 0.000 0.0 Medium Trucks: 84.25 -16.1 0.34 -1.20 -5.43 0.000 0.0 Umitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Pask Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos:	Centerline Dis	t. to Barrier:	50.0 feet		Noise S	ource F	lovations	in fo	of)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Lare Equivalent Distance (in feet) Lare Equivalent Distance (in feet) Road Grade: 0.0% Lare Equivalent Distance (in feet) Lare Equivalent Distance (in feet) Webice Type Ref Caculations Medium Trucks: 46.726 Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atter Autos: 68.46 -4.76 0.31 -120 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -120 -5.43 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Evening Leq Night Ldn CNEL Autos: 62.9 62.3 55.7 55.1 63.2 63 Heavy Trucks: 67.2 66.2 60.5 61.2 65	Centerline Dist. t	o Observer:	50.0 feet		110/30 0				01/		
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Left View: 90.0 degrees Autos: 46.915 Heavy Trucks: 46.726 WehiceType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 67.92 -15.65 0.34 -1.20 -5.43 0.000 0.0 Medium Trucks: 67.92 -16.14 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Right Ldn CNEL VehicleType Leq Deak Hour Leq Day Leq Evening Ledn 63.6 63.6 Medium Trucks: 67.2 66.2 60.5	Barrier Distance t	o Observer:	0.0 feet		Modiu		0.0				
Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Glevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 46.915 Left View: -90.0 degrees Medium Trucks: 46.726 Right View: -90.0 degrees Medium Trucks: 46.744 FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -5.43 0.000 0.0 Medium Trucks: 84.25 -16.1 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leg Day Leg Evening Leg Night Ldn CNEL Autos: 62.8 61.8 58.4 63.6 65 66 Medium Truc	Observer Height (/	Above Pad):	5.0 feet						Grade Adi	ustment	0.0
Road Grade: 0.0% Autos: 46.915 Left View: -90.0 degrees Medium Trucks: 46.744 FHWA Noise Model Calculations Venicle Type Ref Left Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.65 0.000 0.0 Heavy Trucks: 84.25 -16.14 0.34 -1.20 -4.67 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Day Leq Evening Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.8 63.6 65 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 66 Medium Trucks: 69.6 68.7 63.4 63.0 70 Vehicle Noise: 69.6	Pa	d Elevation:	0.0 feet								
Left View: -90.0 degrees Medium Trucks: 46.726 Right View: 90.0 degrees Heavy Trucks: 46.744 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berna Atten Autos: 68.46 -4.76 0.31 -120 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -120 -4.67 0.000 0.0 Medium Trucks: 84.25 -16.14 0.34 -120 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Evening Leq Night Ldn CNEL Autos: 62.9 62.3 55.7 55.1 63.2 63 Medium Trucks: 67.2 66.2 60.5 61.2 65 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)	Roa	d Elevation:	0.0 feet		Lane Eq				ieet)		
Right View: 90.0 degrees Heavy Trucks: 46.744 FHWA Noise Model Calculations Heavy Trucks: 46.744 VehicleType REMEL Traffic Flow Distance Finite Road Freshel Barrier Atten Bern Atten VehicleType REMEL Traffic Flow Distance Finite Road Freshel Barrier Atten Bern Atten Autos: 68.46 -15.55 0.34 -1.20 -4.67 0.000 0.0 Medium Trucks: 79.45 -15.55 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Devining Leq Night Ldn CNEL VehicleType Leq Deak Hour Leq Day Leq Evening Leq Night Ldn CNEL Heavy Trucks: 67.2 66.2 60.5 61.2 63.5 68 Heavy Trucks: 67.2 66.2 60.5 61.2 65.5 68 Vehicle Noise: 69.6 68.7 63.4 63.0	F		0.0%								
FHWA Noise Model Calculations Distance Finite Road Fresnel Barrier Atten Bermarkten Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.67 0.000 0.0 Heavy Trucks: 84.25 -16.14 0.34 -1.20 -5.43 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) - - - - - - - - - - - - - - - - 0.00 0.0 0.00											
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atter Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.65 0.000 0.0 Heavy Trucks: 84.25 -16.14 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.6 63.6 63 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 68 Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 68 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)		Right View:	90.0 degrees		Hea	vy Truck	(s: 46.7	744			
Autos: 68.46 -4.76 0.31 -1.20 -4.65 0.000 0.0 Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.87 0.000 0.0 Heavy Trucks: 84.25 -16.14 0.34 -1.20 -4.87 0.000 0.0 Unmitigated Moise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.8 63.6 63 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 68 Medium Trucks: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)	FHWA Noise Mode										
Medium Trucks: 79.45 -15.65 0.34 -1.20 -4.87 0.000 0.0 Heavy Trucks: 84.25 -16.14 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) -1.20 -5.43 0.000 0.0 VehicleType Leq Deak Hour Leq Deay Leq Reining Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.8 63.6 66 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 63 Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 68 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)								-			
Heavy Trucks: 84.25 -16.14 0.34 -1.20 -5.43 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Evening Leq Night Ldn CNEL Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Matos: 62.8 61.8 58.4 55.8 63.6 63.6 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 66.2 Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 68.5 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70.7 Centerline Distance to Noise Contour (in feet)				-							
Untiligited Noise Levels (without Topo and barrier attenuation) Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.8 63.6 63. Medium Trucks: 62.9 62.3 55.7 55.1 63.2 66. Heavy Trucks: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)				-							
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 62.8 61.8 58.4 55.8 63.6 65 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 66 Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 66 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)						-1.20		-5.43	0.0	100	0.00
Autos: 62.8 61.8 58.4 55.8 63.6 63.7 Medium Trucks: 62.9 62.3 55.7 55.1 63.2 63.7 Heavy Trucks: 67.2 66.2 60.5 61.4 56.8 63.0 66.2 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 55 118 255 54					,						
Medium Trucks: 62.9 62.3 55.7 55.1 63.2 63.3 Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 66 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 55 118 255 54					•	,					
Heavy Trucks: 67.2 66.2 60.5 61.2 68.5 66 Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet)	710100.	02									
Vehicle Noise: 69.6 68.7 63.4 63.0 70.6 70 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 55 118 255 54											
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 55 118 255 54		÷									
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 55 118 255 54					03.4	•	03.0		70.0	,	70
Ldn: 55 118 255 54	Centerline Distanc	e to Noise Co	ntour (in feet)	7	0 dBA	65	dBA	6	0 dBA	55	dBA
			1.			05		0		55	ивя 54
UNEL. 37 122 204 30											56
			CIVI		51		122		204		50

FH	WA-RD-	77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL (9	/12/20	021)		
Scenario: HY Road Name: Clar Road Segment: n/o		Rd.					Name: N umber: 1		/alley Com	merce (;
SITE SPECI	FIC INP	UT DATA				N	OISE N	IODE	L INPUTS	3	
Highway Data				S	Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic	(Adt):	8,220 vehicle	s				A	Autos:	15		
Peak Hour Percen	tage:	8.10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hour Vol	ume:	666 vehicles	;		He	avy Truc	cks (3+ A	xles):	15		
Vehicle Sp	peed:	45 mph		1	/ehicle I	liv					
Near/Far Lane Dist	ance:	36 feet		-		icleType		Dav	Evenina	Niaht	Daily
Site Data					VCIII			76.6%		14.5%	
Barrier He	iaht:	0.0 feet			Me	edium Tr	ucks:	83.3%	4.6%	12.1%	
Barrier Type (0-Wall, 1-B	5	0.0			F	leavy Tr	ucks:	76.9%	5.2%	17.9%	
Centerline Dist. to Ba		50.0 feet									
Centerline Dist. to Obse		50.0 feet		^	loise So		evations		et)		
Barrier Distance to Obse		0.0 feet				Autos					
Observer Height (Above		5.0 feet				n Trucks					
Pad Elev		0.0 feet			Heav	y Trucks	s: 8.0	104	Grade Adj	ustment	0.0
Road Elev	ation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in f	eet)		
Road G	rade:	0.0%				Autos	s: 46.9	915			
Left	View:	-90.0 degree	s		Mediur	n Trucks	s: 46.7	26			
Right	View:	90.0 degree	s		Heav	y Trucks	s: 46.7	'44			
FHWA Noise Model Calc	ulations										
VehicleType REN	1EL ·	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atter
Autos:	68.46	-4.23		0.31		-1.20		4.65	0.0		0.00
Medium Trucks:	79.45	-15.09		0.34		-1.20		4.87	0.0		0.00
Heavy Trucks:	84.25	-15.58		0.34	1	-1.20		-5.43	0.0	00	0.00
Unmitigated Noise Level	s (withou	ut Topo and	barrier	attenu	uation)						
VehicleType Leq Pe	eak Hour	Leq Day	1	Leq Ev	ening	Leq	Night		Ldn		VEL
Autos:	63.3		62.3		59.0		56.3		64.1		64
Medium Trucks:	63.5	-	62.8		56.3		55.7		63.8		64
Heavy Trucks:	67.8		66.8		61.1		61.7		69.1		69
Vehicle Noise:	70.2	2	69.2		64.0		63.6		71.2		71
Centerline Distance to N	oise Con	ntour (in feet)				_					
				70 d	IBA	65 (dBA	6	0 dBA	55	dBA
			Ldn: IEL:		60 62		129 133		277 287		59 61

FHV	VA-RD-7	77-108 HIGHWA	Y NOIS	E PREDIC	TION M	ODEL (S	9/12/2	021)		
Scenario: HY+F Road Name: Clark Road Segment: n/o C	St.	d.				Name: I umber: '		Valley Corr	nmerce C	;
SITE SPECIF	IC INP	UT DATA			N	OISE N	IODE		s	
Highway Data				Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (A	(dt):	8,269 vehicles					Autos:	15		
Peak Hour Percenta	age:	8.10%		Mee	dium Tri	ucks (2 A	(xles):	15		
Peak Hour Volu	me:	670 vehicles		Hei	avy Tru	cks (3+ A	(xles)	15		
Vehicle Spe		45 mph		Vehicle N	<i>lix</i>					
Near/Far Lane Distar	nce:	36 feet		Vehi	cleType		Day	Evening	Night	Daily
Site Data					/	Autos:	76.6%	8.9%	14.5%	86.64
Barrier Hei	aht:	0.0 feet		Me	edium T	rucks:	83.3%	4.6%	12.1%	7.05
Barrier Type (0-Wall, 1-Be	-	0.0		F	leavy Ti	ucks:	76.9%	5.2%	17.9%	6.30
Centerline Dist. to Bar	rier:	50.0 feet		Noise So	urco El	ovation	: (in fa	oof)		
Centerline Dist. to Obser	ver:	50.0 feet		10130 00	Auto		000			
Barrier Distance to Obser	ver:	0.0 feet		Mediur	n Truck		297			
Observer Height (Above P	ad):	5.0 feet			y Truck		004	Grade Ad	iustment	0.0
Pad Eleval		0.0 feet								
Road Eleval		0.0 feet		Lane Equ				feet)		
Road Gra		0.0%			Auto					
Left V		-90.0 degrees			n Truck y Truck					
Right V	lew:	90.0 degrees		neav	y muck	5. 40.	/44			
FHWA Noise Model Calcul	ations									
VehicleType REM	EL 1	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
	68.46	-4.20		.31	-1.20		-4.65		000	0.00
	79.45	-15.09		.34	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-15.58	0	.34	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels	(withou	ıt Topo and bar	rier atte	enuation)						
VehicleType Leq Pea	k Hour	Leq Day	Leq	Evening	Leq	Night		Ldn		VEL
Autos:	63.4			59.0		56.4		64.1		64
Medium Trucks:	63.5		-	56.3		55.7		63.8		64
Heavy Trucks:	67.8		-	61.1		61.7		69.1		69.
Vehicle Noise:	70.2	69.3	2	64.0		63.6	5	71.2	2	71.
Centerline Distance to No	ise Con	tour (in feet)								
				0 dBA	65	dBA	6	60 dBA		dBA
		Ldr		60		129		278		59
		CNEL		62		133		287		619

Thursday, July 27, 2023

FHWA-F	D-77-108 HIGHWA	AY NOISE	PREDIC	TION MO	ODEL (9)	/12/20)21)		
Scenario: E Road Name: Clark St. Road Segment: s/o Cajalo	o Rd.				Name: M umber: 1		/alley Comr	nerce C	
SITE SPECIFIC I	NPUT DATA						L INPUTS		
Highway Data		4	Site Cond	ditions (Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt):	8,366 vehicles				Α	utos:	15		
Peak Hour Percentage:	8.10%		Med	dium Tru	icks (2 A)	xles):	15		
Peak Hour Volume:	678 vehicles		Hea	avy Truc	ks (3+ A)	xles):	15		
Vehicle Speed:	40 mph		Vehicle N	lix					
Near/Far Lane Distance:	12 feet	-		cleType	Ľ	Dav	Evening	Night	Daily
Site Data		-			utos: 7	6.6%	•	14.5%	86.56%
Barrier Height:	0.0 feet		Me	dium Tru	ucks: 8	33.3%	4.6%	12.1%	7.10%
Barrier Type (0-Wall, 1-Berm):	0.0		h	leavy Tru	ucks: 7	6.9%	5.2%	17.9%	6.34%
Centerline Dist. to Barrier:	37.0 feet	-	Noise So	urco Ela	wations	(in fo	of		
Centerline Dist. to Observer:	37.0 feet	Ľ	10136 30	Autos			eij		
Barrier Distance to Observer:	0.0 feet		Madium	n Trucks	0.01				
Observer Height (Above Pad):	5.0 feet			v Trucks			Grade Adju	istment [.]	0.0
Pad Elevation:	0.0 feet		neav.	y mucks	. 0.0	04	orado riaja	ioumonia.	0.0
Road Elevation:	0.0 feet	1	Lane Equ	ivalent	Distance	e (in f	eet)		
Road Grade:	0.0%			Autos					
Left View:	-90.0 degrees			n Trucks		10			
Right View:	90.0 degrees		Heav	y Trucks	36.6	34			
FHWA Noise Model Calculatio	ns								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	e/ 1	Barrier Atte	n Berr	n Atten
Autos: 66.5	1 -3.64	1.8	8	-1.20		4.56	0.00	00	0.00
Medium Trucks: 77.7	2 -14.51	1.9	3	-1.20	-	4.87	0.00	00	0.00
Heavy Trucks: 82.9	9 -15.00	1.9	2	-1.20	-	5.61	0.00	00	0.00
Unmitigated Noise Levels (wit	hout Topo and bar	rrier atten	uation)						
VehicleType Leq Peak Ho			vening	Leq N	•		Ldn	CN	
	3.6 62.		59.2		56.5		64.3		64.
	3.9 63.		56.7		56.1		64.3		64.
	8.7 67.		62.0		62.6		70.0		70.
Vehicle Noise: 7	0.9 69.	9	64.6		64.3		71.9		72.
Centerline Distance to Noise C	Contour (in feet)								
			dBA	65 d		6	0 dBA	55 (
	Ldr		49		106		229		493
	CNEL		51		110		236		509

11114-10-11-1001	IGHWAY NO	ISE PREDIC		ODEL (9/1	12/2021)		
Scenario: E+P Road Name: Clark St. Road Segment: s/o Cajalco Rd.				Name: Me Imber: 15	ead Valley Con 091	nmerce C	;
SITE SPECIFIC INPUT DA	TA		N	OISE MO	DEL INPUT	s	
Highway Data		Site Con), Soft = 15)	-	
Average Daily Traffic (Adt): 8,432 ve	hicles			AL	itos: 15		
Peak Hour Percentage: 8.10%		Me	dium Tru	cks (2 Ax	<i>les):</i> 15		
Peak Hour Volume: 683 veh	icles	He	avy Truc	ks (3+ Ax	<i>les):</i> 15		
Vehicle Speed: 40 mp	h	Vehicle	Mix				
Near/Far Lane Distance: 12 fee	t		icleType	D	ay Evening	Night	Daily
Site Data		ven			6.6% 8.9%	14.5%	
Barrier Height: 0.0 fe	at	М	edium Tr		3.3% 4.6%	12.1%	
Barrier Type (0-Wall, 1-Berm): 0.0	et		Heavy Tr	ucks: 76	5.9% 5.2%	17.9%	6.29
Centerline Dist. to Barrier: 37.0 fe	at						
Centerline Dist. to Observer: 37.0 fe		Noise Se		evations (
Barrier Distance to Observer: 0.0 fe			Autos				
Observer Height (Above Pad): 5.0 fe			m Trucks			. , ,	
Pad Elevation: 0.0 fe		Hear	/y Trucks	: 8.00	4 Grade Ad	justment.	0.0
Road Elevation: 0.0 fe		Lane Eq	uivalent	Distance	(in feet)		
Road Grade: 0.0%			Autos	: 36.85	51		
Left View: -90.0 de	arees	Mediu	m Trucks	: 36.61	0		
Right View: 90.0 de	0	Hear	/y Trucks	36.63	4		
FHWA Noise Model Calculations							
VehicleType REMEL Traffic Flo	ow Distance	ce Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos: 66.51 -3	3.60	1.88	-1.20	-4	.56 0.0	000	0.00
Medium Trucks: 77.72 -14	.51	1.93	-1.20	-4	.87 0.0	000	0.00
Wouldin 1100K3. 11.12 -1-						000	0.00
	5.00	1.92	-1.20	-5	6.61 0.0	JUU	0.00
			-1.20	-5	5.61 0.0	JUU	0.00
Heavy Trucks: 82.99 -15 Unmitigated Noise Levels (without Topo a VehicleType Leq Peak Hour Leq	and barrier at Day Le	t tenuation) q Evening	Leq I	light	Ldn	CI	VEL
Heavy Trucks: 82.99 -15 Unmitigated Noise Levels (without Topo a VehicleType Leq Peak Hour Leq Autos: 63.6	and barrier at Day Le 62.6	t tenuation) q Evening 59.2	Leq I	light 56.6	Ldn 64.3	C/ 3	VEL 64
Heavy Trucks: 82.99 -15 Unmitigated Noise Levels (without Topo VehicleType Leg Peak Hour Leg Autos: 63.6 Medium Trucks: 63.9	Day Leo 62.6 63.3	rtenuation) q Evening 59.2 56.7	Leq I	<i>light</i> 56.6 56.1	Ldn 64.	<i>Cl</i> 3 3	VEL 64
Heavy Trucks: 82.99 -18 Unmitigated Noise Levels (without Topo VehicleType Leq Peak Hour Leq Autos: 63.6 63.9 Medium Trucks: 68.7 68.7	and barrier at Day Le 62.6	t tenuation) q Evening 59.2	Leq I	light 56.6	Ldn 64.3	<i>Cl</i> 3 3	NEL 64. 70.
Heavy Trucks: 82.99 -15 Unmitigated Noise Levels (without Topo VehicleType Leg Peak Hour Leg Autos: 63.6 Medium Trucks: 63.9	Day Leo 62.6 63.3	rtenuation) q Evening 59.2 56.7	Leq I	<i>light</i> 56.6 56.1	Ldn 64.	C/ 3 3 0	NEL 64. 70.
Heavy Trucks: 82.99 -18 Unmitigated Noise Levels (without Topo VehicleType Leq Peak Hour Leq Autos: 63.6 63.9 Medium Trucks: 68.7 68.7	and barrier at Day Lee 62.6 63.3 67.7 69.9 feet)	ttenuation) q Evening 59.2 56.7 62.0 64.6	Leq I	<i>light</i> 56.6 56.1 62.6 64.3	Ldn 64. 64. 70. 71.	CI 3 3 9	NEL 64 64 70 72
Heavy Trucks: 82.99 -18 Unmitigated Noise Levels (without Topo VehicleType Leq Peak Hour Leq Autos: 63.6 63.9 Medium Trucks: 63.9 1000000000000000000000000000000000000	and barrier at Day Lee 62.6 63.3 67.7 69.9 feet)	ttenuation) q Evening 59.2 56.7 62.0 64.6 70 dBA	Leq I	light 56.6 56.1 62.6 64.3	Ldn 64. 70. 71. 60 dBA	C/ 3 3 9 55	VEL 64. 70. 72. dBA
Heavy Trucks: 82.99 -18 Unmitigated Noise Levels (without Topo VehicleType Leq Peak Hour Leq Autos: 63.6 63.9 Medium Trucks: 63.9 1000000000000000000000000000000000000	and barrier at Day Lee 62.6 63.3 67.7 69.9 feet)	ttenuation) q Evening 59.2 56.7 62.0 64.6	Leq I	<i>light</i> 56.6 56.1 62.6 64.3	Ldn 64. 64. 70. 71.	C/ 3 3 0 9 55	NEL 64. 70. 72.

	FHWA-RD)-77-108 HIGH	IWAY NC	ISE PREI		NODEL (S	9/12/20	021)		
Scenario: Road Name: Road Segment:	Clark St.	Rd.				t Name: 1 lumber: 1		/alley Com	merce C	
SITE SP	ECIFIC IN	PUT DATA						L INPUTS	5	
Highway Data				Site C	onditions	(Hard =	10, So	ft = 15)		
Average Daily Tra	affic (Adt):	10,368 vehicl	es				Autos:	15		
Peak Hour Pe	ercentage:	8.10%			Medium T	rucks (2 A	(xles):	15		
Peak Hou	r Volume:	840 vehicle	s		Heavy Tru	icks (3+ A	(xles):	15		
Vehic	le Speed:	40 mph		Vehic	le Mix					
Near/Far Lane	Distance:	12 feet			ehicleTyp	•	Dav	Evenina	Niaht	Daily
Site Data							76.6%		14.5%	86.56%
Barrio	er Heiaht:	0.0 feet			Medium 1	rucks:	83.3%	4.6%	12.1%	7.10%
Barrier Type (0-Wall		0.0			Heavy 1	rucks:	76.9%	5.2%	17.9%	6.34%
Centerline Dist.	· /	37.0 feet		Malaa	0		. (i.e. f.	- 41		
Centerline Dist. to	Observer:	37.0 feet		NOISE	Source E			et)		
Barrier Distance to	Observer:	0.0 feet		14-	Auto dium Truci		000 297			
Observer Height (Ab	ove Pad):	5.0 feet			avy Truci		297	Grade Adji	of month	0.0
Pad	Elevation:	0.0 feet		п	avy muci	15. 0.1	JU4	Graue Auji	Journeriu.	0.0
Road	Elevation:	0.0 feet		Lane	Equivaler	t Distanc	e (in f	'eet)		
Ro	ad Grade:	0.0%			Auto	os: 36.8	351			
	Left View:	-90.0 degre	es	Me	dium Truci	(s: 36.6	510			
R	light View:	90.0 degre	es	н	eavy Truci	(s: 36.6	534			
FHWA Noise Model	Calculation	5								
VehicleType	REMEL	Traffic Flow	Distan	ce Fir	ite Road	Fresn	el	Barrier Atte	n Ben	m Atten
Autos:	66.51	-2.71		1.88	-1.20		-4.56	0.0		0.000
Medium Trucks:	77.72	-13.57		1.93	-1.20		-4.87	0.0		0.000
Heavy Trucks:	82.99	-14.06		1.92	-1.20		-5.61	0.0	00	0.000
Unmitigated Noise L	evels (with	out Topo and	barrier a	ttenuatio	n)					
VehicleType Le		r Leg Da	/ Le	q Evening	Leq	Night		Ldn		IEL
	eq Peak Hou							65.2		65.6
Autos:	64	.5	63.5	-	0.1	57.5				
Autos: Medium Trucks:	64 64	.5 .9	64.2	5	7.7	57.1		65.2		
Autos: Medium Trucks: Heavy Trucks:	64 64 69	.5 .9 .7	64.2 68.6	5	7.7 2.9	57.1 63.6		65.2 70.9		71.1
Autos: Medium Trucks:	64 64	.5 .9 .7	64.2	5	7.7	57.1		65.2		71.1
Autos: Medium Trucks: Heavy Trucks:	64 64 69 71	.5 .9 .7 .8	64.2 68.6 70.8	5 6: 6:	7.7 2.9 5.5	57.1 63.6 65.2		65.2 70.9 72.8		71.1
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 64 69 71	.5 .9 .7 .8	64.2 68.6 70.8	5 6 6 70 dBA	7.7 2.9 5.5 65	57.1 63.6 65.2 dBA		65.2 70.9 72.8		65.4 71.1 73.0 dBA
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 64 69 71	.5 .9 .7 .8 ontour (in feet	64.2 68.6 70.8	5 6: 70 dBA	7.7 2.9 5.5	57.1 63.6 65.2		65.2 70.9 72.8		71.1

		77-108 HIGHWA								
	o: EAC+P							alley Corr	imerce C	
	e: Clark St.				Job Nu	mber: 1	5091			
Road Segmer	nt: s/o Cajalco F	ld.								
	SPECIFIC INF	UT DATA							S	
Highway Data				Site Con	ditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	0,434 vehicles					utos:	15		
Peak Hour	Percentage:	8.10%			dium Truo			15		
	our Volume:	845 vehicles		He	avy Truck	(3+ A	xles):	15		
	hicle Speed:	40 mph		Vehicle I	Nix					
Near/Far La	ne Distance:	12 feet		Vehi	cleType	L	Day	Evening	Night	Daily
Site Data					Au	itos: T	76.6%	8.9%	14.5%	86.65
Bar	rier Height:	0.0 feet		Me	edium Tru	icks: 8	33.3%	4.6%	12.1%	7.05
Barrier Type (0-W		0.0		ŀ	leavy Tru	icks: 7	76.9%	5.2%	17.9%	6.30
Centerline Dis	. ,	37.0 feet		Noise So	urce Ele	vations	(in fo	of)		
Centerline Dist.	to Observer:	37.0 feet		NUISE 30	Autos:			eij		
Barrier Distance	to Observer:	0.0 feet		Mediu	n Trucks:					
Observer Height (Above Pad):	5.0 feet			y Trucks:			Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet					-			
	ad Elevation:	0.0 feet		Lane Equ				eet)		
F	Road Grade:	0.0%			Autos:					
	Left View:	-90.0 degrees			n Trucks:					
	Right View:	90.0 degrees		Heav	y Trucks:	36.6	34			
FHWA Noise Mode	al Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el l	Barrier Att	en Ber	m Atten
Autos:	66.51	-2.68	1	.88	-1.20	-	4.56	0.0	000	0.00
Medium Trucks:	77.72	-13.57	1	.93	-1.20	-	4.87	0.0	000	0.00
Heavy Trucks:	82.99	-14.06	1	.92	-1.20	-	5.61	0.0	000	0.00
Unmitigated Noise	Levels (withou	it Topo and bai	rier atte	enuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq	Evening	Leq N	light		Ldn	CI	VEL
Autos:	64.5	63.	5	60.1		57.5		65.3	3	65.
Medium Trucks:	64.9		-	57.7		57.1		65.2	-	65
Heavy Trucks:	69.7			62.9		63.6		70.9		71
Vehicle Noise:	71.8	70.	9	65.5		65.2		72.8	3	73
Centerline Distanc	e to Noise Con	tour (in feet)								
				0 dBA	65 di	BA	6	0 dBA	55	dBA
		Ldr		57		123		264		56
		CNEI		59		127		273		58

Thursday, July 27, 2023

FHWA-	RD-77-108 HIGH	IWAY NO	DISE PRE	DICTION	IODEL (9)	12/2021)			
Scenario: HY						ead Valley	Comme	erce C	
Road Name: Clark St.				Job N	umber: 1	5091			
Road Segment: s/o Cajale	co Rd.								
SITE SPECIFIC	INPUT DATA					ODEL IN			
Highway Data			Site C	onditions	•	0, Soft = 1	<i>'</i>		
Average Daily Traffic (Adt):		es				utos: 15			
Peak Hour Percentage:				Medium Tr		,			
Peak Hour Volume:		s		Heavy Tru	cks (3+ A)	des): 15	5		
Vehicle Speed:			Vehic	le Mix					
Near/Far Lane Distance:	12 feet			ehicleType	e D	ay Ever	ning Ni	ght	Daily
Site Data					Autos: 7	6.6% 8	.9% 1	4.5%	86.56%
Barrier Height:	0.0 feet			Medium T	rucks: 8	3.3% 4	.6% 1	2.1%	7.10%
Barrier Type (0-Wall, 1-Berm).				Heavy T	rucks: 7	6.9% 5	.2% 1	7.9%	6.34%
Centerline Dist. to Barrier.									
Centerline Dist. to Observer.	37.0 feet		NOISE	Source E		• /			
Barrier Distance to Observer.	0.0 feet			Auto	0.01				
Observer Height (Above Pad)	5.0 feet			dium Truck			le Adjust	mont	0.0
Pad Elevation	0.0 feet		н	eavy Truck	s: 8.00	ją Grau	e Aujusi	ment.	0.0
Road Elevation:	0.0 feet		Lane	Equivalen	Distance	e (in feet)			
Road Grade:	0.0%			Auto	s: 36.8	51			
Left View:	-90.0 degre	es	Me	dium Truck	s: 36.6	10			
Right View.	90.0 degre	es	н	eavy Truck	s: 36.6	34			
FHWA Noise Model Calculatio	ons		1						
VehicleType REMEL	Traffic Flow	Distar	nce Fir	ite Road	Fresne	l Barrie	er Atten	Berm	n Atten
Autos: 66.5	1 -2.30		1.88	-1.20		4.56	0.000		0.000
Medium Trucks: 77.7	2 -13.16		1.93	-1.20		4.87	0.000		0.000
Heavy Trucks: 82.9	9 -13.65		1.92	-1.20	-	5.61	0.000		0.000
Unmitigated Noise Levels (wi				,					
VehicleType Leq Peak H			eq Evening		Night	Ldn		CN	
	64.9	63.9	-	0.5	57.9		65.6		66.0
	65.3	64.6	-	3.1	57.5		65.6		65.8
	70.1	69.0	-	3.3	64.0		71.4		71.
Vehicle Noise:	72.2	71.3	6	5.9	65.7		73.2		73.4
Centerline Distance to Noise	Contour (in feet)					Т		
			70 dBA	65	dBA	60 dB/	4	55 d	
		Ldn: NEL:		61 53	131 135		281 291		606 626

	FHWA-RD	-77-108 HIGH	WAY N	IOISE	PREDIC		MODEL (9/12/20	021)		
Scenario: H Road Name: (Road Segment: s	Clark St.	Rd.					t Name: I lumber: 1		/alley Com	merce C	;
SITE SPI	CIFIC IN	PUT DATA				1	NOISE	IODE	L INPUTS	5	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Trai	fic (Adt):	11,470 vehicle	s				,	Autos:	15		
Peak Hour Per	centage:	8.10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak Hour	Volume:	929 vehicles	5		He	avy Tru	cks (3+ A	xles):	15		
Vehicle	e Speed:	40 mph		1	Vehicle I	Nix					
Near/Far Lane L	Distance:	12 feet		-		cleType	9	Day	Evening	Night	Daily
Site Data				-				76.6%		14.5%	
Barrio	·Heiaht:	0.0 feet			Me	edium T	rucks:	83.3%	4.6%	12.1%	7.06%
Barrier Type (0-Wall,		0.0			ŀ	leavy T	rucks:	76.9%	5.2%	17.9%	6.30%
Centerline Dist. to	,	37.0 feet			Naiaa Ca	uree E	levations	lin fe	at l		
Centerline Dist. to C	bserver:	37.0 feet		-	voise So	Auto			eet)		
Barrier Distance to C	bserver:	0.0 feet				Auto n Truck		000 297			
Observer Height (Abo	ve Pad):	5.0 feet				n Truck v Truck		004	Grade Adj	ustment	. 0 0
Pad E	levation:	0.0 feet			neav	у писк	.5. 0.0	704	Oracio Auj	usument	0.0
Road E	levation:	0.0 feet		L	Lane Equ	uivalen	t Distanc	e (in i	feet)		
Roa	d Grade:	0.0%				Auto		351			
-	eft View:	-90.0 degree				n Truck					
Rig	ght View:	90.0 degree	:S		Heav	y Truck	s: 36.0	534			
FHWA Noise Model C	alculations	:									
	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Atte		m Atten
Autos:	66.51	-2.27		1.88	-	-1.20		-4.56	0.0		0.00
Medium Trucks:	77.72	-13.16		1.93		-1.20		-4.87	0.0		0.00
Heavy Trucks:	82.99	-13.65		1.92	2	-1.20		-5.61	0.0	00	0.00
Unmitigated Noise Le											
	Peak Hou			Leq Ev	vening	Leq	Night		Ldn		NEL
Autos:	64.	-	63.9		60.6		57.9		65.7		66.
Medium Trucks:	65.	-	64.6		58.1		57.5		65.6		65.
Heavy Trucks:	70.	-	69.0		63.3		64.0		71.4		71.
Vehicle Noise:	72.	2	71.3		66.0		65.7		73.2	<u>.</u>	73.
Centerline Distance to	Noise Co	ntour (in feet)		=0							
				70 a		65	dBA	6	60 dBA	55	dBA
			Ldn: VEL:		61 63		131 135		281 291		606 627
		CI	VEL:		63		135		291		627

FHW	4-RD-77	7-108 HIGH	IWAY	NOISE	PREDIC		ODEL (9)/12/20)21)		
Scenario: E Road Name: Seaton Road Segment: n/o Caj		I.					Name: N umber: 1		/alley Com	merce C	;
SITE SPECIFI	C INPU	JT DATA							L INPUTS	3	
Highway Data					Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic (Ad	t):	656 vehicle	es					Autos:	15		
Peak Hour Percentag	e: 8	.10%			Me	dium Tri	icks (2 A	xles):	15		
Peak Hour Volum	e:	53 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vehicle Spee	d:	45 mph		F	Vehicle I	Mix					
Near/Far Lane Distand	e:	36 feet		-		icleType		Dav	Evening	Night	Daily
Site Data					10/1			76.6%	8.9%	14.5%	
Barrier Heigi		0.0 feet			Me	edium Ti	ucks:	83.3%	4.6%	12.1%	
Barrier Type (0-Wall, 1-Berr		0.0			ŀ	leavy T		76.9%		17.9%	
Centerline Dist. to Barri	·	50.0 feet		_							
Centerline Dist. to Observ		50.0 feet		-	Noise So				et)		
Barrier Distance to Observ		0.0 feet				Auto		000			
Observer Height (Above Pa		5.0 feet				n Truck		297			
Pad Elevatio	·	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Adj	ustment	: 0.0
Road Elevation	m:	0.0 feet			Lane Equ	uivalent	Distanc	e (in f	eet)		
Road Grad	le: 0	0.0%				Auto	s: 46.9	915			
Left Vie	w: -	90.0 degre	es		Mediur	n Truck	s: 46.7	726			
Right Vie	w: 9	90.0 degre	es		Heav	y Truck	s: 46.7	744			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	. Tr	affic Flow		stance	Finite		Fresn	-	Barrier Atte	en Ber	m Atten
	3.46	-15.21		0.3		-1.20		-4.65	0.0		0.000
	9.45	-26.07		0.3		-1.20		-4.87	0.0		0.000
Heavy Trucks: 84	1.25	-26.56		0.3	34	-1.20		-5.43	0.0	00	0.000
Unmitigated Noise Levels (vithout	Topo and	barri	er atter	nuation)						
VehicleType Leq Peak		Leq Day		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	52.4		51.3		48.0		45.3		53.1		53.4
Medium Trucks:	52.5		51.8		45.3		44.7		52.8		53.0
Heavy Trucks:	56.8		55.8		50.1		50.7		58.1		58.3
Vehicle Noise:	59.2		58.3		53.0		52.6		60.2		60.4
Centerline Distance to Nois	e Conto	our (in feet)								
			Т	70	dBA	65	dBA	6	0 dBA	55	dBA
			L			00					
			Ldn: NEL:		11		24 25	1	51 53		111 115

	FHWA-RD	-77-108 HIGHW	AY NO	ISE PREDIO		IODEL (9/12/2	021)		
Road Nam	io: E+P ne: Seaton Av. nt: n/o Cajalco I	Rd.				t Name: I lumber:		/alley Corr	imerce C	;
SITE	SPECIFIC IN	PUT DATA			1	NOISE	IODE		S	
Highway Data				Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	727 vehicles					Autos:	15		
Peak Hour	Percentage:	8.10%		Me	edium Tr	rucks (2 A	Axles):	15		
	lour Volume:	59 vehicles		He	eavy Tru	cks (3+ A	Axles):	15		
	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		Veł	icleType	e	Day	Evening	Night	Daily
Site Data						Autos:	76.6%	8.9%	14.5%	87.88%
Ba	rrier Height:	0.0 feet		M	ledium T	rucks:	83.3%	4.6%	12.1%	6.40%
Barrier Type (0-W		0.0			Heavy T	rucks:	76.9%	5.2%	17.9%	5.72%
Centerline Di	st. to Barrier:	50.0 feet		Noise S	ource F	levation	s (in fe	pet)		
Centerline Dist.	to Observer:	50.0 feet			Auto		000			
Barrier Distance		0.0 feet		Mediu	m Truck		297			
Observer Height (,	5.0 feet		Hea	vy Truck	s: 8.	004	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet		Laws Fr		6 Distant	(in -			
	ad Elevation:	0.0 feet		Lane Eq	Auto	t Distand	915	reet)		
	Road Grade: Left View:	0.0% -90.0 degrees		Madie	m Truck		915 726			
	Right View:	90.0 degrees			vy Truck		744			
FHWA Noise Mode	ol Calculations									
VehicleType	REMEL	Traffic Flow	Distand	e Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	-14.70		0.31	-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-26.07		0.34	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-26.56		0.34	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise										
VehicleType	Leq Peak Hour			q Evening		Night		Ldn		NEL
Autos:	52.		1.8	48.5		45.9		53.6		54.
Medium Trucks:	52. 56.		1.8 5.8	45.3 50.1		44.7 50.7		52.8 58.1		53.
Heavy Trucks: Vehicle Noise:	59.		5.8 8.4	50.1		50.7		58. 60.3		58. 60.
Centerline Distand	ce to Noise Co	ntour (in feet)								
Distance				70 dBA	65	dBA	6	0 dBA	55	dBA
		1	dn:	11		24		52	· · · · ·	113

Thursday, July 27, 2023

			E PREDIC			/12/20	21)		
Scenario: EAC Road Name: Seaton Av. Road Segment: n/o Cajalco	Rd.				Vame: N mber: 1		alley Com	merce (;
SITE SPECIFIC IN	PUT DATA			N	DISE M	ODEL	. INPUT	5	
Highway Data			Site Con	ditions (Hard = 1	10, Soi	ft = 15)		
Average Daily Traffic (Adt):	696 vehicles				A	utos:	15		
Peak Hour Percentage:	8.10%		Med	dium Tru	cks (2 A.	xles):	15		
Peak Hour Volume:	56 vehicles		Hea	avy Truc	ks (3+ A.	xles):	15		
Vehicle Speed:	45 mph		Vehicle N	lix					
Near/Far Lane Distance:	36 feet			cleType	[Day	Evening	Night	Daily
Site Data						6.6%	8.9%	14.5%	
Barrier Height:	0.0 feet		Me	dium Tru	icks: 8	33.3%	4.6%	12.1%	7.10%
Barrier Type (0-Wall, 1-Berm):	0.0		H	leavy Tri	icks: 7	6.9%	5.2%	17.9%	6.349
Centerline Dist. to Barrier:	50.0 feet		Noise So	uree Ele	votiona	lin fo	a.#1		
Centerline Dist. to Observer:	50.0 feet		Noise 30	Autos		•	e()		
Barrier Distance to Observer:	0.0 feet		Madium	n Trucks	0.0				
Observer Height (Above Pad):	5.0 feet			v Trucks			Grade Adj	ustment	. 0 0
Pad Elevation:	0.0 feet		neav	y mucks	. 0.0	04	orade Auj	usunem	. 0.0
Road Elevation:	0.0 feet		Lane Equ	ivalent	Distanc	e (in fe	eet)		
Road Grade:	0.0%			Autos					
Left View:	-90.0 degrees			n Trucks					
Right View:	90.0 degrees		Heav	y Trucks	46.7	44			
FHWA Noise Model Calculation	5								
VehicleType REMEL	Traffic Flow D	istance	Finite	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos: 68.46	-14.95		31	-1.20		4.65	0.0		0.00
Medium Trucks: 79.45	-25.82		34	-1.20		4.87		000	0.00
Heavy Trucks: 84.25	-26.31	0.	34	-1.20	-	5.43	0.0	000	0.00
Unmitigated Noise Levels (with									
VehicleType Leq Peak Hou			Evening	Leq N	J		Ldn		NEL
Autos: 52			48.2		45.6		53.4		53.
Medium Trucks: 52			45.6		45.0		53.1		53.
Heavy Trucks: 57 Vehicle Noise: 59			50.4		51.0		58.4		58. 60.
		1	53.3		52.9		60.4	ł	60.
Centerline Distance to Noise Co	ntour (in feet)	70	dBA	65 d		-) dBA	FF	dBA
	Ldn:		ава 12	000	ва 25	00	<i>54</i>	35	ава 115
	CNEL:		12		25		55		119
	CNLL.		12		20		55		113

	FHWA-RD	-77-108 HIGH	WAY NC	ISE PRED		MODEL (S	9/12/20	021)		
Road Nam	o: EAC+P e: Seaton Av. nt: n/o Cajalco	Rd.				t Name: N lumber: 1		/alley Com	merce C	;
	SPECIFIC IN	PUT DATA						L INPUTS	5	
Highway Data				Site Co	onditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	767 vehicle	es				Autos:	15		
	Percentage:	8.10%			fedium Tr					
	our Volume:	62 vehicle	6	F	leavy Tru	cks (3+ A	(xles):	15		
	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	36 feet		Ve	hicleType		Day	Evening	Night	Daily
Site Data						Autos:	76.6%	8.9%	14.5%	87.819
Bar	rier Heiaht:	0.0 feet		1	Medium T	rucks:	83.3%	4.6%	12.1%	6.44
Barrier Type (0-W		0.0			Heavy T	rucks:	76.9%	5.2%	17.9%	5.759
Centerline Dis	st. to Barrier:	50.0 feet		Noiso	Source E	lovation	in fr	of		
Centerline Dist.	to Observer:	50.0 feet		140/36	Auto		200	eel)		
Barrier Distance	to Observer:	0.0 feet		Mod	ium Truck		297			
Observer Height (J	Above Pad):	5.0 feet			avy Truck		004	Grade Adj	ustment	· 0 0
Pa	ad Elevation:	0.0 feet								
	ad Elevation:	0.0 feet		Lane E	quivalen			feet)		
F	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degre			um Truck					
	Right View:	90.0 degree	2S	He	avy Truck	s: 46.7	744			
FHWA Noise Mode										
VehicleType	REMEL	Traffic Flow	Distan		e Road	Fresn	-	Barrier Atte		m Atten
Autos:	68.46	-14.47		0.31	-1.20		-4.65	0.0		0.00
Medium Trucks:	79.45	-25.82		0.34	-1.20		-4.87	0.0		0.00
Heavy Trucks:	84.25	-26.31		0.34	-1.20		-5.43	0.0	100	0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou			ttenuation g Evening		Night		Ldn	0	NEL
Autos	53		52.1	48.		46.1		53.8		54.
Medium Trucks:	52		52.1	45		45.0		53.1		53
Heavy Trucks:	57		56.1	50.	-	51.0		58.4		58
Vehicle Noise:	59		58.6	53.		53.0		60.5		60.
Centerline Distanc	e to Noise Co	ntour (in feet)							
Centerline Distanc	e to Noise Co	ntour (in feet		70 dBA	65	dBA	6	0 dBA	55	dBA
Centerline Distanc	e to Noise Co	ntour (in feet	Ldn:	70 dBA 12		dBA 25	e	60 dBA 54	55	dBA 117

	FHWA-RD	0-77-108 HIGH	WAY N	OISE	PREDIC		IODEL (9	/12/2	021)		
Scenari Road Nam Road Segmer	e: Seaton Av.	Rd.					Name: N lumber: 1		/alley Com	merce (>
SITE S	SPECIFIC IN	PUT DATA							L INPUTS	3	
Highway Data				S	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	766 vehicle	es					Autos:	15		
Peak Hour	Percentage:	8.10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	62 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		V	/ehicle I	Mix					
Near/Far Lar	ne Distance:	36 feet				icleType		Dav	Evening	Niaht	Dailv
Site Data								76.6%	•	14.5%	
Bar	rier Height:	0.0 feet			Me	edium T	rucks:	83.3%	4.6%	12.1%	7.109
Barrier Type (0-W	•	0.0			ŀ	leavy T	rucks:	76.9%	5.2%	17.9%	6.349
Centerline Dis	. ,	50.0 feet						6 F	- 41		
Centerline Dist. I	o Observer:	50.0 feet		N	voise so	Auto	evations		et)		
Barrier Distance t	o Observer:	0.0 feet				Auto n Truck					
Observer Height (J	Above Pad):	5.0 feet				т тrucк v Truck			Grade Adj	ustmont	
Pa	d Elevation:	0.0 feet			neav	y muck	s. o.u	104	Grade Auj	usunen	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	t Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 46.9	915			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 46.7	26			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 46.7	'44			
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	e/	Barrier Atte	en Bei	rm Atten
Autos:	68.46	-14.54		0.31		-1.20		4.65	0.0	00	0.00
Medium Trucks:	79.45	-25.40		0.34	4	-1.20		4.87	0.0	00	0.00
Heavy Trucks:	84.25	-25.89		0.34	4	-1.20		5.43	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	attenı	uation)						
	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:	53		52.0		48.7		46.0		53.8		54.
Medium Trucks:	53		52.5		46.0		45.4		53.5		53.
Heavy Trucks:	57		56.5		50.8		51.4		58.8		59.
Vehicle Noise:	59	.9	58.9		53.7		53.3		60.9)	61.
Centerline Distanc	e to Noise Co	ontour (in feet,)								
				70 d	1BA	65	dBA	6	60 dBA	55	dBA
			Ldn: NEL:		12 13		26 27		57 59		123 127

Scenario: HY+P				Project Na	me Mead	Valley Con	merce (
Road Name: Seaton Av					ber: 15091			·			
Road Segment: n/o Cajalco				000 110/1	20. 1000						
SITE SPECIFIC II	IPUT DATA		NOISE MODEL INPUTS								
Highway Data			Site Con	ditions (Ha	ard = 10, S	oft = 15)					
Average Daily Traffic (Adt):	837 vehicles				Autos	: 15					
Peak Hour Percentage:	8.10%		Me	dium Truck	s (2 Axles)	: 15					
Peak Hour Volume:	68 vehicles		Hei	avy Trucks	(3+ Axles)	: 15					
Vehicle Speed:	45 mph	ŀ	Vehicle N	lix							
Near/Far Lane Distance:	36 feet	Ē	Vehi	cleType	Day	Evening	Night	Daily			
Site Data				Auto	os: 76.69	6 8.9%	14.5%	87.71			
Barrier Height:	0.0 feet		Me	edium Truc	ks: 83.39	6 4.6%	12.1%	6.499			
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Truc	ks: 76.9	6 5.2%	17.9%	5.809			
Centerline Dist. to Barrier:	50.0 feet	-	Noise So	urce Eleva	ations (in t	feet)					
Centerline Dist. to Observer:	50.0 feet	ŀ		Autos:	0.000						
Barrier Distance to Observer:	0.0 feet		Mediur	n Trucks:	2.297						
Observer Height (Above Pad):	5.0 feet		Heav	y Trucks:	8.004	Grade Ad	iustment	: 0.0			
Pad Elevation:	0.0 feet		Long E-	ukualant Di	atoneo (!	faati					
Road Elevation: Road Grade:	0.0 feet 0.0%	-	Lane Equ	ivalent Di Autos:	46.915	leelj					
Road Grade: Left View:	0.0% -90.0 degrees		Mediur	n Trucks:	46.915						
Right View:	90.0 degrees			y Trucks:	46.744						
right non.	50.0 dog.000			,							
FHWA Noise Model Calculation						_					
VehicleType REMEL		listance	Finite		Fresnel	Barrier Att		m Atten			
Autos: 68.46		0.3		-1.20	-4.65		000	0.00			
Medium Trucks: 79.45 Heavy Trucks: 84.25		0.3		-1.20 -1.20	-4.87 -5.43		000	0.00			
Heavy Trucks: 84.25	-20.89	0.3	54	-1.20	-5.43	0.0	000	0.00			
Unmitigated Noise Levels (with		i	,								
VehicleType Leq Peak Ho			vening	Leq Nig		Ldn		NEL			
	3.5 52.4 3.2 52.5		49.1		46.5	54. 53.	-	54. 53.			
	3.2 52.5 7.5 56.5		46.0 50.8		45.4 51.4	53.		53. 59.			
			53.8		53.4	60.9		61			
		,	55.0		00.4	00.	,	01.			
Centerline Distance to Noise C	ontour (in feet)	70	dBA	65 dB/	4	60 dBA	55	dBA			
	Ldn.		<i>ава</i> 12	00 <i>aB</i> /	27	<i>60 ав</i> А 58		<i>ав</i> я 12			
	Lun	-	12		21	58		123			

Thursday, July 27, 2023

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9	/12/2	021)			
Scenario	E				Project Name: Mead Valley Commerce C							
Road Name	Seaton Av.					Job N	umber: 1	5091				
Road Segment	: s/o Cajalco	Rd.										
	PECIFIC IN	PUT DATA							L INPUTS	;		
Highway Data				3	Site Con	ditions	(Hard = 1	10, S	oft = 15)			
Average Daily T	raffic (Adt):	1,398 vehicle	s				A	utos	15			
Peak Hour P	ercentage:	8.10%					ucks (2 A					
Peak Ho	ur Volume:	113 vehicles			Hea	avy Truo	cks (3+ A	xles).	15			
Vehi	icle Speed:	45 mph		5	Vehicle N	lix						
Near/Far Lane	e Distance:	36 feet		-		cleType		Dav	Evening	Night	Daily	
Site Data							Autos:	, 76.6%	6 8.9%	14.5%	86.56	
Barr	ier Height:	0.0 feet			Me	dium Ti	rucks: 8	33.3%	6 4.6%	12.1%	7.10	
Barrier Type (0-Wa		0.0			F	leavy Ti	rucks:	76.9%	5.2%	17.9%	6.34	
Centerline Dist	to Barrier:	50.0 feet			Noise So	urco El	ovations	(in f	oot)			
Centerline Dist. to	Observer:	50.0 feet		Ľ	140136 30	Auto:			een			
Barrier Distance to	Observer:	0.0 feet			Madium	n Truck	0.0					
Observer Height (A	bove Pad):	5.0 feet				y Truck			Grade Adju	istment [.]	0.0	
Pac	Elevation:	0.0 feet			Tieav	y muck	5. 0.0	04	0/000//00/0	ioumonia.	0.0	
Road	Elevation:	0.0 feet		1	Lane Equ	iivalent	Distanc	e (in	feet)			
Re	oad Grade:	0.0%				Auto		15				
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 46.7	26				
1	Right View:	90.0 degree	s		Heav	y Truck	s: 46.7	44				
FHWA Noise Model	Calculations	5										
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	e/	Barrier Atte	n Berr	m Atter	
Autos:	68.46	-11.92		0.3	1	-1.20	-	4.65	0.0	00	0.00	
Medium Trucks:	79.45	-22.79		0.3	4	-1.20	-	4.87	0.0	00	0.00	
Heavy Trucks:	84.25	-23.28		0.3	4	-1.20	-	5.43	0.0	00	0.00	
Unmitigated Noise	Levels (with	out Topo and	barrie	r atten	uation)							
VehicleType L	eq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	CN	IEL	
Autos:	55		54.6		51.3		48.6		56.4		56	
Medium Trucks:	55		55.1		48.6		48.0		56.1		56	
Heavy Trucks:	60		59.1		53.4		54.0		61.4		61	
Vehicle Noise:	62	.5	51.5		56.3		55.9	_	63.5		63	
Centerline Distance	to Noise Co	ntour (in feet)										
				70 0	dBA	65	dBA		60 dBA	55	dBA	
			dn:		18		40		85		18	
			IEL		10		40		88		19	

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9/12	/2021)		
	rio: E+P ne: Seaton Av.						Name: Mea umber: 150	d Valley Con 91	nmerce C	;
Road Segme	Road Segment: s/o Cajalco Rd.									
	SPECIFIC IN	IPUT DATA						DEL INPUT	S	
Highway Data				5	Site Con	ditions	(Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	2,869 vehicle	es				Auto	os: 15		
Peak Hour	Percentage:	8.10%			Me	dium Tri	ucks (2 Axle	s): 15		
Peak H	lour Volume:	232 vehicle	s		He	avy Tru	cks (3+ Axle	s): 15		
Ve	hicle Speed:	45 mph		1	/ehicle l	Mix				
Near/Far La	ne Distance:	36 feet		-		icleType	Day	Evening	Night	Daily
Site Data					VCIII		Autos: 76.0			82.00
					14	, edium Ti			12.1%	
	rrier Height:	0.0 feet 0.0				leavy Ti				13.51
Barrier Type (0-V	. ,				,	icavy n	uono. 10.	570 5.270	17.570	10.01
	st. to Barrier:	50.0 feet		٨	loise Sc	ource El	evations (in	i feet)		
Centerline Dist.		50.0 feet				Auto	s: 0.000			
Barrier Distance		0.0 feet			Mediui	m Truck	s: 2.297			
Observer Height	· ,	5.0 feet			Heav	y Truck	s: 8.004	Grade Ad	justment	: 0.0
-	ad Elevation:	0.0 feet			ana Ea	vivalant	Distance (i	in fact)		
	ad Elevation:	0.0 feet		-	ane Equ	Auto		n leelj		
	Road Grade:	0.0%			Madiu	Auto m Truck				
	Left View:	-90.0 degree				n Truck v Truck				
	Right View:	90.0 degree	es		neav	y muck	5. 40.744			
FHWA Noise Mod		-								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fresnel	Barrier Att		m Atter
Autos:		-9.04		0.31		-1.20	-4.6		000	0.0
Medium Trucks:		-21.65		0.34		-1.20	-4.8		000	0.0
Heavy Trucks:	84.25	-16.87		0.34	1	-1.20	-5.4	13 0.0	000	0.0
Unmitigated Nois										
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night	Ldn		NEL
Autos:	58		57.5		54.2		51.5	59.3		59
Medium Trucks:	56		56.3		49.7		49.1	57.3		57
Heavy Trucks:	66	-	65.5		59.8		60.4	67.		68
Vehicle Noise:	67	.6	66.6		61.2		61.2	68.	7	68
Centerline Distan	ce to Noise Co	ontour (in feet)						1 .	
			L	70 d		65	dBA	60 dBA		dBA
			Ldn:		41		88	190)	40
			NEL:		42		91	196		42

F	HWA-RD-	77-108 HIGH	WAY N	OISE	PREDIC	TION M	ODEL (9	/12/20)21)		
Scenario: EA Road Name: Se Road Segment: s/o	eaton Av.	Rd.					Name: N umber: 1		/alley Com	merce C	;
SITE SPEC	CIFIC INF	PUT DATA							L INPUTS	6	
Highway Data				S	ite Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffi	c (Adt):	1,484 vehicle	es					Autos:	15		
Peak Hour Perce	entage:	8.10%			Med	dium Tru	ucks (2 A	xles):	15		
Peak Hour V	olume:	120 vehicle	s		Hea	avy Truc	cks (3+ A	xles):	15		
Vehicle	Speed:	45 mph		1	ehicle N	liv					
Near/Far Lane Di	stance:	36 feet				cleType		Dav	Evening	Night	Daily
Site Data					VCIII			76.6%	•	14.5%	
Barrier I	loiaht.	0.0 feet			Me	edium Tr	rucks:	83.3%	4.6%	12.1%	7.10
Barrier Type (0-Wall, 1-		0.0			H	leavy Tr	rucks:	76.9%	5.2%	17.9%	6.34
Centerline Dist. to	,	50.0 feet									
Centerline Dist. to Ob		50.0 feet		^	loise So		evations		et)		
Barrier Distance to Ob	server:	0.0 feet				Auto: n Truck:		00			
Observer Height (Abov	e Pad):	5.0 feet						97 104	Grade Adj	untmont	0.0
Pad Ele	evation:	0.0 feet			neav	y Trucks	5. 0.0	104	Grade Auj	usunen.	0.0
Road Ele	evation:	0.0 feet		L	ane Equ	ıivalent	Distanc	e (in f	eet)		
Road	Grade:	0.0%				Autos	s: 46.9	915			
Lei	ft View:	-90.0 degre	es		Mediur	n Trucks	s: 46.7	26			
Righ	t View:	90.0 degre	es		Heav	y Trucks	s: 46.7	'44			
FHWA Noise Model Cal	culations										
VehicleType RE	MEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atter
Autos:	68.46	-11.66		0.31		-1.20		4.65	0.0	00	0.00
Medium Trucks:	79.45	-22.53		0.34		-1.20		4.87	0.0	00	0.00
Heavy Trucks:	84.25	-23.02		0.34	ļ	-1.20		-5.43	0.0	00	0.00
Unmitigated Noise Lev			barrier	attenı	uation)						
VehicleType Leq I	Peak Hour	Leq Day	/ L	.eq Ev	ening	Leq	Night		Ldn		VEL
Autos:	55.9	-	54.9		51.5		48.9		56.6		57
Medium Trucks:	56.1		55.4		48.8		48.3		56.4		56
Heavy Trucks:	60.4	-	59.4		53.6		54.3		61.7		61
Vehicle Noise:	62.7	7	61.8		56.5		56.2		63.7		63
Centerline Distance to	Noise Cor	ntour (in feet)								
				70 d		65 (dBA	6	i0 dBA	55	dBA
			Ldn: NEL:		19 20		41 43		89 92		19 19

FH	WA-RD-7	77-108 HIGHV	VAY NC	DISE F	PREDIC	TION N	NODEL (9/12/2	021)			
Scenario: EAC Road Name: Sea Road Segment: s/o (t Name: lumber:		Valley Com	imerce C	;			
SITE SPECI	FIC INP	UT DATA		NOISE MODEL INPUTS								
Highway Data				S	ite Cond	ditions	(Hard =	10, So	oft = 15)			
Average Daily Traffic	5					Autos:	15					
Peak Hour Percen	tage:	8.10%			Med	dium Ti	rucks (2 /	Axles):	15			
Peak Hour Vo		239 vehicles			Hea	avy Tru	icks (3+ /	Axles):	15			
Vehicle S		45 mph		V	ehicle N	lix						
Near/Far Lane Dist	ance:	36 feet			Vehi	cleTyp	e	Day	Evening	Night	Daily	
Site Data							Autos:	76.6%	8.9%	14.5%	82.149	
Barrier He	Barrier Height: 0.0 feet						rucks:	83.3%	4.6%	12.1%	4.56%	
Barrier Type (0-Wall, 1-B	erm):	0.0			H	leavy 1	rucks:	76.9%	5.2%	17.9%	13.30%	
Centerline Dist. to Ba	arrier:	50.0 feet		N	oise So	urce E	levation	s (in fe	eet)			
Centerline Dist. to Obse		50.0 feet				Auto		000				
Barrier Distance to Obse		0.0 feet			Mediun	n Truck	(s: 2.	297				
Observer Height (Above		5.0 feet			Heav	y Truck	(s: 8.	004	Grade Adj	iustment	: 0.0	
Pad Elev Road Elev		0.0 feet 0.0 feet		1	ano Fai	uivalon	t Distan	no (in	foot)			
Road G		0.0%		_	uno 240	Auto		915				
		-90.0 degrees	;		Mediun			726				
Right		90.0 degrees			Heav	y Trucł	(s: 46.	744				
FHWA Noise Model Calc	ulations											
VehicleType REN		Traffic Flow	Distan		Finite		Fresr	-	Barrier Atte		m Atten	
Autos:	68.46	-8.90		0.31		-1.20		-4.65		000	0.00	
Medium Trucks:	79.45	-21.45		0.34		-1.20		-4.87		000	0.00	
Heavy Trucks:	84.25	-16.81		0.34		-1.20		-5.43	0.0	000	0.00	
Unmitigated Noise Level								1				
VehicleType Leq Pe Autos:	ak Hour 58.7	Leq Day	7.6	eq Eve	ening 54.3	Leq	Night 51.7	7	Ldn 59.4		NEL 59.	
Medium Trucks:	57.1		7.0 6.5		49.9		49.3		57.5		59.	
Heavy Trucks:	66.6		5.6		59.9		60.5		67.9		68.	
Vehicle Noise:	67.6		6.6		61.3		61.3		68.8		69.	
Centerline Distance to N	oise Con	tour (in feet)										
				70 dł	BA	65	dBA	6	60 dBA	55	dBA	
			dn:		41		89		192		41	
			EL:		43		92		198		428	

Thursday, July 27, 2023

FHWA-F	RD-77-108 HIGH	WAY NO	ISE PREDIO		ODEL (9/1	12/2021)					
Scenario: HY				Project Name: Mead Valley Commerce C							
Road Name: Seaton A		Job Ni	imber: 15	091							
Road Segment: s/o Cajalo	o Rd.										
SITE SPECIFIC	INPUT DATA					DEL INPUTS	1				
Highway Data			Site Cor	ditions (Hard = 10), Soft = 15)					
Average Daily Traffic (Adt):	1,632 vehicle	s				<i>itos:</i> 15					
Peak Hour Percentage:	8.10%				cks (2 Axi	,					
Peak Hour Volume:		;	He	avy Truc	ks (3+ Axi	les): 15					
Vehicle Speed:			Vehicle	Mix							
Near/Far Lane Distance:	36 feet			icleType	Da	ay Evening	Night Daily				
Site Data						6.6% 8.9%	14.5% 86.56%				
Barrier Height:	0.0 feet		М	edium Tru	ucks: 83	3.3% 4.6%	12.1% 7.10%				
Barrier Type (0-Wall, 1-Berm):				Heavy Tru	ucks: 76	6.9% 5.2%	17.9% 6.34%				
Centerline Dist. to Barrier:				-							
Centerline Dist. to Observer:	50.0 feet		Noise Se		vations (
Barrier Distance to Observer:	0.0 feet			Autos	. 0.00	-					
Observer Height (Above Pad):	5.0 feet			m Trucks			ustment: 0.0				
Pad Elevation:	0.0 feet		Hea	/y Trucks	: 8.00	4 Grade Auju	Istinent. 0.0				
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)					
Road Grade:	0.0%			Autos	: 46.91	5					
Left View:	-90.0 degree	s	Mediu	m Trucks	46.72	:6					
Right View:	90.0 degree	s	Hea	/y Trucks	46.74	4					
FHWA Noise Model Calculatio	ns		1								
VehicleType REMEL	Traffic Flow	Distan		Road	Fresnel						
Autos: 68.4	• • • • • • • • •		0.31	-1.20		.65 0.0					
Medium Trucks: 79.4			0.34	-1.20		.87 0.0					
Heavy Trucks: 84.2	5 -22.60		0.34	-1.20	-5	.43 0.0	0.00				
Unmitigated Noise Levels (wit		-	,								
VehicleType Leq Peak H			q Evening	Leq N	•	Ldn	CNEL				
		55.3	51.9		49.3	57.1	57.				
		55.8	49.3		48.7	56.8	••••				
		59.8	54.1		54.7	62.1	62.				
		62.2	57.0		56.6	64.1	64.				
Centerline Distance to Noise	Contour (in feet)										
			70 dBA	65 d		60 dBA	55 dBA				
		Ldn:			44	94	203				
		IEL:	20 21		44	98	210				

	FHWA-RD	-77-108 HIGHV	VAY NO	ISE PREDIO		ODEL (9/1	2/2021)			
Scenario Road Name Road Segmen	e: Seaton Av.	Rd.	Project Name: Mead Valley Commerce C Job Number: 15091							
	PECIFIC IN	PUT DATA					DEL INPUT	s		
Highway Data				Site Cor	ditions (Hard = 10	, Soft = 15)			
Average Daily 7	raffic (Adt):	3,103 vehicles	3			Aut	tos: 15			
Peak Hour F	Percentage:	8.10%		Me	dium Tru	cks (2 Axle	es): 15			
Peak Ho	our Volume:	251 vehicles		He	avy Truc	ks (3+ Axle	es): 15			
Veh	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	36 feet			icleType	Da	evening	Night	Daily	
Site Data							.6% 8.9%	14.5%		
Bari	rier Heiaht:	0.0 feet		M	edium Tr	ucks: 83	.3% 4.6%	12.1%	4.699	
Barrier Type (0-Wa		0.0			Heavy Tr	ucks: 76	.9% 5.2%	17.9%	12.979	
Centerline Dis	t. to Barrier:	50.0 feet		Noico S	ourco Ek	evations (i	in foot)			
Centerline Dist. to	o Observer:	50.0 feet		10136 3	Autos		,			
Barrier Distance t	o Observer:	0.0 feet		14-15	m Trucks	. 0.000				
Observer Height (A	Above Pad):	5.0 feet			/y Trucks			iustment	. 0 0	
Pa	d Elevation:	0.0 feet		Tica	ry mucka	. 0.004	+ 0/440 / Kg	Juotinoni	. 0.0	
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)			
R	load Grade:	0.0%			Autos		5			
	Left View:	-90.0 degrees	3		m Trucks		-			
	Right View:	90.0 degrees	6	Hea	/y Trucks	46.744	4			
FHWA Noise Mode	I Calculations	;								
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Att	en Ber	m Atten	
Autos:	68.46	-8.68		0.31	-1.20	-4.		000	0.00	
Medium Trucks:	79.45	-21.13		0.34	-1.20	-4.	•••	000	0.00	
Heavy Trucks:	84.25	-16.71		0.34	-1.20	-5.	43 0.0	000	0.00	
Unmitigated Noise										
	Leq Peak Hou			q Evening	Leq I	•	Ldn		NEL	
Autos:	58. 57.		7.9 6.8	54.5 50.2		51.9 49.7	59.6	-	60. 58	
Medium Trucks:	÷		6.8 5.7	50.2 60.0			57.8 68.0			
Heavy Trucks: Vehicle Noise:	66. 67.		5.7 6.8	60.0		60.6 61.4	68.0	-	68 69	
			0.0	01.4		01.4	68.9	9	69.	
Centerline Distance	e to Noise Co	ntour (in feet)		70 dBA	65 0	(DA	60 dBA	FF	dBA	
		,	dn:	70 ава 42	030	ва 91	00 0BA 196		ава 42	
			an: EL:	42		91	203		42.	
		CN	<u></u> .	44		94	203		43	

FHWA-RD-77	-108 HIGHWAY	' NOISE	PREDIC	TION MC	DDEL (9)	12/2021)		
Scenario: E Road Name: Seaton Av. Road Segment: n/o Rider St.					Vame: M mber: 1	ead Valley Co 5091	mmerce	÷C
SITE SPECIFIC INPU	T DATA					ODEL INPUT	rs	
Highway Data		4	Site Cond	ditions (l	Hard = 1	0, Soft = 15)		
Average Daily Traffic (Adt): 1,	398 vehicles				Α	utos: 15		
Peak Hour Percentage: 8.	.10%		Med	dium True	cks (2 A)	<i>(les):</i> 15		
Peak Hour Volume: 1	13 vehicles		Hea	avy Truck	(3+ A)	<i>(les):</i> 15		
Vehicle Speed:	45 mph		Vehicle N	lix				
Near/Far Lane Distance:	36 feet	-		cleType	1	ay Evening	Nigh	Daily
Site Data			10/11			6.6% 8.9%		
Barrier Height:	0.0 feet		Me	dium Tru	icks: 8	3.3% 4.6%	12.1	% 7.10%
Barrier Type (0-Wall, 1-Berm):	0.0		h	leavy Tru	icks: 7	6.9% 5.2%	17.9	% 6.34%
	50.0 feet	_		-				
	50.0 feet	1	Noise So			. ,		
Barrier Distance to Observer:	0.0 feet			Autos:				
	5.0 feet			n Trucks:				
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.00	04 Grade A	ajustme	nt: 0.0
Road Elevation:	0.0 feet	1	Lane Equ	ivalent l	Distance	e (in feet)		
Road Grade: 0	.0%		-	Autos	46.9	15		
Left View: -9	0.0 degrees		Mediun	n Trucks:	46.7	26		
Right View: 9	0.0 degrees		Heav	y Trucks:	46.7	44		
FHWA Noise Model Calculations								
VehicleType REMEL Tra	affic Flow Di	stance	Finite	Road	Fresne		tten E	erm Atten
Autos: 68.46	-11.92	0.3	1	-1.20		4.65 0	.000	0.000
Medium Trucks: 79.45	-22.79	0.3		-1.20			.000	0.000
Heavy Trucks: 84.25	-23.28	0.3	4	-1.20	-	5.43 0	.000	0.000
Unmitigated Noise Levels (without								
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq N		Ldn		CNEL
Autos: 55.6	54.6		51.3		48.6	56		56.7
Medium Trucks: 55.8	55.1		48.6		48.0	56		56.3
Heavy Trucks: 60.1	59.1		53.4		54.0	61		61.6
Vehicle Noise: 62.5	61.5		56.3		55.9	63	.5	63.7
Centerline Distance to Noise Conto	our (in feet)							
	, . L	70 0	dBA	65 d		60 dBA	_	55 dBA
	Ldn:		18		40	8	-	184
	CNEL:		19		41	8	8	190

FHWA	A-RD-	77-108 HIGH	IWAY	NOISE	PREDIC		IODEL (9/12/2	021)					
Scenario: E+P Road Name: Seaton Road Segment: n/o Rid		Project Name: Mead Valley Commerce C Job Number: 15091												
SITE SPECIFIC	C INF	PUT DATA			NOISE MODEL INPUTS									
Highway Data				4	Site Con	ditions	(Hard =	10, So	oft = 15)					
Average Daily Traffic (Ad	ft):	1,885 vehicle	es					Autos:	15					
Peak Hour Percentag	je:	8.10%			Mee	dium Tr	ucks (2)	Axles):	15					
Peak Hour Volum	ne:	153 vehicle	s		Hei	avy Tru	cks (3+)	Axles):	15					
Vehicle Spee	ed:	45 mph		-	Vehicle N	Niv								
Near/Far Lane Distanc	e:	36 feet		H		cleType	•	Day	Evening	Night	Daily			
Site Data					10/11		Autos:	76.6%						
Barrier Height: 0.0 feet					Me	edium T	rucks:	83.3%	4.6%	12.1%	5.799			
Barrier Type (0-Wall, 1-Bern		0.0 1001			F	leavy T		76.9%						
Centerline Dist. to Barrie		50.0 feet		-										
Centerline Dist. to Observe		50.0 feet		1	Noise So				eet)					
Barrier Distance to Observe		0.0 feet				Auto		000						
Observer Height (Above Pag		5.0 feet			Mediur			297						
Pad Elevatio		0.0 feet			Heav	y Truck	(S. 8.	004	Grade Ad	ijustment	: 0.0			
Road Elevatio		0.0 feet		1	Lane Equ	ıivalen	t Distan	ce (in i	feet)					
Road Grad	le:	0.0%				Auto	s: 46.	915						
Left Vie	W.	-90.0 degree	es		Mediur	n Truck	s: 46.	726						
Right Vie	W.	90.0 degree	es		Heav	y Truck	is: 46.	744						
FHWA Noise Model Calcula				1										
VehicleType REMEL		Traffic Flow	Di	istance	Finite		Fresr		Barrier At		m Atten			
	8.46	-10.74		0.3		-1.20		-4.65		000	0.00			
	9.45	-22.37		0.3		-1.20		-4.87		000	0.00			
Heavy Trucks: 84	4.25	-20.00		0.3	4	-1.20		-5.43	0.	000	0.00			
Unmitigated Noise Levels (v		· ·			<u> </u>			1		-				
VehicleType Leq Peak				Leq E		Leq	Night		Ldn		NEL			
Autos:	56.8		55.8		52.5		49.8		57.		57			
Medium Trucks:	56.2		55.5		49.0		48.4		56.		56			
Heavy Trucks:	63.4		62.4		56.7		57.3		64.		64			
Vehicle Noise:	64.9	9	63.9		58.6		58.5	>	66.	0	66			
Centerline Distance to Nois	e Cor	ntour (in feet)	70			10.4				10.4			
			l	70 0		65	dBA		60 dBA		dBA			
			Ldn:		27		58		125		26			
		C	NEL:		28		60		129	9	27			

Thursday, July 27, 2023

FHWA	RD-77-108 HIGH	IWAY NOI	SE PREDIC	TION MO	DEL (9/12/	2021)			
Scenario: EAC Road Name: Seaton A Road Segment: n/o Ride	Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC	INPUT DATA					EL INPUTS			
Highway Data			Site Con	ditions (H	ard = 10, S	Soft = 15)			
Average Daily Traffic (Adt)	: 1,484 vehicl	es			Auto	s: 15			
Peak Hour Percentage	: 8.10%		Me	dium Truc	ks (2 Axles): 15			
Peak Hour Volume	: 120 vehicle	s	He	avy Truck	s (3+ Axles): 15			
Vehicle Speed	: 45 mph		Vehicle I	Mix					
Near/Far Lane Distance	: 36 feet			icleType	Day	Evening	Night Daily		
Site Data					tos: 76.6	•	14.5% 86.56		
Barrier Height	: 0.0 feet		M	edium Truc	ks: 83.3	% 4.6%	12.1% 7.10		
Barrier Type (0-Wall, 1-Berm)			1	Heavy True	ks: 76.9	% 5.2%	17.9% 6.349		
Centerline Dist. to Barrier			Noine Or			f = = 43			
Centerline Dist. to Observer	: 50.0 feet		Noise Sc		ations (in	reet)			
Barrier Distance to Observer	: 0.0 feet			Autos:	0.000				
Observer Height (Above Pad)	: 5.0 feet			m Trucks:	2.297	Crada Adiu	stment: 0.0		
Pad Elevation	0.0 feet		Heav	y Trucks:	8.004	Grade Adju	sunenii. 0.0		
Road Elevation	0.0 feet		Lane Eq	uivalent D	istance (ir	n feet)			
Road Grade	0.0%			Autos:	46.915				
Left View	-90.0 degre	es	Mediu	m Trucks:	46.726				
Right View	90.0 degre	es	Heav	y Trucks:	46.744				
FHWA Noise Model Calculati	ons		1						
VehicleType REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atter	n Berm Atten		
Autos: 68.	46 -11.66		0.31	-1.20	-4.6	5 0.00	0.00		
Medium Trucks: 79.	45 -22.53		0.34	-1.20	-4.8	7 0.00	0.00		
Heavy Trucks: 84.	25 -23.02		0.34	-1.20	-5.4	3 0.00	0.00		
Unmitigated Noise Levels (w	ithout Topo and	barrier at	tenuation)						
VehicleType Leq Peak H			evening	Leq Ni		Ldn	CNEL		
Autos:	55.9	54.9	51.5		48.9	56.6	57		
Medium Trucks:	56.1	55.4	48.8		48.3	56.4	56		
Heavy Trucks:	60.4	59.4	53.6		54.3	61.7	61		
Vehicle Noise:	62.7	61.8	56.5		56.2	63.7	63		
Centerline Distance to Noise	Contour (in feet	,							
		3	70 dBA	65 dE	A	60 dBA	55 dBA		
		Ldn: NEL:	19 20		41 43	89 92	19 19		

FHWA-RD-77-108 HIGHWA	AY NOISE	PREDIC	TION MC	DEL (9	/12/20)21)		
Scenario: EAC+P						/alley Com	merce C)
Road Name: Seaton Av.			Job Nu	mber: 1	5091			
Road Segment: n/o Rider St.								
SITE SPECIFIC INPUT DATA		0.44					6	
Highway Data	2	Site Conc	titions (F		· ·	,		
Average Daily Traffic (Adt): 1,971 vehicles			lium Truc		utos:	15 15		
Peak Hour Percentage: 8.10%						15		
Peak Hour Volume: 160 vehicles		Hea	avy Truck	(S (3+ A	xies):	15		
Vehicle Speed: 45 mph	١	Vehicle M	lix					
Near/Far Lane Distance: 36 feet		Vehic	cleType	l	Day	Evening	Night	Daily
Site Data			AL	itos:	76.6%	8.9%	14.5%	84.33
Barrier Height: 0.0 feet		Me	dium Tru	icks: 8	33.3%	4.6%	12.1%	5.84
Barrier Type (0-Wall, 1-Berm): 0.0		н	leavy Tru	icks:	76.9%	5.2%	17.9%	9.83
Centerline Dist. to Barrier: 50.0 feet	,	Noise So	urce Ele	vations	(in fe	ef)		
Centerline Dist. to Observer: 50.0 feet	-	10/30 000	Autos:			01/		
Barrier Distance to Observer: 0.0 feet		Medium	1 Trucks:	0.0				
Observer Height (Above Pad): 5.0 feet			/ Trucks: / Trucks:			Grade Adj	ustment	.00
Pad Elevation: 0.0 feet					•			
Road Elevation: 0.0 feet	1	Lane Equ				ieet)		
Road Grade: 0.0%			Autos:					
Left View: -90.0 degrees			n Trucks:					
Right View: 90.0 degrees		Heavy	/ Trucks:	46.7	'44			
FHWA Noise Model Calculations								
	Distance	Finite F		Fresne		Barrier Atte		m Atter
Autos: 68.46 -10.55	0.31		-1.20		4.65	0.0		0.00
Medium Trucks: 79.45 -22.14	0.34		-1.20		4.87	0.0		0.00
Heavy Trucks: 84.25 -19.88	0.34	4	-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise Levels (without Topo and bar								
VehicleType Leq Peak Hour Leq Day	Leg Ev		Leq N	•		Ldn		NEL
Autos: 57.0 56.	-	52.7		50.0		57.8		58
Medium Trucks: 56.4 55.	-	49.2		48.7		56.8		57
Heavy Trucks: 63.5 62.	-	56.8		57.4		64.8		65
Vehicle Noise: 65.0 64.	.1	58.7		58.6		66.1		66
Centerline Distance to Noise Contour (in feet)								dBA
	70 a		65 dl		6	0 dBA	55	
Centerline Distance to Noise Contour (in feet) Ldi CNEI	n:	1BA 28 28	65 dl	BA 59 61	6	128 132	55	ава 27 28

FHWA-RD-77-108 HIGHWAY N	OISE PREDICTION MODEL (9/12/2021)
Scenario: HY Road Name: Seaton Av. Road Segment: n/o Rider St.	Project Name: Mead Valley Commerce C Job Number: 15091
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 1,632 vehicles	Autos: 15
Peak Hour Percentage: 8.10%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 132 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 36 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 76.6% 8.9% 14.5% 86.56%
Barrier Height: 0.0 feet	Medium Trucks: 83,3% 4,6% 12,1% 7,10%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 76,9% 5,2% 17,9% 6,34%
Centerline Dist. to Barrier: 50.0 feet	
Centerline Dist. to Observer: 50.0 feet	Noise Source Elevations (in feet)
Barrier Distance to Observer: 0.0 feet	Autos: 0.000
Observer Height (Above Pad): 5.0 feet	Medium Trucks: 2.297
Pad Elevation: 0.0 feet	Heavy Trucks: 8.004 Grade Adjustment: 0.0
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 46.915
Left View: -90.0 degrees	Medium Trucks: 46.726
Right View: 90.0 degrees	Heavy Trucks: 46.744
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Dista	
Autos: 68.46 -11.25	0.31 -1.20 -4.65 0.000 0.000
Medium Trucks: 79.45 -22.11	0.34 -1.20 -4.87 0.000 0.000
Heavy Trucks: 84.25 -22.60	0.34 -1.20 -5.43 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier	,
	eq Evening Leq Night Ldn CNEL
Autos: 56.3 55.3	51.9 49.3 57.1 57.4
Medium Trucks: 56.5 55.8	49.3 48.7 56.8 57.0
Heavy Trucks: 60.8 59.8	54.1 54.7 62.1 62.3
Vehicle Noise: 63.2 62.2	57.0 56.6 64.1 64.4
Centerline Distance to Noise Contour (in feet)	
L	70 dBA 65 dBA 60 dBA 55 dBA
Ldn:	20 44 94 203
CNEL:	21 45 98 210

FHWA-RD	-77-108 HIGHWA`	Y NOISE	PREDIC	TION MO	DDEL (9	/12/20	21)								
Scenario: HY+P Road Name: Seaton Av. Road Segment: n/o Rider St							Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC IN	PUT DATA			N	DISE N	ODE		s							
Highway Data			Site Cond	litions (Hard =	10, So	ft = 15)								
Average Daily Traffic (Adt):	2.119 vehicles				A	utos:	15								
Peak Hour Percentage:	8.10%		Med	lium Tru	cks (2 A	xles):	15								
Peak Hour Volume:	172 vehicles		Hea	avy Truc	ks (3+ A	xles):	15								
Vehicle Speed:	45 mph	-	Vehicle N	liv											
Near/Far Lane Distance:	ŀ	VehicleType Day Evening Night													
Site Data		venie			76.6%	8.9%	14.5%	Daily 84.48							
	0.0 feet		Me	dium Tri		33.3%	4.6%	12.1%	5.939						
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 reet		Heavy Trucks: 76.9% 5.2% 17.9% 9												
Centerline Dist. to Barrier:	50.0 feet														
Centerline Dist. to Observer:	50.0 feet		Noise So				et)								
Barrier Distance to Observer:	0.0 feet			Autos											
Observer Height (Above Pad):	5.0 feet			n Trucks											
Pad Elevation:	0.0 feet		Heavy	y Trucks	: 8.0	04	Grade Adj	ustment.	0.0						
Road Elevation:	ŀ	Lane Equ	ivalent	Distanc	e (in f	eet)									
Road Grade:	ŀ		Autos	: 46.9	15	,									
Left View:	-90.0 degrees		Mediun	n Trucks	: 46.7	26									
Right View:	90.0 degrees		Heavy	/ Trucks	: 46.7	'44									
FHWA Noise Model Calculations			Т	1											
VehicleType REMEL		listance	Finite I		Fresn		Barrier Atte		m Atten						
Autos: 68.46	-10.22	0.3		-1.20		4.65		000	0.00						
Medium Trucks: 79.45	-21.76	0.3		-1.20		4.87		000	0.00						
Heavy Trucks: 84.25	-19.68	0.3	34	-1.20		5.43	0.0	000	0.00						
Unmitigated Noise Levels (witho		rier atter	nuation)												
VehicleType Leq Peak Hour			vening	Leq N			Ldn		VEL						
Autos: 57.			53.0		50.3		58.1		58.						
Medium Trucks: 56.			49.6		49.0		57.1		57.						
Heavy Trucks: 63.			57.0		57.6		65.0		65						
Vehicle Noise: 65.	3 64.3	5	59.0		58.8		66.4	+	66						
Centerline Distance to Noise Co.	ntour (in feet)														
			dBA	65 a		6	0 dBA		dBA						
	Ldn:		29		62		133		28						
	CNEL		30		64		137		295						

Thursday, July 27, 2023

FHWA-	RD-77-108 HIGH	IWAY NO	ISE PREDIO	CTION MO	DDEL (9/12	/2021)					
Scenario: E Road Name: Harvill Av Road Segment: n/o Cajal			Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC	INPUT DATA					DEL INPUTS	3				
Highway Data			Site Cor	nditions (Hard = 10,	Soft = 15)					
Average Daily Traffic (Adt).	9,765 vehicl	es			Auto	os: 15					
Peak Hour Percentage.	8.10%		Me	edium Tru	cks (2 Axle	s): 15					
Peak Hour Volume:	791 vehicle	s	He	eavy Truci	ks (3+ Axles	s): 15					
Vehicle Speed:	50 mph		Vehicle	Mix							
Near/Far Lane Distance.	48 feet			nicleType	Day	Evening	Night Daily				
Site Data					utos: 76.6		14.5% 86.56				
Barrier Height.	0.0 feet		M	ledium Tru	icks: 83.3	3% 4.6%	12.1% 7.10				
Barrier Type (0-Wall, 1-Berm)				Heavy Tru	icks: 76.9	9% 5.2%	17.9% 6.34				
Centerline Dist. to Barrier			Noise O			64					
Centerline Dist. to Observer	59.0 feet		Noise S		vations (in	reet)					
Barrier Distance to Observer	0.0 feet			Autos	0.000						
Observer Height (Above Pad)	5.0 feet			m Trucks		Crada Adi	ustment: 0.0				
Pad Elevation	0.0 feet		неа	vy Trucks	8.004	Grade Adji	usimenii. 0.0				
Road Elevation	0.0 feet		Lane Eq	uivalent	Distance (i	n feet)					
Road Grade	0.0%			Autos	54.129						
Left View	-90.0 degre	es	Mediu	m Trucks	53.966						
Right View.	90.0 degre	es	Hea	vy Trucks	53.982						
FHWA Noise Model Calculatio	ons										
VehicleType REMEL	Traffic Flow	Distand	ce Finite	Road	Fresnel	Barrier Atte	en Berm Atter				
Autos: 70.2			0.62	-1.20	-4.6	i9 0.0	00 0.0				
Medium Trucks: 81.0			0.60	-1.20	-4.8		00 0.0				
Heavy Trucks: 85.3	-15.29	-	0.60	-1.20	-5.3	65 0.0	0.0				
Unmitigated Noise Levels (wi			,								
VehicleType Leq Peak H			q Evening	Leq N	•	Ldn	CNEL				
	64.4	63.4	60.1		57.4	65.2					
	64.4	63.7	57.2		56.6	64.7					
	68.3	67.3	61.6		62.2	69.6					
Vehicle Noise:	70.9	69.9	64.7	•	64.3	71.9	72				
Centerline Distance to Noise	Contour (in feet	,					I				
			70 dBA	65 d		60 dBA	55 dBA				
		Ldn:	78		169	364	78				
		NEL:	78 81		109	376	81				

FHWA-RD-77-108 HIGHV	AY NOISE	PREDICT		DEL (9	/12/20	21)				
Scenario: E+P Road Name: Harvill Av. Road Segment: n/o Cajalco Rd.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC INPUT DATA						L INPUTS	3			
Highway Data		Site Cond	litions (H	lard = 1	10, So	ft = 15)				
Average Daily Traffic (Adt): 9,991 vehicles				A	utos:	15				
Peak Hour Percentage: 8.10%		Med	lium Truc	ks (2 A	xles):	15				
Peak Hour Volume: 809 vehicles		Hea	vy Truck	s (3+ A	xles):	15				
Vehicle Speed: 50 mph	-	Vehicle M	live							
Near/Far Lane Distance: 48 feet	-		leType		Dav	Evening	Night	Daily		
Site Data		venic			76.6%	Evening 8.9%	14.5%			
Barrier Height: 0.0 feet		Me	dium Tru	cks: 8	33.3%	4.6%	12.1%	6.96		
Barrier Type (0-Wall, 1-Berm): 0.0		H	eavy Tru	cks: 7	76.9%	5.2%	17.9%			
Centerline Dist. to Barrier: 59.0 feet	-						-			
Centerline Dist. to Observer: 59.0 feet	-	Noise Sou				et)				
Barrier Distance to Observer: 0.0 feet			Autos:	0.0						
Observer Height (Above Pad): 5.0 feet			Trucks:	2.2						
Pad Elevation: 0.0 feet		Heavy	Trucks:	8.0	04	Grade Adj	ustment.	0.0		
Road Elevation: 0.0 feet		Lane Equ	ivalent D	Distanc	e (in f	eet)				
Road Grade: 0.0%			Autos:	54.1	29					
Left View: -90.0 degrees		Medium	Trucks:	53.9	66					
Right View: 90.0 degrees		Heavy	Trucks:	53.9	82					
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow	Distance	Finite F	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atter		
Autos: 70.20 -3.84	-0.6	32	-1.20	-	4.69	0.0	00	0.00		
Medium Trucks: 81.00 -14.79	-0.6	60	-1.20	-	4.88	0.0	00	0.00		
Heavy Trucks: 85.38 -15.16	-0.6	60	-1.20	-	5.35	0.0	00	0.00		
Unmitigated Noise Levels (without Topo and b										
VehicleType Leq Peak Hour Leq Day		vening	Leq N	•		Ldn		NEL		
	3.5	60.2		57.5		65.3		65		
	3.7	57.2		56.6		64.7		64		
	7.4	61.7		62.3		69.7		69		
	0.0	64.8		64.4		72.0		72		
Centerline Distance to Noise Contour (in feet)										
		dBA	65 dE		6	0 dBA	55	dBA		
L	dn:	80 82		172 178		370 383		791 824		

FHWA-RD-7	7-108 HIGHWAY	NOISE	E PREDIC	TION M	ODEL (9/	12/2021)		
Scenario: EAC Road Name: Harvill Av. Road Segment: n/o Cajalco Ro	d.				Name: M umber: 15	ead Valley C 5091	Comme	rce C
SITE SPECIFIC INP	JT DATA			N	OISE M	ODEL INP	UTS	
Highway Data			Site Con	ditions ((Hard = 1	0, Soft = 15,)	
Average Daily Traffic (Adt): 26	3,387 vehicles				A	utos: 15		
Peak Hour Percentage: 8	3.10%		Me	dium Tru	icks (2 Ax	<i>(les):</i> 15		
Peak Hour Volume: 2,	137 vehicles		He	avy Truc	ks (3+ Ax	(les): 15		
Vehicle Speed:	50 mph	ł	Vehicle	Mix				
Near/Far Lane Distance:	48 feet	ł		icleType	0	ay Evenir	na Mi	ght Daily
Site Data			Ven			6.6% 8.9		4.5% 86.56%
			м	edium Tr		3.3% 4.6		4.3% 00.30% 2.1% 7.10%
Barrier Height:	0.0 feet			Heavy Tr		6.9% 5.2		7.9% 6.34%
Barrier Type (0-Wall, 1-Berm):	0.0			icavy ii	ucks. 1	0.570 3.2	.70 1	1.970 0.3470
Centerline Dist. to Barrier:	59.0 feet		Noise So	ource Ele	evations	(in feet)		
Centerline Dist. to Observer:	59.0 feet			Autos	s: 0.00	00		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks	3: 2.29	97		
Observer Height (Above Pad): Pad Elevation:	5.0 feet 0.0 feet		Heav	/y Trucks	s: 8.00)4 Grade	Adjust	ment: 0.0
Road Elevation:	0.0 feet	-	Lano Ea	uivalont	Distance	(in foot)		
	0.0 reet	ŀ	Lane Ly	Autos		, ,		
	90.0 degrees		Modiu	m Trucks				
	90.0 degrees 90.0 degrees			/y Trucks				
FHWA Noise Model Calculations								
VehicleType REMEL T	raffic Flow Di	stance	Finite	Road	Fresne	l Barrier	Atten	Berm Atten
Autos: 70.20	0.38	-0.6	52	-1.20	-4	4.69	0.000	0.000
Medium Trucks: 81.00	-10.49	-0.6	50	-1.20	-4	4.88	0.000	0.000
Heavy Trucks: 85.38	-10.98	-0.6	30	-1.20	-	5.35	0.000	0.000
Unmitigated Noise Levels (without								
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq I	•	Ldn		CNEL
Autos: 68.8	67.7		64.4		61.7		59.5	69.8
Medium Trucks: 68.7	68.0		61.5		60.9		59.0	69.2
Heavy Trucks: 72.6	71.6		65.9		66.5		73.9	74.1
Vehicle Noise: 75.2	74.3		69.0		68.6	1	76.2	76.4
Centerline Distance to Noise Cont	our (in feet)							
	l	70	dBA	65 c		60 dBA		55 dBA
	Ldn:		152		328		706	1,521
	CNEL:		157		339	1	730	1,573

FHW	/A-RD	-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	NODEL (9/12/2	021)		
Road Name: Harvil	Scenario: EAC+P Road Name: Harvill Av. Road Segment: n/o Cajalco Rd.						t Name: lumber:		Valley Con	nmerce (;
SITE SPECIF	IC IN	PUT DATA				I	NOISE	NODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Se	oft = 15)		
Average Daily Traffic (A	dt):	26,613 vehicle	es					Autos:	15		
Peak Hour Percenta	ige:	8.10%			Me	dium Ti	rucks (2	Axles):	15		
Peak Hour Volu	me:	2,156 vehicle	s		He	avy Tru	icks (3+ .	Axles):	15		
Vehicle Spe	ed:	50 mph			Vehicle I	Nix					
Near/Far Lane Distar	ice:	48 feet		F		cleType	e	Dav	Evening	Night	Daily
Site Data							Autos:	76.6%	•	14.5%	
Barrier Heig	tht.	0.0 feet			Me		rucks:	83.3%		12.1%	
Barrier Type (0-Wall, 1-Be		0.0 1001			F	leavy 1	rucks:	76.9%		17.9%	
Centerline Dist. to Ban		59.0 feet		-		_					
Centerline Dist. to Obser		59.0 feet		4	Noise So				eet)		
Barrier Distance to Obser	ver:	0.0 feet				Auto		000			
Observer Height (Above P	ad):	5.0 feet			Mediur			297	Grade Ad		
Pad Elevat	ion:	0.0 feet			Heav	y Truck	(S. 8.	004	Grade Ad	Justinent	0.0
Road Elevat		Lane Equ	uivalen	t Distan	ce (in	feet)					
Road Gra	ide:	0.0%				Auto	os: 54	129			
Left Vi	ew:	-90.0 degree	es		Mediur			966			
Right Vi	ew:	90.0 degree	es		Heav	y Truck	(s: 53	982			
FHWA Noise Model Calcul											
VehicleType REME		Traffic Flow		istance	Finite		Fresi		Barrier Att		m Atten
	70.20	0.42		-0.6	-	-1.20		-4.69		000	0.00
	31.00	-10.48		-0.6		-1.20		-4.88		000	0.00
Heavy Trucks: 8	35.38	-10.92		-0.6	0	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise Levels					<u> </u>						
VehicleType Leq Pea				Leq E	vening	Leq	Night		Ldn		VEL
Autos:	68.		67.8		64.4		61.		69.		69
Medium Trucks:	68.		68.0		61.5		60.		69.		69
Heavy Trucks:	72.		71.6		65.9		66.		73.		74.
Vehicle Noise:	75.		74.3		69.1		68.	5	76.	2	76
Centerline Distance to Noi	se Co	ntour (in feet)	70	10.4		-10.4		0 -0 4		-04
			I de :	70 (dBA	65	dBA	_	50 dBA		dBA
		0	Ldn: NEL:		153 158		330 341		710 735		1,53 1,58

Thursday, July 27, 2023

FHWA-I	RD-77-108 HIGH	WAY NO	SE PREDIO	CTION MC	DEL (9/12	/2021)					
Scenario: HY Road Name: Harvill Av Road Segment: n/o Cajalo	-		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC	INPUT DATA					EL INPUTS	5	-			
Highway Data			Site Cor	nditions (H	lard = 10,	Soft = 15)					
Average Daily Traffic (Adt):	29,026 vehicle	s			Auto						
Peak Hour Percentage:	8.10%				ks (2 Axles	/					
Peak Hour Volume:	2,351 vehicles	3	He	eavy Truck	s (3+ Axles	s): 15					
Vehicle Speed:			Vehicle	Mix							
Near/Far Lane Distance:	48 feet			nicleType	Day	Evening	Night	Daily			
Site Data					itos: 76.6		•	86.569			
Barrier Height:	0.0 feet		N	ledium Tru	cks: 83.3	3% 4.6%	12.1%	7.109			
Barrier Type (0-Wall, 1-Berm):				Heavy Tru	cks: 76.9	9% 5.2%	17.9%	6.34%			
Centerline Dist. to Barrier:	59.0 feet		Noiso S	ourco Elo	vations (in	foot)					
Centerline Dist. to Observer:	59.0 feet		10130 0	Autos:		1001/					
Barrier Distance to Observer:	0.0 feet		Modiu	m Trucks:	0.000						
Observer Height (Above Pad):	5.0 feet			vv Trucks:		Grade Adj	ustment: (0.0			
Pad Elevation:	0.0 1000										
Road Elevation:			Lane Eq		Distance (i	n feet)					
Road Grade:				Autos:							
Left View:				m Trucks:	00.000						
Right View:	90.0 degree	es	Hea	vy Trucks:	53.982						
FHWA Noise Model Calculatio	ons							-			
VehicleType REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte		n Atten			
Autos: 70.2			0.62	-1.20	-4.6			0.00			
Medium Trucks: 81.0			0.60	-1.20	-4.8			0.00			
Heavy Trucks: 85.3	-10.56	-	0.60	-1.20	-5.3	5 0.0	000	0.00			
Unmitigated Noise Levels (wit	thout Topo and	barrier at	tenuation)					-			
VehicleType Leq Peak H			q Evening	Leq N	•	Ldn	CNE				
		68.1	64.8		62.2	69.9		70.			
		68.5	61.9		61.3	69.4		69.			
		72.0	66.3		66.9	74.3		74.			
Vehicle Noise:	75.6	74.7	69.5	5	69.0	76.6	6	76.			
Orméralia - Distance de Noire a	Contour (in feet)										
Centerline Distance to Noise					-	60 dBA	55 d	BA			
Centerline Distance to Noise			70 dBA	65 dl							
Centerline Distance to Noise		Ldn: VEL:	70 dBA 162 168	65 dl	349 361	752		1,620			

	FHWA-RI	0-77-108 HIGH	WAY NO	DISE PRED		IODEL (9/12	2/2021)						
Road Nan	rio: HY+P ne: Harvill Av. ent: n/o Cajalco	Rd.			Project Name: Mead Valley Commerce C Job Number: 15091								
	SPECIFIC IN	IPUT DATA					DEL INPUTS	1					
Highway Data				Site Co	onditions	(Hard = 10,	Soft = 15)						
Average Daily	Traffic (Adt):	29,252 vehicle	es			Auto	os: 15						
Peak Hour	Percentage:	8.10%		٨	ledium Tr	ucks (2 Axle	s): 15						
Peak H	lour Volume:	2,369 vehicle	s	F	leavy Tru	cks (3+ Axle	s): 15						
Ve	ehicle Speed:	50 mph		Vehicl	Mix								
Near/Far La	ane Distance:	48 feet			hicleType	Da	/ Evening	Night Daily					
Site Data						Autos: 76.		14.5% 86.59					
Ba	rrier Height:	0.0 feet			Medium T	rucks: 83.	3% 4.6%	12.1% 7.05					
Barrier Type (0-V		0.0			Heavy T	rucks: 76.	9% 5.2%	17.9% 6.36					
Centerline D	ist. to Barrier:	59.0 feet		Noise	Source F	evations (ii	1 foot)						
Centerline Dist.	to Observer:	59.0 feet		110130	Auto		,						
Barrier Distance	to Observer:	0.0 feet		Mod	ium Truck	0.000							
Observer Height	(Above Pad):	5.0 feet			avy Truck			istment: 0.0					
P	ad Elevation:	0.0 feet											
Ro	ad Elevation:	0.0 feet		Lane E		Distance (,						
	Road Grade:	0.0%			Auto								
	Left View:	-90.0 degre			ium Truck	- 00.000							
	Right View:	90.0 degre	es	He	avy Truck	s: 53.982							
FHWA Noise Mod	el Calculation	s		1									
VehicleType	REMEL	Traffic Flow	Distar	ce Fini	te Road	Fresnel	Barrier Atte	n Berm Atter					
Autos:	70.20	0.83		-0.62	-1.20	-4.0	59 0.0	0.0					
Medium Trucks:	81.00	-10.07		-0.60	-1.20	-4.8	88 0.0	0.0					
Heavy Trucks:	85.38	-10.52		-0.60	-1.20	-5.3	35 0.0	0.0					
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenuation)								
VehicleType	Leq Peak Hou			eq Evening		Night	Ldn	CNEL					
Autos:			68.2	64		62.2	69.9	70					
Medium Trucks:			68.5	61	-	61.3	69.4	69					
Heavy Trucks:			72.0	66		67.0	74.3	74					
Vehicle Noise:	75	.7	74.7	69	.5	69.0	76.6	76					
Contorlino Distan	ce to Noise Co	ontour (in feet)										
Centernite Distan				70 dBA		dBA	60 dBA	55 dBA					
Centennie Distan						-							
Centennie Distan			Ldn: NEL:	10 0BA 16	3	351 363	756 782	1,62					

FHWA-RD-77-108 HI	GHWAY NC	ISE PREDI		DEL (9/12/	2021)	
Scenario: E Road Name: Harvill Av. Road Segment: s/o Cajalco Rd.				ame: Meac nber: 1509	l Valley Com 1	merce C
SITE SPECIFIC INPUT DAT	A				EL INPUTS	5
Highway Data		Site Co.	nditions (H	ard = 10, S	Soft = 15)	
Average Daily Traffic (Adt): 11,175 veh	icles			Autos	s: 15	
Peak Hour Percentage: 8.10%		М	edium Truci	ks (2 Axles): 15	
Peak Hour Volume: 905 vehi	cles	Н	eavy Trucks	s (3+ Axles): 15	
Vehicle Speed: 50 mph		Vehicle	Mix			
Near/Far Lane Distance: 48 feet			hicleType	Dav	Evening	Night Daily
Site Data				tos: 76.6	÷	14.5% 86.56
Barrier Height: 0.0 fee	t	٨	ledium Truc	ks: 83.3	% 4.6%	12.1% 7.10
Barrier Type (0-Wall, 1-Berm): 0.0			Heavy Truc	ks: 76.9	% 5.2%	17.9% 6.349
Centerline Dist. to Barrier: 59.0 fee	t	Noine C			64)	
Centerline Dist. to Observer: 59.0 fee	t	Noise S	ource Elev		feet)	
Barrier Distance to Observer: 0.0 fee	t	14 m - 14	Autos: m Trucks:	0.000		
Observer Height (Above Pad): 5.0 fee	t		vy Trucks:	2.297 8.004	Crada Adi	ustment: 0.0
Pad Elevation: 0.0 fee	t	nea	vy mucks.	0.004	Graue Auji	Journerit. 0.0
Road Elevation: 0.0 fee	t	Lane Ed	quivalent D	istance (ir	n feet)	
Road Grade: 0.0%			Autos:	54.129		
Left View: -90.0 deg	rees	Media	ım Trucks:	53.966		
Right View: 90.0 deg	grees	Hea	vy Trucks:	53.982		
FHWA Noise Model Calculations						
VehicleType REMEL Traffic Flo				Fresnel	Barrier Atte	
		-0.62	-1.20	-4.69		
Medium Trucks: 81.00 -14		-0.60	-1.20	-4.88		
Heavy Trucks: 85.38 -14	71	-0.60	-1.20	-5.38	5 0.0	00 0.00
Unmitigated Noise Levels (without Topo a		,				
VehicleType Leq Peak Hour Leq I		eq Evening	Leq Ni		Ldn	CNEL
Autos: 65.0	64.0	60.		58.0	65.8	
Medium Trucks: 65.0	64.3	57.8	-	57.2	65.3	
Heavy Trucks: 68.9	67.9	62.		62.8	70.2	
Vehicle Noise: 71.5	70.5	65.3	5	64.8	72.4	72
Centerline Distance to Noise Contour (in f	eet)	70 -/04	05.15		CO -/D A	<i></i>
	L	70 dBA	65 dB		60 dBA	55 dBA
	Ldn: CNEL:	86		185	398	85
	UNEL:	89		191	412	88

	FHWA-RD-	77-108 HIGHWA	Y NOIS	E PREDIC		IODEL (9/12/20	021)				
	o: E+P e: Harvill Av. t: s/o Cajalco F	Rd.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE S		PUT DATA		NOISE MODEL INPUTS								
Highway Data				Site Con	ditions	(Hard =	10, So	oft = 15)				
Average Daily 1	raffic (Adt):	1,298 vehicles					Autos:	15				
Peak Hour I	Percentage:	8.10%		Me	dium Tr	ucks (2 A	Axles):	15				
Peak Ho	our Volume:	915 vehicles		He	avy Tru	cks (3+ A	Axles):	15				
	icle Speed:	50 mph		Vehicle I	Nix							
Near/Far Lar	e Distance:	48 feet		VehicleType Day Evening Night L								
Site Data						Autos:	76.6%	8.9%	14.5%	86.719		
Bar	rier Height:	0.0 feet		Me	edium T	rucks:	83.3%	4.6%	12.1%	7.029		
Barrier Type (0-Wa		0.0		ŀ	leavy T	rucks:	76.9%	5.2%	17.9%	6.27%		
Centerline Dis	t. to Barrier:	59.0 feet		Noise So	urco F	evation	s (in fo	of)				
Centerline Dist. t	o Observer:	59.0 feet		110/30 00	Auto		000					
Barrier Distance t	o Observer:	0.0 feet		Mediu	n Truck		297					
Observer Height (#	Above Pad):	5.0 feet			y Truck		D04	Grade Ad	iustment	0.0		
Pa	d Elevation:	0.0 feet 0.0 feet							,			
	d Elevation:		Lane Equ				feet)					
F	oad Grade:	0.0%			Auto		129					
	Left View:	-90.0 degrees			n Truck		966					
	Right View:	90.0 degrees		Heav	y Truck	S.' 53.'	982					
FHWA Noise Mode	l Calculations											
VehicleType		Traffic Flow	Distance	e Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten		
Autos:	70.20	-3.30		.62	-1.20		-4.69		000	0.00		
Medium Trucks:	81.00	-14.22		.60	-1.20		-4.88		000	0.00		
Heavy Trucks:	85.38	-14.71	-0	.60	-1.20		-5.35	0.0	000	0.00		
Unmitigated Noise	Levels (witho	ut Topo and bar	rier atte	enuation)								
	Leq Peak Hour			Evening	Leq	Night		Ldn		VEL		
Autos:	65.1			60.7		58.1		65.		66.		
Medium Trucks:	65.0		-	57.8		57.2	-	65.3	-	65.		
Heavy Trucks:	68.9		-	62.1		62.8		70.3		70.		
Vehicle Noise:	71.5	5 70.	5	65.3		64.9)	72.4	4	72.		
Centerline Distanc	e to Noise Cor	ntour (in feet)										
				0 dBA	65	dBA	6	i0 dBA		dBA		
		Ldr		86		185		399		859		
		CNEL		89		192		413		889		

Thursday, July 27, 2023

FHWA	RD-77-108 HIG	GHWAY N	OISE P	REDIC	TION MO	ODEL (9/	12/202	21)			
Scenario: EAC				Project Name: Mead Valley Commerce C							
Road Name: Harvill A	v.				Job Ni	imber: 15	5091				
Road Segment: s/o Caja	co Rd.										
SITE SPECIFIC	INPUT DATA	4						INPUTS	6		
Highway Data			Sit	te Cond	ditions (Hard = 1	0, Sofi	t = 15)			
Average Daily Traffic (Adt)	: 26,260 vehi	cles					utos:	15			
Peak Hour Percentage	: 8.10%					cks (2 Ax	,	15			
Peak Hour Volume	,	les		Hea	avy Truc	ks (3+ Ax	les):	15			
Vehicle Speed			Ve	hicle N	lix						
Near/Far Lane Distance	: 48 feet			Vehi	cleType	D	ay E	Evening	Night	Daily	
Site Data					A	utos: 7	6.6%	8.9%	14.5%	86.56	
Barrier Heigh	: 0.0 feet			Me	dium Tru	ucks: 8	3.3%	4.6%	12.1%	7.10	
Barrier Type (0-Wall, 1-Berm				H	leavy Tri	ucks: 7	6.9%	5.2%	17.9%	6.34	
Centerline Dist. to Barrie	: 59.0 feet		Ne	vica Sa	urco Ela	vations	(in foo	<i>(</i> #)			
Centerline Dist. to Observe	: 59.0 feet		140	//30 00	Autos			9			
Barrier Distance to Observe	: 0.0 feet			Madium	n Trucks	. 0.00	-				
Observer Height (Above Pad	: 5.0 feet				y Trucks			Grade Adj	ustment:	0.0	
Pad Elevation	0.0 feet										
Road Elevation	0.0 1000		La	ne Equ		Distance		et)			
Road Grade	0.070				Autos						
Left View	· 00.0 40g.				n Trucks						
Right View	: 90.0 degr	ees		Heav	y Trucks	53.98	32				
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Traffic Flow			Finite		Fresnel		arrier Atte		m Atter	
Autos: 70.			-0.62		-1.20		1.69	0.0		0.00	
Medium Trucks: 81.			-0.60		-1.20		1.88	0.0		0.00	
Heavy Trucks: 85.	38 -11.0	00	-0.60		-1.20	-5	5.35	0.0	00	0.00	
Unmitigated Noise Levels (w											
VehicleType Leq Peak I			.eq Eve		Leq N	•	L	_dn		IEL	
Autos:	68.7	67.7		64.4		61.7		69.5		69	
Medium Trucks:	68.7	68.0		61.5		60.9		69.0		69	
Heavy Trucks:	72.6	71.6		65.9		66.5		73.9		74	
Vehicle Noise:	75.2	74.2		69.0		68.6		76.1		76	
Centerline Distance to Noise	Contour (in fe	et)					_				
			70 dB		65 d		60	dBA	55	dBA	
		Ldn:		152		327		704		1,51	
		CNEL:		157		338		728		1.56	

FHWA-RD	0-77-108 HIGHWAY	NOISE	PREDIC	TION MO	DEL (9/12	/2021)	
Scenario: EAC+P Road Name: Harvill Av. Road Segment: s/o Cajalco	Rd.				ame: Mea nber: 150	d Valley Com 91	merce C
SITE SPECIFIC IN	PUT DATA					DEL INPUTS	3
Highway Data			Site Con	ditions (H	lard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	26,382 vehicles				Auto	os: 15	
Peak Hour Percentage:	8.10%		Me	dium Truc	ks (2 Axle	s): 15	
Peak Hour Volume:	2,137 vehicles		He	avy Truck	s (3+ Axle	s): 15	
Vehicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lane Distance:	48 feet	F	Veh	icleType	Day	Evening	Night Daily
Site Data				Au	tos: 76.0	5% 8.9%	14.5% 86.63%
Barrier Height:	0.0 feet		М	edium Tru	cks: 83.3	3% 4.6%	12.1% 7.06%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	cks: 76.9	9% 5.2%	17.9% 6.31%
Centerline Dist. to Barrier:	59.0 feet	H	Noiso Si	ource Elev	ations (ir	foot	
Centerline Dist. to Observer:	59.0 feet	ť	140/36 30	Autos:	0.000	Teelj	
Barrier Distance to Observer:	0.0 feet		Modiu	m Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			v Trucks:	8.004	Grade Adi	ustment: 0.0
Pad Elevation:	0.0 feet			· · · ·			
Road Elevation:	0.0 feet	4	Lane Eq	uivalent D		n feet)	
Road Grade:	0.0%			Autos:	54.129		
Left View:	-90.0 degrees			m Trucks:	53.966		
Right View:	90.0 degrees		Heat	y Trucks:	53.982		
FHWA Noise Model Calculations							
VehicleType REMEL		stance		Road	Fresnel	Barrier Atte	
Autos: 70.20	0.38	-0.6	-	-1.20	-4.6		
Medium Trucks: 81.00	-10.51	-0.6	-	-1.20	-4.8		
Heavy Trucks: 85.38	-11.00	-0.6	-	-1.20	-5.3	5 0.0	00 0.00
Unmitigated Noise Levels (with							
VehicleType Leq Peak Hou		Leq E	vening	Leq Ni	•	Ldn	CNEL
Autos: 68			64.4		61.7	69.5	
Medium Trucks: 68			61.5		60.9	69.0	
Heavy Trucks: 72 Vehicle Noise: 75			65.9		66.5 68.6	73.9	
verificie ivolse: 75	.2 74.2		09.0		08.0	76.2	/6.
Centerline Distance to Noise Co	ntour (in feet)						
	[70 (dBA	65 dE		60 dBA	55 dBA
	Ldn:		152		327	704	1,517
	CNEL:		157		338	728	1,569

	FHWA-RD	0-77-108 HIGH	WAY N	DISE	PREDIC		IODEL (9)/12/2	021)		
Scenario Road Name Road Segmen	e: Harvill Av.	Rd.					Name: N lumber: 1		Valley Com	merce C	;
SITE S	SPECIFIC IN	IPUT DATA							L INPUTS	6	
Highway Data				S	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,886 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	8.10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak He	our Volume:	2,340 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vel	nicle Speed:	50 mph		L.	/ehicle	Mix					
Near/Far Lar	e Distance:	48 feet				icleType		Dav	Evening	Niaht	Dailv
Site Data					VCII			76.6%		14.5%	
	rier Height:	0.0 feet			М	edium Ti		83.3%		12.1%	
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	76.9%	5.2%	17.9%	6.349
Centerline Dis	. ,	59.0 feet		-		-					
Centerline Dist. 1		59.0 feet		N	loise Sc		evations		eet)		
Barrier Distance t	o Observer:	0.0 feet				Auto		000			
Observer Height ()	Above Pad):	5.0 feet				m Truck		297	Oursels Adi		
÷ (d Elevation:	0.0 feet			Heav	ry Truck	s: 8.0	004	Grade Adj	usiment	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 54.1	129			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53.9	966			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 53.9	982			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	0.77		-0.62	-	-1.20		-4.69	0.0		0.00
Medium Trucks:	81.00	-10.09		-0.60	-	-1.20		-4.88	0.0		0.00
Heavy Trucks:	85.38	-10.58		-0.60)	-1.20		-5.35	0.0	00	0.00
Unmitigated Noise											
	Leq Peak Hou			eq Ev	rening	Leq	Night		Ldn		VEL
Autos:	69		68.1		64.8		62.1		69.9		70.
Medium Trucks:	69		68.4		61.9		61.3		69.4		69.
Heavy Trucks:	73		72.0		66.3		66.9		74.3		74.
Vehicle Noise:	75	.6	74.7		69.4		69.0		76.6		76.
Centerline Distanc	e to Noise Co	ontour (in feet)							I	
				70 d		65	dBA	6	60 dBA	55	dBA
			Ldn:		162		348		750		1.615
			NEL:		162		348 360		730		1.671

	FHWA-RD-	77-108 HIGHW	AY NOI	ISE PREDI		NODEL (9/12/20	021)		
Road Name	o: HY+P e: Harvill Av. t: s/o Cajalco F	Rd.				t Name: lumber:		/alley Com	imerce C	;
SITE S	SPECIFIC INF	UT DATA							S	
Highway Data				Site Col	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 2	9,008 vehicles					Autos:	15		
Peak Hour	Percentage:	8.10%		M	edium T	rucks (2 /	Axles):	15		
Peak He	our Volume: 2	2,350 vehicles		H	eavy Tru	icks (3+ /	Axles):	15		
	nicle Speed:	50 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		Vel	nicleTyp	e	Day	Evening	Night	Daily
Site Data						Autos:	76.6%	8.9%	14.5%	86.629
Bar	rier Height:	0.0 feet		N	ledium 1	rucks:	83.3%	4.6%	12.1%	7.079
Barrier Type (0-Wa	•	0.0			Heavy 1	rucks:	76.9%	5.2%	17.9%	6.319
Centerline Dis	t. to Barrier:	59.0 feet		Noise S	ource F	levation	s (in fo	of)		
Centerline Dist. t	o Observer:	59.0 feet		10130 0	Auto		000			
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Truck		297			
Observer Height (/	Above Pad):	5.0 feet			vy Truci		004	Grade Ad	iustment.	0.0
	d Elevation:	0.0 feet								
	d Elevation:	0.0 feet		Lane Eq		t Distan		'eet)		
F	Road Grade:	0.0%		14-15	Auto		129			
	Left View:	-90.0 degrees 90.0 degrees			ım Trucl vy Trucl		966 982			
	Right View:	90.0 degrees		1100	vy muci	13. 33.	502			
FHWA Noise Mode	I Calculations									
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresr	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	0.79	-	0.62	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-10.09		0.60	-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-10.58	-	0.60	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (without	ut Topo and ba	arrier at	tenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leo	q Evening	Leq	Night		Ldn	CI	VEL
Autos:	69.2		3.1	64.8		62.2		69.9		70.
Medium Trucks:	69.1		3.4	61.9		61.3		69.4		69.
Heavy Trucks:	73.0		2.0	66.3		66.9		74.3		74.
Vehicle Noise:	75.6	5 74	1.7	69.4		69.0)	76.6	6	76.
Centerline Distanc	e to Noise Con	tour (in feet)								
				70 dBA	65	dBA	-	i0 dBA		dBA
		LC	in:	162		348		750		1,616
				167		360		776		1.672

Thursday, July 27, 2023

FHWA-F	2D-77-108 HIGHW	AY NOIS	E PREDIC	TION MC	DEL (9/12	/2021)				
Scenario: E			Project Name: Mead Valley Commerce C							
Road Name: Cajalco R				Job Nu	mber: 1509	91				
Road Segment: w/o Clark	St.									
SITE SPECIFIC I	NPUT DATA					DEL INPUTS	6			
Highway Data			Site Con	ditions (F	Hard = 10,	Soft = 15)				
Average Daily Traffic (Adt):	18,885 vehicles				Auto	os: 15				
Peak Hour Percentage:	8.10%		Me	dium Truc	cks (2 Axle	s): 15				
Peak Hour Volume:	1,530 vehicles		He	avy Truck	is (3+ Axle	s): 15				
Vehicle Speed:	55 mph		Vehicle I	Niv						
Near/Far Lane Distance:	102 feet			cleType	Day	Evening	Night	Daily		
Site Data					itos: 76.0	•	•	86.56		
Barrier Height:	0.0 feet		Me	edium Tru	cks: 83.3	3% 4.6%	12.1%	7.10		
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Tru	cks: 76.9	9% 5.2%	17.9%	6.349		
Centerline Dist. to Barrier:	110.0 feet		Naina C-		vations (in	faat				
Centerline Dist. to Observer:	110.0 feet		Noise Sc			reet)				
Barrier Distance to Observer:	0.0 feet			Autos:	0.000					
Observer Height (Above Pad):	5.0 feet			n Trucks:		Grade Adju	internet i	0.0		
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Aujt	JSUITETIL	0.0		
Road Elevation:	0.0 feet		Lane Equ	ivalent l	Distance (i	n feet)				
Road Grade:	0.0%			Autos:	97.591					
Left View:	-90.0 degrees		Mediur	n Trucks:	97.500					
Right View:	90.0 degrees		Heav	y Trucks:	97.509					
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm	Atten		
Autos: 71.7	8 -1.49	-4.	46	-1.20	-4.7	8 0.0	00	0.00		
Medium Trucks: 82.4		-4.	45	-1.20	-4.8		00	0.00		
Heavy Trucks: 86.4	0 -12.84	-4.	45	-1.20	-5.1	4 0.0	00	0.00		
Unmitigated Noise Levels (wit	hout Topo and ba	arrier atte	nuation)							
VehicleType Leq Peak Ho			Evening	Leq N	•	Ldn	CN			
		3.6	60.3		57.6	65.4		65.		
		3.7	57.2		56.6	64.7		64		
		6.9	61.2		61.8	69.2		69.		
Vehicle Noise: 7	0.7 69	9.8	64.6		64.1	71.7		71.		
Centerline Distance to Noise (Contour (in feet)									
) dBA	65 di		60 dBA	55 d			
		dn:	142		306	660		1.42		
	L	un.	142		300	000		.,		

FHWA-RD-77-108 HIGHW	AY NOIS		ON MODEL ((9/12/2)	021)					
Scenario: E+P Road Name: Cajalco Rd. Road Segment: w/o Clark St.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC INPUT DATA					L INPUTS	3				
Highway Data		Site Condit	ions (Hard =	: 10, Sc	oft = 15)					
Average Daily Traffic (Adt): 19,315 vehicles				Autos:	15					
Peak Hour Percentage: 8.10%		Mediu	m Trucks (2	Axles):	15					
Peak Hour Volume: 1,564 vehicles		Heavy	y Trucks (3+	Axles):	15					
Vehicle Speed: 55 mph		Vehicle Mix	,							
Near/Far Lane Distance: 102 feet		Vehicle		Dav	Evening	Night	Daily			
Site Data			Autos:	76.6%		14.5%				
Barrier Height: 0.0 feet		Medi	um Trucks:	83.3%	4.6%	12.1%	6.979			
Barrier Type (0-Wall, 1-Berm): 0.0		Hea	avy Trucks:	76.9%	5.2%	17.9%	6.51%			
Centerline Dist. to Barrier: 110.0 feet		Noise Sour	ce Elevation	s (in fa	oof)					
Centerline Dist. to Observer: 110.0 feet		-		.000						
Barrier Distance to Observer: 0.0 feet		Medium		.297						
Observer Height (Above Pad): 5.0 feet		Heavy		.004	Grade Adj	ustment	0.0			
Pad Elevation: 0.0 feet										
Road Elevation: 0.0 feet			alent Distan		feet)					
Road Grade: 0.0%				.591						
Left View: -90.0 degrees		Medium		.500						
Right View: 90.0 degrees		Heavy	frucks: 97	.509						
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow	Distance				Barrier Atte		m Atten			
Autos: 71.78 -1.39			1.20	-4.78	0.0		0.00			
Medium Trucks: 82.40 -12.33			1.20	-4.88	0.0		0.00			
Heavy Trucks: 86.40 -12.63	-4	.45 -	1.20	-5.14	0.0	00	0.00			
Unmitigated Noise Levels (without Topo and b										
VehicleType Leq Peak Hour Leq Day		Evening	Leq Night		Ldn		VEL			
	3.7	60.4	57.		65.5		65.			
	3.7	57.2	56.		64.7		64.			
	7.1	61.4	62.	-	69.4		69.			
	9.9	64.8	64.	2	71.8		72.			
Centerline Distance to Noise Contour (in feet)										
	70	0 dBA	65 dBA	6	60 dBA	55	dBA			
L CNI	dn:	145 151	313 324		675 699		1,454 1,505			

FHWA-RD-77-108 HI	SHWAY NOI	SE PREDICTION MODEL (9/12/2021)
Scenario: EAC Road Name: Cajalco Rd. Road Segment: w/o Clark St.		Project Name: Mead Valley Commerce C Job Number: 15091
SITE SPECIFIC INPUT DAT	4	NOISE MODEL INPUTS
Highway Data		Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 26,993 veh	cles	Autos: 15
Peak Hour Percentage: 8.10%		Medium Trucks (2 Axles): 15
Peak Hour Volume: 2,186 vehic	les	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 55 mph		Vehicle Mix
Near/Far Lane Distance: 102 feet		VehicleType Day Evening Night Daily
Site Data		Autos: 76.6% 8.9% 14.5% 86.56
		Medium Trucks: 83.3% 4.6% 12.1% 7.10
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 76.9% 5.2% 17.9% 6.34
Centerline Dist. to Barrier: 110.0 feet		
Centerline Dist. to Observer: 110.0 feet		Noise Source Elevations (in feet)
Barrier Distance to Observer: 0.0 feet		Autos: 0.000
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 2.297
Pad Elevation: 0.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0
Road Elevation: 0.0 feet		Lane Equivalent Distance (in feet)
Road Grade: 0.0%		Autos: 97.591
Left View: -90.0 deg	rees	Medium Trucks: 97.500
Right View: 90.0 deg		Heavy Trucks: 97.509
FHWA Noise Model Calculations		
VehicleType REMEL Traffic Flow	/ Distance	Finite Road Fresnel Barrier Atten Berm Atte
Autos: 71.78 0.)6 -4	.46 -1.20 -4.78 0.000 0.0
Medium Trucks: 82.40 -10.4	30 -4	.45 -1.20 -4.88 0.000 0.0
Heavy Trucks: 86.40 -11.	29 -4	.45 -1.20 -5.14 0.000 0.0
Unmitigated Noise Levels (without Topo an		,
VehicleType Leq Peak Hour Leq D		Evening Leq Night Ldn CNEL
Autos: 66.2	65.2	61.8 59.2 66.9 6
Medium Trucks: 65.9	65.3	58.7 58.2 66.3 6
Heavy Trucks: 69.5	68.4	62.7 63.4 70.7 70
Vehicle Noise: 72.3	71.3	66.2 65.6 73.2 7
Centerline Distance to Noise Contour (in fe		0 dBA 65 dBA 60 dBA 55 dBA
	Ldn:	180 389 837 1.8
	CNEL:	180 389 837 1,80 187 402 867 1,80
	UNILL.	107 402 007 1,0

	FHWA-RD	-77-108 HIGH	WAY	NOISE F	REDICT	ION MC	DDEL (9/12/20	021)							
Road Name	Scenario: EAC+P Road Name: Cajalco Rd. Road Segment: w/o Clark St.						Project Name: Mead Valley Commerce C Job Number: 15091									
SITE S	PECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUT	s						
Highway Data				Si	ite Condi	itions (I	Hard =	10, Sc	ft = 15)							
Average Daily T	raffic (Adt):	27,423 vehicle	es					Autos:	15							
Peak Hour F	Percentage:	8.10%			Medi	ium Tru	cks (2 A	xles):	15							
Peak Ho	ur Volume:	2,221 vehicle	s		Heav	vy Truci	ks (3+ A	xles):	15							
Veh	icle Speed:	55 mph		14	ehicle Mi	iv										
Near/Far Lan	e Distance:	102 feet				leType		Day	Evening	Night	Daily					
Site Data					10/110			76.6%	•	14.5%						
	ior Hoight	0.0 feet			Med	dium Tru		83.3%		12.1%	7.019					
вагг Barrier Type (0-Wa	ier Height:	0.0 Teet				avy Tru		76.9%		17.9%						
Centerline Dist	. ,	0.0 110.0 feet														
Centerline Dist. to		110.0 feet		N	oise Sou				eet)							
Barrier Distance to		0.0 feet				Autos.		000								
Observer Height (A		5.0 feet			Medium			297								
	d Elevation:	0.0 feet			Heavy	Trucks.	: 8.0	004	Grade Ad	ustment.	0.0					
	d Elevation:	0.0 feet		La	ane Equi	valent	Distand	e (in i	feet)							
	oad Grade:	0.0%				Autos.	97.	591								
	Left View:	-90.0 degree	es		Medium	Trucks.	97.	500								
	Right View:	90.0 degree	es		Heavy	Trucks.	97.	509								
FHWA Noise Model																
VehicleType	REMEL	Traffic Flow		stance	Finite R		Fresn	-	Barrier Att		m Atten					
Autos:	71.78	0.13		-4.46		-1.20		-4.78		000	0.00					
Medium Trucks:	82.40	-10.79		-4.45		-1.20 -1.20		-4.88		000	0.00					
Heavy Trucks:	86.40	-11.14		-4.45		-1.20		-5.14	0.0	000	0.00					
Unmitigated Noise			-							Т						
	.eq Peak Hou			Leq Eve		Leq N	•		Ldn		VEL					
Autos:	66		65.2		61.9		59.2		67.		67.					
Medium Trucks:	66		65.3		58.8		58.2		66.		66.					
Heavy Trucks:	69	-	68.6		62.9		63.5		70.9		71.					
Vehicle Noise:	72		71.4		66.3		65.7		73.3	3	73.					
Centerline Distance	to Noise Co	ntour (in feet)	70 dE	24	65 d	D A	4	0 dBA	FF	dBA					
			Ldn:	70 01	183	05 0	BA 395		<i>и ава</i> 851		ава 1.833					
		~	NEL:		183		395 409		881		1,83					
		0	•		150		409		001		1,091					

Thursday, July 27, 2023

FHWA-F	RD-77-108 HIGH	IWAY NO	SE PRED		IODEL (9	/12/20	21)			
Scenario: HY Road Name: Cajalco R Road Segment: w/o Clark		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC	INPUT DATA						INPUTS	;		
Highway Data			Site Co	nditions	(Hard = 1	10, Soi	ft = 15)			
Average Daily Traffic (Adt):	29,693 vehicl	es			A	utos:	15			
Peak Hour Percentage:	8.10%		/	ledium Tr	ucks (2 A	xles):	15			
Peak Hour Volume:	2,405 vehicle	s	1	leavy Tru	cks (3+ A.	xles):	15			
Vehicle Speed:	55 mph		Vehicl	Mix						
Near/Far Lane Distance:	102 feet			hicleType		Dav	Evening	Night	Daily	
Site Data						76.6%	8.9%	14.5%	86.56%	
Barrier Height:	0.0 feet			Medium T	rucks: 8	33.3%	4.6%	12.1%	7.10%	
Barrier Type (0-Wall, 1-Berm):				Heavy T	rucks: 7	76.9%	5.2%	17.9%	6.34%	
Centerline Dist. to Barrier:			Noice	Source El	ovetiene	lin fo	o.#)			
Centerline Dist. to Observer:	110.0 feet		Noise	Auto			ei)			
Barrier Distance to Observer:	0.0 feet			um Truck	. 0.0					
Observer Height (Above Pad):	5.0 feet			um Truck avv Truck			Grade Adjı	istment [.]	0.0	
Pad Elevation:	0.0 feet		пе	avy muck	s. o.u	04	orade Auja	isuneni.	0.0	
Road Elevation:	0.0 feet		Lane E	quivalent	Distance	e (in fe	eet)			
Road Grade:	0.0%			Auto	s: 97.5	91				
Left View:		es		um Truck		00				
Right View:	90.0 degre	es	He	avy Truck	s: 97.5	09				
FHWA Noise Model Calculatio	ns		-							
VehicleType REMEL	Traffic Flow	Distanc	e Fini	e Road	Fresne	el E	Barrier Atte	n Berr	n Atten	
Autos: 71.7	8 0.48	-	4.46	-1.20	-	4.78	0.00	00	0.000	
Medium Trucks: 82.4	0 -10.39	-	4.45	-1.20	-	4.88	0.00	00	0.000	
Heavy Trucks: 86.4	0 -10.88	-	4.45	-1.20	-	5.14	0.00	00	0.000	
Unmitigated Noise Levels (wit										
VehicleType Leq Peak H			q Evening	,	Night		Ldn	CN	IEL	
	6.6	65.6	62		59.6		67.3		67.3	
	6.4	65.7	59		58.6		66.7		66.9	
	39.9	68.8	63		63.8		71.2		71.3	
	72.7	71.8	66	6	66.0		73.6		73.9	
Centerline Distance to Noise	Contour (in feet	,								
			70 dBA		dBA	60	0 dBA	55 (dBA	
		Ldn:	19	2	414		892		1,922	
		NEL:	19		429		924			

	FHWA-RD	-77-108 HIGHWA	AY NOISI	E PREDIC	TION M	ODEL (9	/12/20)21)			
Scenario Road Name Road Segmen	Cajalco Rd.		Project Name: Mead Valley Commerce C Job Number: 15091								
	PECIFIC IN	PUT DATA						L INPUTS	5		
Highway Data				Site Con	ditions (Hard =	10, So	ft = 15)			
Average Daily 1	raffic (Adt):	30,122 vehicles				A	Autos:	15			
Peak Hour F	Percentage:	8.10%		Me	dium Tru	icks (2 A	xles):	15			
Peak Ho	ur Volume:	2,440 vehicles		He	avy Truc	ks (3+ A	xles):	15			
Veh	icle Speed:	55 mph		Vehicle I	Mix						
Near/Far Lan	e Distance:	102 feet			icleType		Dav	Evening	Night	Dailv	
Site Data				VCIII			76.6%	8.9%	14.5%		
Barr	ier Height:	0.0 feet		Me	edium Tr	ucks:	83.3%	4.6%	12.1%	7.02%	
Barrier Type (0-Wa		0.0		ŀ	leavy Tr	ucks:	76.9%	5.2%	17.9%	6.45%	
Centerline Dis	. ,	110.0 feet		Noise So	ource Ele	vations	in fe	ef)			
Centerline Dist. to	Observer:	110.0 feet			Autos						
Barrier Distance to	o Observer:	0.0 feet		Modiu	m Trucks	. 0.0	97				
Observer Height (A	bove Pad):	5.0 feet			v Trucks			Grade Adj	ustment	0.0	
Pa	d Elevation:	0.0 feet					-				
Roa	d Elevation:	0.0 feet		Lane Equ				ieet)			
R	oad Grade:	0.0%			Autos		591				
	Left View:	-90.0 degrees			m Trucks						
	Right View:	90.0 degrees		Heav	ry Trucks	s: 97.5	509				
FHWA Noise Mode	Calculations	5									
VehicleType	REMEL		Distance	Finite		Fresn		Barrier Atte	en Ber	m Atten	
Autos:	71.78	0.54	-4.4		-1.20		-4.78	0.0		0.000	
Medium Trucks:	82.40	-10.37	-4.4		-1.20		-4.88	0.0		0.000	
Heavy Trucks:	86.40	-10.74	-4.4	45	-1.20		-5.14	0.0	00	0.000	
Unmitigated Noise											
	.eq Peak Hou		,	Evening	Leq I			Ldn		NEL	
Autos:	66		-	62.3		59.6		67.4		67.7	
Medium Trucks:	66			59.2		58.6		66.7		66.9	
Heavy Trucks:	70			63.3		63.9		71.3		71.5	
Vehicle Noise:	72		8.	66.7		66.1		73.7		74.0	
Centerline Distance	e to Noise Co	ntour (in feet)									
				dBA	65 0		6	0 dBA	55	dBA	
		Ldr		195 202		420		905		1,950	
		CNEL	L.:	202		435		937		2,019	

FHV	/A-RD-	77-108 HIGH	WAY N	IOISE	PREDIC		ODEL (9	/12/20)21)					
	Scenario: E Road Name: Cajalco Rd. Road Segment: w/o Day St.					Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIF	IC INP	UT DATA				N	OISE N	IODE	L INPUTS	3				
Highway Data					Site Con	ditions ('Hard = '	10, So	ft = 15)					
Average Daily Traffic (A	dt): 2	1,942 vehicle	s				A	Autos:	15					
Peak Hour Percenta	ge:	8.10%			Me	dium Tru	icks (2 A	xles):	15					
Peak Hour Volu	ne: 1	,777 vehicles	3		He	avy Truc	ks (3+ A	xles):	15					
Vehicle Spe	ed:	55 mph		5	Vehicle I	Mix								
Near/Far Lane Distar	ice:	102 feet		F		icleType	1	Dav	Evening	Niaht	Daily			
Site Data								76.6%	8.9%	14.5%				
Barrier Heid	tht.	0.0 feet			Me	edium Tr	ucks:	83.3%	4.6%	12.1%	7.10%			
Barrier Type (0-Wall, 1-Be		0.0			F	leavy Tr	ucks:	76.9%	5.2%	17.9%	6.34%			
Centerline Dist. to Bar		110.0 feet		H	N 0			6 F.	- 41					
Centerline Dist. to Obser	ver:	110.0 feet		Ľ	Noise So	Autos			et)					
Barrier Distance to Obser	ver:	0.0 feet			Madiuu	Autos n Trucks								
Observer Height (Above P	ad):	5.0 feet				v Trucks			Grade Adj	uctmont				
Pad Elevat	ion:	0.0 feet			Ticav	y mucka	. 0.0	104	Orade Auj	usunon	. 0.0			
Road Elevat	ion:	0.0 feet		1	Lane Equ	uivalent	Distanc	e (in f	eet)					
Road Gra	de:	0.0%				Autos	: 97.5	591						
Left Vi	ew:	-90.0 degree	es		Mediur	n Trucks	: 97.5	500						
Right Vi	ew:	90.0 degree	es		Heav	y Trucks	: 97.5	509						
FHWA Noise Model Calcul	ations													
VehicleType REME	L	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten			
	71.78	-0.84		-4.4	-	-1.20		4.78	0.0		0.000			
	32.40	-11.70		-4.4	-	-1.20		4.88	0.0		0.000			
Heavy Trucks:	36.40	-12.19		-4.4	5	-1.20		-5.14	0.0	00	0.000			
Unmitigated Noise Levels	(withou	ut Topo and	barrier	' atten	uation)									
VehicleType Leq Pea				Leq E	vening	Leq I			Ldn		NEL			
Autos:	65.3		64.3		60.9		58.3		66.0		66.4			
Medium Trucks:	65.0		64.4		57.8		57.3		65.4		65.6			
Heavy Trucks:	68.6		67.5		61.8		62.5		69.8		70.0			
Vehicle Noise:	71.4	ļ	70.4		65.3		64.7		72.3		72.5			
Centerline Distance to Noi	se Con	ntour (in feet)												
Centerline Distance to Noi	se Con			70 (dBA	65 c		6	0 dBA	55	dBA			
Centerline Distance to Noi	se Con		Ldn:	70 (dBA 157 163	65 c	IBA 339 350	6	0 dBA 729 755	55	dBA 1,571 1.627			

FH	WA-RD	-77-108 HIGH	IWAY	' NOISE	PREDIC	TION	MODEL (9/12/2	021)				
Scenario: E+P Road Name: Caja Road Segment: w/o [t Name: Number:		Valley Corr	nmerce C	;		
SITE SPECI	FIC IN	PUT DATA			NOISE MODEL INPUTS								
Highway Data				5	Site Cond	ditions	(Hard =	10, Sc	oft = 15)				
Average Daily Traffic (Adt):	22,486 vehicle	es					Autos:	15				
Peak Hour Percent	tage:	8.10%			Med	dium Ti	rucks (2)	Axles):	15				
Peak Hour Volu	ume:	1,821 vehicle	s		Hea	avy Tru	ıcks (3+)	Axles):	15				
Vehicle Sp	eed:	55 mph		1	Vehicle N	<i>lix</i>							
Near/Far Lane Dista	ince:	102 feet		-		cleTyp	e	Dav	Evening	Night	Daily		
Site Data					-		Autos:	76.6%	•	14.5%			
Barrier He	iaht [.]	0.0 feet			Me	dium 1	rucks:	83.3%	4.6%	12.1%	6.95%		
Barrier Type (0-Wall, 1-Be	•	0.0			H	leavy T	Frucks:	76.9%	5.2%	17.9%	6.45%		
Centerline Dist. to Ba		110.0 feet		L.	Noise So	uree F	Invetion	o (in fi	n (1				
Centerline Dist. to Obse	erver:	110.0 feet		'	voise 30	Auto		000	eel)				
Barrier Distance to Obse	erver:	0.0 feet			Mediun			297					
Observer Height (Above F	Pad):	5.0 feet				y Truck		257	Grade Ad	iustment	0.0		
Pad Eleva	ation:	0.0 feet								aounom	0.0		
Road Eleva		0.0 feet		1	Lane Equ				feet)				
Road Gr		0.0%				Auto		591					
Left		-90.0 degree			Mediun			500					
Right \	/iew:	90.0 degree	es		Heav	y Truci	(S: 97.	509					
FHWA Noise Model Calcu	lations												
VehicleType REM	IEL	Traffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten		
Autos:	71.78	-0.73		-4.40		-1.20		-4.78		000	0.00		
Medium Trucks:	82.40	-11.68		-4.4		-1.20		-4.88		000	0.00		
Heavy Trucks:	86.40	-12.01		-4.4	5	-1.20		-5.14	0.0	000	0.00		
Unmitigated Noise Levels	s (witho	ut Topo and	barri	ier atten	uation)								
	ak Hour			Leg Ev		Leq	Night		Ldn		VEL		
Autos:	65.		64.4		61.0		58.4		66.1		66.		
Medium Trucks:	65.		64.4		57.9		57.3		65.4		65		
Heavy Trucks:	68. 71.		67.7		62.0		62.0		70.0		70.		
Vehicle Noise:		-	70.6		65.4		64.3	9	72.5	0	12.		
Centerline Distance to No	oise Col	ntour (in feet)	-		67	(8.4			1	(8.4		
			1 -	70 c		65	dBA		60 dBA		dBA		
			Ldn: NEL:		160		345		744		1,603		
		C	VEL.		166		358		770		1,660		

Thursday, July 27, 2023

FHWA	RD-77-1	08 HIGH	WAY NO	DISE	PREDIC		ODEL (S	9/12/2	.021)		_		
Scenario: EAC Road Name: Cajalco Rd. Road Segment: w/o Day St.					Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC	INPUT	DATA							EL INPUTS	3			
Highway Data				1	Site Con	ditions	(Hard =	10, S	oft = 15)				
Average Daily Traffic (Adt)	33,21	17 vehicle	s				,	Autos.	15				
Peak Hour Percentage	: 8.10	0%			Med	dium Tru	icks (2 A	(xles)	: 15				
Peak Hour Volume	2,69	1 vehicles			Hea	avy Truc	cks (3+ A	(xles)	: 15				
Vehicle Speed	5	5 mph			Vehicle N	lix							
Near/Far Lane Distance	: 10	2 feet		H		cleType		Day	Evening	Night	Daily		
Site Data				-				76.6%	•	14.5%			
Barrier Height	· 0	.0 feet			Me	dium Ti	ucks:	83.3%	6 4.6%	12.1%	7.10		
Barrier Type (0-Wall, 1-Berm)		.0			H	leavy Tr	ucks:	76.9%	6 5.2%	17.9%	6.34		
Centerline Dist. to Barrier		.0 feet			Noise So	uree El	ovotion	. /in 6	in a fi				
Centerline Dist. to Observer	: 110	.0 feet		4	NUISE 30	Auto:		000	eel)				
Barrier Distance to Observer	: 0	.0 feet			1 4 m ali	n Truck:		297					
Observer Height (Above Pad)	: 5	.0 feet				n Trucks y Trucks		297 004	Grade Adj	ustment	0.0		
Pad Elevation	: 0	.0 feet			neav	y mucks	5. 0.0	JU4	Orade Auj	usunent.	0.0		
Road Elevation	: 0	.0 feet		1	Lane Equ	iivalent	Distanc	e (in	feet)				
Road Grade	: 0.0	%				Autos		591					
Left View	: -90	.0 degree	s		Mediur	n Trucks	s: 97.	500					
Right View	: 90	.0 degree	s		Heav	y Trucks	s: 97.	509					
FHWA Noise Model Calculati	ons			_									
VehicleType REMEL	Trafi	fic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ben	m Atter		
Autos: 71.	78	0.96		-4.4	6	-1.20		-4.78	0.0	00	0.00		
Medium Trucks: 82	40	-9.90		-4.4	5	-1.20		-4.88	0.0	00	0.00		
Heavy Trucks: 86.	40	-10.39		-4.4	5	-1.20		-5.14	0.0	00	0.00		
Unmitigated Noise Levels (wi	thout T	opo and l	barrier a	tten	uation)								
VehicleType Leq Peak F		Leq Day		eq Ei	vening	Leq	Night		Ldn		VEL		
	67.1		56.1		62.7		60.1		67.8		68		
	66.8		56.2		59.6		59.1		67.2		67		
	70.4		59.3		63.6		64.3	_	71.6		71		
Vehicle Noise:	73.2	ī	72.2		67.1		66.5		74.1		74		
Centerline Distance to Noise	Contou	r (in feet)											
				70 c	dBA	65 (dBA		60 dBA	55	dBA		
			.dn:		207		446		962		2,07		
			IEL		214		462		995		2.14		

FHWA-RD-77-108 HIGHW	ay nois	SE PREDIC	TION M	ODEL (9	/12/20	21)				
Scenario: EAC+P Road Name: Cajalco Rd. Road Segment: wlo Day St.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC INPUT DATA						LINPUTS	3			
Highway Data		Site Con	ditions	(Hard = 1	10, So	ft = 15)				
Average Daily Traffic (Adt): 33,761 vehicles				A	utos:	15				
Peak Hour Percentage: 8.10%		Mee	dium Tru	icks (2 A	xles):	15				
Peak Hour Volume: 2,735 vehicles		Hei	avy Truc	:ks (3+ A	xles):	15				
Vehicle Speed: 55 mph		Vehicle M	Nix							
Near/Far Lane Distance: 102 feet			cleType	1	Dav	Evening	Night	Daily		
Site Data					76.6%	8.9%	14.5%			
Barrier Height: 0.0 feet		Me	edium Tr	ucks: 8	33.3%	4.6%	12.1%	7.00%		
Barrier Type (0-Wall, 1-Berm): 0.0		F	leavy Tr	ucks: 7	76.9%	5.2%	17.9%	6.419		
Centerline Dist. to Barrier: 110.0 feet		Noise So	urco El	ovations	(in fo	of)				
Centerline Dist. to Observer: 110.0 feet		110/30 00	Autos			01/				
Barrier Distance to Observer: 0.0 feet		Madium	n Trucks	. 0.0						
Observer Height (Above Pad): 5.0 feet			v Trucks			Grade Adj	ustment	· 0.0		
Pad Elevation: 0.0 feet					-		aounom	. 0.0		
Road Elevation: 0.0 feet		Lane Equ	uivalent	Distanc	e (in f	eet)				
Road Grade: 0.0%			Autos		91					
Left View: -90.0 degrees			n Trucks		00					
Right View: 90.0 degrees		Heav	y Trucks	s: 97.5	09					
FHWA Noise Model Calculations		1								
VehicleType REMEL Traffic Flow	Distance	e Finite		Fresne		Barrier Atte	en Ber	m Atten		
Autos: 71.78 1.03		.46	-1.20		4.78	0.0		0.00		
Medium Trucks: 82.40 -9.89		.45	-1.20		4.88	0.0		0.00		
Heavy Trucks: 86.40 -10.27	-4	.45	-1.20	-	5.14	0.0	00	0.00		
Unmitigated Noise Levels (without Topo and ba		,								
VehicleType Leq Peak Hour Leq Day	,	Evening	Leq			Ldn		NEL		
	5.1	62.8		60.1		67.9		68.		
	5.2	59.6		59.1		67.2		67.		
	9.5	63.8		64.4		71.8		71.		
Vehicle Noise: 73.3 72	2.3	67.2		66.6		74.2		74.		
					-	-	-			
Centerline Distance to Noise Contour (in feet)										
		0 dBA	65 (6	0 dBA	55	dBA		
	dn:	0 dBA 210 217	65 (dBA 452 468	6	0 dBA 975 1.009	55	dBA 2,100 2,174		

FHWA-RD-77-108 H	IGHWAY NOI	SE PREDICT	ION MODEL (9/12/2021)						
Scenario: HY Road Name: Cajalco Rd. Road Segment: w/o Day St.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC INPUT DA	ГА		NOISE N	ODEL INPUT	5					
Highway Data		Site Cond	itions (Hard =	10, Soft = 15)						
Average Daily Traffic (Adt): 36,538 ve	hicles			Autos: 15						
Peak Hour Percentage: 8.10%		Medi	ium Trucks (2 A	Axles): 15						
Peak Hour Volume: 2,960 veh	nicles	Hear	vy Trucks (3+ A	Axles): 15						
Vehicle Speed: 55 mp	h	Vehicle Mi	iv							
Near/Far Lane Distance: 102 fee	t			Day Evening	Night Daily					
Site Data		Verner		76.6% 8.9%	14.5% 86.56%					
Barrier Height: 0.0 fe	ot	Med	lium Trucks:	83.3% 4.6%	12.1% 7.10%					
Barrier Type (0-Wall, 1-Berm): 0.0	el	He		76.9% 5.2%	17.9% 6.34%					
Centerline Dist. to Barrier: 110.0 fe	et		•							
Centerline Dist. to Observer: 110.0 fe		Noise Sou	rce Elevation:	, ,						
Barrier Distance to Observer: 0.0 fe				000						
Observer Height (Above Pad): 5.0 fe	et	Medium		297						
Pad Elevation: 0.0 fe	et	Heavy	Trucks: 8.0	004 Grade Adj	ustment: 0.0					
Road Elevation: 0.0 fe	et	Lane Equi	valent Distand	ce (in feet)						
Road Grade: 0.0%			Autos: 97.	591						
Left View: -90.0 de	grees	Medium	Trucks: 97.	500						
Right View: 90.0 de	grees	Heavy	Trucks: 97.	509						
FHWA Noise Model Calculations		1								
VehicleType REMEL Traffic Fl	ow Distanc	e Finite R	Road Fresh	el Barrier Atte	en Berm Atten					
					000 0.000					
					000 0.000					
Heavy Trucks: 86.40 -9	9.98 -4	1.45	-1.20	-5.14 0.0	0.000					
Unmitigated Noise Levels (without Topo	and barrier att	enuation)								
		Evening	Leq Night	Ldn	CNEL					
Autos: 67.5	66.5	63.1	60.5							
Medium Trucks: 67.3	66.6	60.1	59.5							
Heavy Trucks: 70.8	69.7	64.0	64.7							
		67.5	66.9	9 74.5	5 74.8					
Vehicle Noise: 73.6	72.7	07.5	00.0							
	feet)			1	1					
Vehicle Noise: 73.6	feet)	'0 dBA	65 dBA	60 dBA	55 dBA					
Vehicle Noise: 73.6	feet)			60 dBA 1,025 1.061						

	FHWA-RD-	77-108 HIGH	WAY NO	ISE PRED	ICTION I	MODEL (9/12/2	021)					
Scenario Road Name Road Segmen		Project Name: Mead Valley Commerce C Job Number: 15091											
SITE S	PECIFIC INF		NOISE MODEL INPUTS										
Highway Data				Site Co	onditions	; (Hard =	10, Sc	oft = 15)					
Average Daily T	raffic (Adt): 3	7,083 vehicle	s				Autos:	15					
Peak Hour F	Percentage:	8.10%		N	Medium Trucks (2 Axles): 15								
Peak Ho	our Volume: 3	3,004 vehicles		F	Heavy Trucks (3+ Axles): 15								
	icle Speed:	55 mph		Vehicle	Mix								
Near/Far Lan	e Distance:	102 feet		Ve	hicleTyp	e	Day	Evening	Night	Daily			
Site Data						Autos:	76.6%	8.9%	14.5%	86.58%			
Barr	ier Height:	0.0 feet		1	Medium	Frucks:	83.3%	4.6%	12.1%	7.01%			
Barrier Type (0-Wa		0.0			Heavy	Frucks:	76.9%	5.2%	17.9%	6.41%			
Centerline Dist	to Barrier:	110.0 feet		Noise	Source F	levation	s (in fa	pet)					
Centerline Dist. to	o Observer:	110.0 feet		10/30 0	Auto		000						
Barrier Distance to	o Observer:	0.0 feet		Med	um Truc		297						
Observer Height (A	,	5.0 feet			avy Truci		D04	Grade Ad	iustment.	0.0			
	d Elevation:	0.0 feet			·								
	d Elevation:	0.0 feet		Lane E		t Distand		leet)					
Road Grade: 0.0%					Autos: 97.591 Medium Trucks: 97.500								
Left View: -90.0 degrees					Heavy Trucks: 97.509								
	Right View:	90.0 degree	s	ne	avy muc	(5. 97.)	509						
FHWA Noise Model	Calculations												
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresh	el	Barrier Atte	en Ber	m Atten			
Autos:	71.78	1.44		-4.46	-1.20		-4.78	0.0	000	0.00			
Medium Trucks:	82.40	-9.48		-4.45	-1.20		-4.88		000	0.00			
Heavy Trucks:	86.40	-9.87		-4.45	-1.20		-5.14	0.0	000	0.00			
Unmitigated Noise	Levels (witho	ut Topo and I	barrier a	ttenuation)								
VehicleType I	eq Peak Hour	Leq Day	Le	q Evening	Leo	Night		Ldn	CI	VEL			
Autos:	67.6	6 6	6.5	63.	2	60.5	5	68.3	3	68.			
Medium Trucks:	67.3		56.6	60.		59.5		67.6		67.			
Heavy Trucks:	70.9		59.9	64.		64.8		72.2	-	72.			
Vehicle Noise:	73.7	,	72.7	67.	6	67.0)	74.6	6	74.			
Centerline Distance	e to Noise Con	tour (in feet)											
				70 dBA		dBA	6	60 dBA		dBA			
			Ldn:	223	-	481		1,037		2,235			
			IEL:	23		498		1.074		2,313			

Thursday, July 27, 2023

		-77-108 HIGH\										
Scenario: E					Project Name: Mead Valley Commerce C Job Number: 15091							
Road Name: Cajalco Rd.						JOD NL	imper:	5091				
Road Segment: w/o De	ecker	Rd.										
SITE SPECIFI	C INI	PUT DATA							L INPUT	5		
Highway Data				4	Site Con	ditions (Hard =	10, So	oft = 15)			
Average Daily Traffic (A	dt): 1	24,256 vehicle	s				,	Autos:	15			
Peak Hour Percenta	ge:	8.10% 1,965 vehicles			Medium Trucks (2 Axles): 15							
Peak Hour Volun	ne:				Hea	avy Truc	ks (3+ A	xles):	15			
Vehicle Spe	ed:	55 mph		h	Vehicle N	Aiv						
Near/Far Lane Distan	ce:	102 feet				cleTvpe		Dav	Evening	Night	Dailv	
Site Data				-				76.6%	•	14.5%		
Barrier Heig	hé.	0.0 feet			Me	dium Tri		83.3%		12.1%		
Barrier Type (0-Wall, 1-Ben		0.0 reet 0.0				leavy Tru		76.9%	5.2%	17.9%	6.34	
Centerline Dist. to Barr	·	110.0 feet										
Centerline Dist. to Observer:		110.0 feet		4	Noise So				eet)			
Barrier Distance to Observer:		0.0 feet				Autos		000				
Observer Height (Above Pad):		5.0 feet				n Trucks		297				
Pad Elevation:		0.0 feet			Heav	y Trucks	: 8.0	004	Grade Adj	ustment	: 0.0	
Road Elevati		0.0 feet			Lane Equ	ivalent	Distand	e (in	feet)			
Road Grade:		0.0%		F		Autos			,			
Left View:		-90.0 degree	-		Mediur	n Trucks	97	500				
Right View:		90.0 degree			Heav	y Trucks	97.	509				
FHWA Noise Model Calcula	tions											
VehicleType REME	L	Traffic Flow	Dista	ance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atter	
Autos: 7	1.78	-0.40		-4.4	-6	-1.20		-4.78	0.0	000	0.00	
Medium Trucks: 8	2.40	-11.27		-4.4	5	-1.20		-4.88	0.0	000	0.00	
Heavy Trucks: 8	6.40	-11.76		-4.4	-5	-1.20		-5.14	0.0	000	0.00	
Unmitigated Noise Levels (witho	ut Topo and b	arrier	atten	uation)							
VehicleType Leq Peak				Leq E	vening	Leq N			Ldn		VEL	
Autos:	65.		64.7		61.3		58.7		66.5		66	
Medium Trucks:	65.		64.8		58.3		57.7		65.8		66	
Heavy Trucks:	69.		6.8		62.3		62.9		70.3		70	
Vehicle Noise:	71.	8 7	0.9		65.7		65.2		72.8	3	73	
Centerline Distance to Nois	se Col	ntour (in feet)										
				70 0	dBA	65 d	BA	(60 dBA		dBA	
		L	.dn:		168		362		780		1,68	

Scenario: E+P Project Name: Mead Valley Commerce C Road Segment: Vio Decker Rd. Job Number: 15091 SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 24,825 vehicles Autos: 15 Peak Hour Percentage: 8,10% Medium Trucks: (34 Axles): 15 Vehicle Speed: 55 mph Medium Trucks: (34 Axles): 15 Vehicle Type Day Evening Night Daily Site Data Autos: 76.6% 8.9% 14.5% 86.61% Barrier Type (0-Wall, 1-Berm): 0.0 Feet Moles Source: 10.9% 6.43% Centerline Dist. to Observer: 10.0 feet Autos: 76.9% 5.2% 17.9% 6.43% Deserver Height: 0.0 feet Autos: 97.501 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: 90.0 degrees Fresnel Barrier Atten Bernier Atten	F	HWA-RD-	77-108 HIGHWA	AY NOISI	E PREDIC	TION M	ODEL (9	/12/20	21)		
Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 24,825 vehicles Autos: 15 Peak Hour Volume: 2,011 vehicles Autos: 15 Peak Hour Volume: 2,011 vehicles Medium Trucks: (3+ Axles): 15 Vehicle Speed: 55 mph Medium Trucks: (3+ Axles): 15 Site Data Vehicle Type Day Evening Night Daily Barrier Type (0-Wall, 1-Berm): 0.0 feet Autos: 76.6% 8.9% 12.1% 6.96% Barrier Distance to Observer: 10.0 feet Medium Trucks: 83.3% 4.6% 12.1% 6.96% Barrier Distance to Observer: 0.0 feet Autos: 0.00 Medium Trucks: 2.297 Observer Height (Above Pag): 5.0 feet Medium Trucks: 87.500 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Left View: 90.0 degrees Medium Trucks: 97.591 Heavy Trucks: 97.591 Heavy Trucks: 86.40 -11.25 -4.45 -1.20 -5.14 <t< th=""><th>Road Name: Ca</th><th>jalco Rd.</th><th>Rd.</th><th></th><th></th><th></th><th></th><th></th><th>/alley Com</th><th>merce C</th><th>:</th></t<>	Road Name: Ca	jalco Rd.	Rd.						/alley Com	merce C	:
Average Daily Traffic (Adt): 24,825 vehicles Autos: 15 Peak Hour Percentage: 8.10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,011 vehicles Heavy Trucks (2 Axles): 15 Vehicle Speed: 55 mph Heavy Trucks (3 Axles): 15 Site Data Autos: 76.8% 8.9% 14.5% 86.61% Barrier Type (0-Wall, 1-Berm): 0.0 64.3% Medium Trucks: 83.3% 4.6% 12.1% 6.9% Barrier Type (0-Wall, 1-Berm): 0.0 10.0 feavy Trucks: 76.9% 5.2% 17.9% 6.43% Observer: 0.0 feet Mole Source Elevations (in feet) Medium Trucks: 2.000 Medium Trucks: 2.97 Observer: 0.0 feet Mutos: 0.000 Medium Trucks: 2.00 4.400 0.0 0.0 Road Elevation: 0.0 feet Mutos: 97.591 Medium Trucks: 97.591 Road Elevation: 0.0 feet Medium Trucks: 97.500 Heavy Trucks: 97.509	SITE SPEC	NOISE MODEL INPUTS									
Notes 15 Peak Hour Volume: 2,011 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 102 feet Site Data Autos: Barrier Height: 0.0 feet Barrier Neight: 0.0 feet Barrier Neight: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Cacluations Finite Road VehicleType REMEL Traffic Flow <th>Highway Data</th> <th></th> <th></th> <th></th> <th>Site Con</th> <th>ditions</th> <th>(Hard =</th> <th>10, So</th> <th>ft = 15)</th> <th></th> <th></th>	Highway Data				Site Con	ditions	(Hard =	10, So	ft = 15)		
Peak Hour Volume: 2,011 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 102 feet Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist to Observer: 10.0 feet Barrier Distance to Observer: 10.0 feet Barrier Distance to Observer: 10.0 feet Barrier Dist to Observer: 10.0 feet Barrier Distance to Observer: 10.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Road Grade: 0.0% Road Grade: 0.0% Actos: 97.591 Heavy Trucks: 8.04 Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Vehicle Type REMEL Vehicle Type RelMEL Traffic Flow Distance Vehicle Type Relware Vehicle Type Relwintrucks: 90.0 degr	Average Daily Traffic	; (Adt): 2	4,825 vehicles				A	lutos:	15		
Vehicle Speed: Near/Far Lane Distance: 55 mph 102 feet Vehicle Mix Site Data Autos: 76.6% 8.9% 14.5% 86.61% Barrier Height: 0.0 feet Medium Trucks: 83.3% 4.6% 12.1% 6.96% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 83.3% 4.6% 12.1% 6.96% Barrier Type (0-Wall, 1-Berm): 0.0 Noise Source Elevations (in feet) 6.43% Centerline Dist to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 2.97 Observer Height (Above Pad): 5.0 feet Medium Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Left View: 90.0 degrees Medium Trucks: 97.591 Heavy Trucks: 8.004 Carde Adjustment: 0.0 0.000 Heavy Trucks: 97.591 Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 -0.30 -4.46 -1.20	Peak Hour Perce	entage:	8.10%		Me	dium Tru	icks (2 A	xles):	15		
Near/Far Lane Distance: 102 fet Vehicle Mix Day Evening Night Daily Site Data Autos: 76.6% 8.9% 14.5% 86.61% Barrier Height: 0.0 feet Medium Trucks: 83.3% 4.6% 5.2% 17.9% 6.43% Barrier Type (C-Walt .1-Berm): 0.0 Feet Medium Trucks: 83.3% 4.6% 6.43% Centerline Dist. to Barrier: 110.0 feet Noise Source Elevations (in feet) 76.9% 5.2% 17.9% 6.43% Observer Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos: 97.501 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Right View: 90.0 degrees Medium Trucks: 97.500 Heavy Trucks: 97.500 FHMA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 71	Peak Hour V	olume: 2	2,011 vehicles		He	avy Truc	:ks (3+ A	xles):	15		
Near/Far Lane Distance: 102 feet Site Data Autos:: 76.% 8.9% 14.5% 86.6% 10.9% Barrier Height: 0.0 feet Medium Trucks:: 83.3% 46.6% 12.1% 6.9% Barrier Type (0-Wall, 1-Berm): 0.0 Feet Medium Trucks:: 83.3% 46.6% 12.1% 6.93% Centerline Dist. to Doserver: 110.0 feet Autos:: 0.00 Medium Trucks:: 82.297 Observer Height (Above Pad): 5.0 feet Autos:: 0.00 Medium Trucks:: 82.297 Pad Elevation: 0.0 feet Autos:: 97.591 Medium Trucks:: 80.04 Grade Adjustment: 0.0 Left View: 90.0 degrees Medium Trucks:: 97.509 Medium Trucks:: 97.509 FHWA Noise Model Calculations Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Heavy Trucks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 0.000 0.000	Vehicle	Speed:	55 mph		Vehicle	Mix					
Site Data Autos: 76.6% 8.9% 14.5% 86.81% Barrier Height: 0.0 feet Medium Trucks: 83.3% 4.6% 12.1% 6.96% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 83.3% 4.6% 12.1% 6.96% Centerline Dist. to Barrier: 110.0 feet Moise Source Elevations (in feet) 76.9% 5.2% 17.9% 6.43% Observer Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Medium Trucks: 9.004 Road Grade: 0.0% Left View: 90.0 degrees Medium Trucks: 97.500 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 -0.30 4.46 -1.20 -4.78 0.000 0.000 Heavy Trucks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000	Near/Far Lane Dis	stance:	102 feet					Dav	Evenina	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 110.0 feet Barrier Jistence to Observer: 110.0 feet Barrier Distance to Observer: 10.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations Distance VehicleType REMEL Traffic Flow Distance VehicleType REMEL VehicleType REMEL VehicleType REMEL VehicleType REMEL VehicleType REMEL VehicleType Leq Veat VehicleType Leq Veat VehicleType Equations VehicleType Equat Leq Veat <td>Site Data</td> <td></td>	Site Data										
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 76.9% 5.2% 17.9% 6.43% Centerline Dist. to Diserver: 110.0 feet Noise Source Elevations (in feet) Autos: 0.00 Barrier Distance to Observer: 0.0 feet Autos: 0.00 Medium Trucks: 2.297 Observer Height (Above Pad): 0.0 feet Autos: 0.00 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 97.591 Left Ivew: 90.0 degrees FHWA Noise Model Calculations Qued reades Finite Road Fresnel Barrier Atten Berm Atten Wehine Trucks: 82.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Medium Trucks: 86.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Medium Trucks: 86.40 -11.55 -4.45 -1.20 -6.74 0.000 0.000 Medium Trucks: 86.40 -11.55 -4.45 -1.20 -6.74 0.000 0.000	Parrier L	loight:	0.0 foot		M	edium Ti	ucks:	33.3%	4.6%	12.1%	6.96%
Centerline Dist. to Barrier: 110.0 feet Centerline Dist. to Diserver: 110.0 feet Centerline Dist. to Observer: 110.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 degrees Right View: 90.0 degrees VehicleType REMEL Traffic Flow VehicleType Leq Peek Hour Leq Vening Leq Vening Leq Night Lon Autos: 65.8 64.8 58.3 Finite Topo Edeveni					1	Heavy Tr	ucks:	76.9%	5.2%	17.9%	6.43%
Centerline Dist. to Observer: 110.0 feet Noise Source Elevations (in feet) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Lane Equivalent Distance (in feet) Medium Trucks: 97.500 FHWA Noise Model Calculations 90.0 degrees Heavy Trucks: 97.500 Heavy Trucks: 97.500 FHWA Noise Model Calculations 11.25 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Medium Trucks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Night Ldn CNEL Medium Trucks: <	1 1 ()	,									
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Leat View: 90.0 degrees Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 97.500 Heavy Trucks: 97.500 FHWA Noise Model Calculations WeinliceType REMEL Traffic Flow Distance Fresnel Barrier Atten Berr Atten Autos: 71.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Medium Trucks: 82.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 Urnitigated Noise Levels (without Topo and barrier attenuation) Leq Reving Leq Night Len CNEL VehicleType Leq Deak Hour Leq Day Leq Zevening Leq Night Len CNEL					Noise So				et)		
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance D	Barrier Distance to Ob	server:	0.0 feet								
Pad Elevation: 0.0 feet Road Elevation: 0.0 degrees Right View: -90.0 degrees FHWA Noise Model Calculations Heavy Trucks: 97.500 FHWA Noise Model Calculations: Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: T7.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Day Leq Day Leq Night Ldn CNEL Medium Trucks: 65.8 64.8 58.3 57.7 65.8 66.6 66.5 Medium Trucks: 69.2 68.1 62.4	Observer Height (Above	e Pad):	5.0 feet						Our de Adi		
Road Grade: 0.0% Autos: 97.591 Left View: -90.0 degrees Medium Trucks: 97.509 Right View: 90.0 degrees Heavy Trucks: 97.509 FHWA Noise Model Calculations Heavy Trucks: 97.509 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Medium Trucks: 86.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Qay Leq Evening Leq Night Ldn CNEL Autos: 65.5 64.8 58.3 57.7 65.8 66.6 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.6 Medium Trucks: 65.2 71.9 71.0 65.8 65.3 72.9 73.3			0.0 feet		Heav	y Truck	s: 8.0	04	Grade Adj	ustment	0.0
Left View: -90.0 degrees Medium Tracks: 97.500 FHWA Noise Model Calculations Heavy Tracks: 97.500 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: T/1.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Tracks: 82.40 -11.25 -4.45 -1.20 -4.88 0.000 0.000 Medium Tracks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Day Leq Revining Leq Night Ldn CNEL Autos: 65.8 64.8 58.3 57.7 65.8 66.6 66.5 Medium Tracks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.5	Road Ele	vation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in f	eet)		
Right View: 90.0 degrees Heavy Trucks: 97.509 FHWA Noise Model Calculations Heavy Trucks: 97.509 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) Leq Revening Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.6 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.6 Medium Trucks: 69.2 68.1 62.4 63.1 70.4 70.6 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1	Road	Grade:	0.0%			Autos	s: 97.5	i91			
FHWA Noise Model Calculations FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 71.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.88 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.5 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.6 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.0 Heavy Trucks: 65.5 64.8 58.3 57.7 65.8 66.1 Heavy Trucks: 65.5 64.8 58.3 57.7 65.8 66.1 Vehicle Noise: 71.9 71.0	Lef	t View:	-90.0 degrees		Mediu	m Truck	s: 97.5	00			
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 71.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.88 0.000 0.000 Heavy Trucks: 86.40 -11.25 -4.45 -1.20 -5.14 0.000 0.000 Ummitgated Noise Levels (without Topo and barrier attenuation) -5.14 0.000 0.000 Ummitgated Noise Levels (without Topo and barrier attenuation) Leq Revening Leq Night Ldn CNEL Autos: 65.8 64.8 58.3 57.7 65.8 66.6 66.5 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.4 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.3	Righ	t View:	90.0 degrees		Heav	y Truck	s: 97.5	09			
Autos: 71.78 -0.30 -4.46 -1.20 -4.78 0.000 0.000 Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Heavy Trucks: 82.40 -11.25 -4.45 -1.20 -4.78 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.8 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.0 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.5	FHWA Noise Model Cal	culations									
Medium Trucks: 82.40 -11.25 -4.45 -1.20 -4.88 0.000 0.000 Heavy Trucks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 Umitigated Noise Levels (without Topo and barrier attenuation) - - -5.14 0.000 0.000 VehicleType Leq Peak Hour Leq Day Leq Revining Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.6 Medium Trucks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.3											
Heavy Trucks: 86.40 -11.59 -4.45 -1.20 -5.14 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNEL Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 65.8 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.6 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1											
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.6 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.0 Heavy Trucks: 69.2 68.1 65.3 70.4 70.4 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1											
VehicleType Leq Peak Hour Leq Day Leq Vehicle Leq Night Ldn CNEL Autos: 65.8 64.8 61.4 58.8 66.6 66.5 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.0 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73:	Heavy Trucks:	86.40	-11.59	-4.4	45	-1.20		5.14	0.0	00	0.000
Autos: 65.8 64.8 61.4 58.8 66.6 66.5 Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.6 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.6 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1 Centerline Distance to Noise Contour (in feet)	Unmitigated Noise Leve	els (withou	ut Topo and bai	rier atte	nuation)						
Medium Trucks: 65.5 64.8 58.3 57.7 65.8 66.0 Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.6 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1 Centerline Distance to Noise Contour (in feet) Image: Contour (in feet)<	VehicleType Leq F	Peak Hour	Leq Day	Leg E	Evening	Leq	Night		Ldn	CI	VEL
Heavy Trucks: 69.2 68.1 62.4 63.1 70.4 70.0 Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.7 Centerline Distance to Noise Contour (in feet)				-							
Vehicle Noise: 71.9 71.0 65.8 65.3 72.9 73.1 Centerline Distance to Noise Contour (in feet)				-							
Centerline Distance to Noise Contour (in feet)											
	Vehicle Noise:	71.9) 71.	0	65.8		65.3		72.9		73.1
70 dBA 65 dBA 60 dBA 55 dBA	Centerline Distance to I	Noise Con	tour (in feet)								
						65		6		55	
Ldn: 171 369 794 1,711											'
CNEL: 177 382 822 1,772			CNEL		177		382		822		1,772

Fł	HWA-RD	0-77-108 HIGH	IWAY N	IOISE	PREDIC	TION M	ODEL (S)/12/20)21)		
Road Name: Caj	Scenario: EAC Road Name: Cajalco Rd. Road Segment: w/o Decker Rd.						Name: I umber: 1		/alley Com	merce (2
SITE SPEC	IFIC IN	PUT DATA				N	IOISE N	IODE	L INPUTS	3	
Highway Data				1	Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic	(Adt):	35,672 vehicl	es				,	Autos:	15		
Peak Hour Percer	ntage:	8.10%			Me	dium Tri	ucks (2 A	xles):	15		
Peak Hour Vo	olume:	2,889 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vehicle S	peed:	55 mph			Vehicle I	Mix					
Near/Far Lane Dist	tance:	102 feet		H		icleType		Dav	Evening	Night	Daily
Site Data								76.6%	8.9%	14.5%	
Barrier H	oight:	0.0 feet			Me	edium Ti	rucks:	83.3%	4.6%	12.1%	
Barrier Type (0-Wall, 1-E	•	0.0			ŀ	leavy Ti	rucks:	76.9%	5.2%	17.9%	6.34%
Centerline Dist. to B		110.0 feet		H					0		
Centerline Dist. to Obs		110.0 feet		4	Noise So				et)		
Barrier Distance to Obs	erver:	0.0 feet				Auto		000			
Observer Height (Above	Pad):	5.0 feet				n Truck		297 004	Grade Adj	unternant	
Pad Elev	ation:	0.0 feet			Heav	y Truck	5: 8.0	104	Grade Auj	usuneni	. 0.0
Road Elev	ation:	0.0 feet		1	Lane Equ	uivalent	Distanc	e (in f	eet)		
Road G	Grade:	0.0%				Auto	s: 97.	591			
Left	View:	-90.0 degre	es		Mediur	n Truck	s: 97.	500			
Right	View:	90.0 degre	es		Heav	y Truck	s: 97.	509			
FHWA Noise Model Calc	ulations	5									
VehicleType REI	MEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el i	Barrier Atte	en Ber	m Atten
Autos:	71.78	1.27		-4.4	6	-1.20		-4.78	0.0	00	0.000
Medium Trucks:	82.40	-9.59		-4.4	5	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-10.08		-4.4	5	-1.20		-5.14	0.0	00	0.000
Unmitigated Noise Level	ls (witho	out Topo and	barrier	atten	uation)						
VehicleType Leq P	eak Hou	r Leq Da	/ L	Leg Ei	vening	Leq	Night		Ldn	C	NEL
Autos:	67		66.4		63.0		60.4		68.1		68.
Medium Trucks:	67		66.5		59.9		59.4		67.5		67.7
Heavy Trucks:	70		69.6		63.9		64.6		71.9		72.1
			72.6		67.4		66.8		74.4		74.7
Vehicle Noise:	73	.5	12.0								
Vehicle Noise:)	70 0	dBA	65	dBA	6	0 dBA	55	dBA
Vehicle Noise:		ontour (in feel		70 0	dBA 217 225	65	dBA 468 485	6	0 dBA 1,008 1.044	55	dBA 2,172 2,249

	FHWA-RD-	-77-108 HIGHW	AY NO	ISE PREDIC	TION	IODEL (9/12/20	021)					
Road Nam	io: EAC+P e: Cajalco Rd. nt: w/o Decker F				t Name: I lumber:		/alley Corr	imerce C	;				
SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS									
Highway Data				Site Con	ditions	(Hard =	10, So	oft = 15)					
Average Daily	Traffic (Adt):	36,241 vehicles					Autos:	15					
Peak Hour	Percentage:	8.10%		Me	dium Tr	rucks (2 A	(xles)	15					
		2,936 vehicles		He	avy Tru	cks (3+ A	(xles):	15					
	hicle Speed:	55 mph		Vehicle	Mix								
Near/Far La	ne Distance:	102 feet		Veh	icleType	9	Day	Evening	Night	Daily			
Site Data						Autos:	76.6%	8.9%	14.5%	86.59%			
Bai	rier Height:	0.0 feet		Medium Trucks: 83.3% 4.6% 12.1%									
Barrier Type (0-W		0.0		1	Heavy T	rucks:	76.9%	5.2%	17.9%	6.40%			
Centerline Dis	st. to Barrier:	110.0 feet		Noise So	ource E	levation	: (in fe	ef)					
Centerline Dist.	to Observer:	110.0 feet			Auto		000						
Barrier Distance		0.0 feet		Mediu	m Truck		297						
Observer Height (Above Pad): 5.0 feet					vy Truck		004	Grade Ad	iustment	: 0.0			
Pad Elevation: 0.0 feet													
	ad Elevation:	0.0 feet		Lane Eq				'eet)					
	Road Grade: Left View:	0.0%		Madiu	Auto m Truck								
	Right View:	-90.0 degrees 90.0 degrees			vy Truck								
	Night view.	90.0 degrees		11001	y much	3. 51.	505						
FHWA Noise Mode	el Calculations												
VehicleType		Traffic Flow	Distand		Road	Fresh	-	Barrier Att		m Atten			
Autos:	71.78	1.34		4.46	-1.20		-4.78		000	0.00			
Medium Trucks:	82.40	-9.58		4.45	-1.20		-4.88		000	0.00			
Heavy Trucks:	86.40	-9.97	-	4.45	-1.20		-5.14	0.0	000	0.00			
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier at	tenuation)									
VehicleType	Leq Peak Hour			q Evening	Leq	Night		Ldn		NEL			
Autos:	67.5		5.4	63.1		60.4		68.2		68.			
Medium Trucks:	67.2		6.5	60.0		59.4		67.5		67.			
Heavy Trucks:	70.8		9.8	64.1		64.7		72.1		72.			
Vehicle Noise:	73.0	o 72	2.6	67.5		66.9		74.5)	74.			
Centerline Distand	e to Noise Cor	ntour (in feet)											
				70 dBA	65	dBA	6	i0 dBA	55	dBA			
		CNE	in:	220 228		474		1,021		2,200			
						491		1.057		2.278			

Thursday, July 27, 2023

FHWA	-RD	-77-108 HIGH	NAY	NOISE	PREDIC	TION M	ODEL (9	/12/2	021)				
Scenario: HY						Project Name: Mead Valley Commerce C							
Road Name: Cajalco						Job N	umber: 1	5091					
Road Segment: w/o Decker Rd.													
SITE SPECIFIC	: INI	PUT DATA								3			
Highway Data					Site Con	ditions		· ·	· · ·				
Average Daily Traffic (Adl): :	39,240 vehicle	s					utos					
Peak Hour Percentage	e.:	8.10%					ıcks (2 A						
Peak Hour Volum	e: :	3,178 vehicles			He	avy Truc	cks (3+ A	xles).	: 15				
Vehicle Speer	d:	55 mph		-	Vehicle I	<i>lix</i>							
Near/Far Lane Distance	e:	102 feet			Vehi	cleType	1	Day	Evening	Night	Daily		
Site Data								76.6%	•	14.5%			
Barrier Heigh	<i>t</i> -	0.0 feet			Me	edium Tr	ucks: 8	33.3%	6 4.6%	12.1%	7.109		
Barrier Type (0-Wall, 1-Berm		0.0			ŀ	leavy Tr	ucks:	76.9%	6 5.2%	17.9%	6.349		
Centerline Dist. to Barrie	· · · ·	110.0 feet		-	Noise So			6 m #					
Centerline Dist. to Observe	r:	110.0 feet		-	Noise So				eet)				
Barrier Distance to Observe	r:	0.0 feet				Autos							
Observer Height (Above Pag):	5.0 feet				n Trucks			Crada Adi	untmont			
Pad Elevatio	n:	0.0 feet			Heav	y Trucks	s: 8.0	04	Grade Adj	usuneni.	0.0		
Road Elevation	n:	0.0 feet			Lane Equ	ivalent	Distanc	e (in	feet)				
Road Grad	e:	0.0%				Autos	s: 97.5	91					
Left View	V.	-90.0 degree	s		Mediur	n Trucks	s: 97.5	00					
Right View	V.	90.0 degree	s		Heav	y Truck:	s: 97.5	09					
FHWA Noise Model Calculat	ions												
VehicleType REMEL		Traffic Flow	Di	stance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten		
Autos: 71	.78	1.69		-4.4	16	-1.20	-	4.78	0.0	00	0.00		
Medium Trucks: 82	.40	-9.18		-4.4	15	-1.20	-	4.88	0.0	00	0.00		
Heavy Trucks: 86	.40	-9.67		-4.4	15	-1.20	-	5.14	0.0	00	0.00		
Unmitigated Noise Levels (w	ritho	ut Topo and I	oarri	er atter	nuation)								
VehicleType Leq Peak				Leq E	vening	Leq	Night		Ldn		VEL		
Autos:	67.		6.8		63.4		60.8		68.5		68		
Medium Trucks:	67.		6.9		60.4		59.8		67.9		68.		
Heavy Trucks:	71.		70.1		64.4		65.0		72.4		72.		
Vehicle Noise:	73.9	9 7	73.0		67.8		67.2		74.8		75		
Centerline Distance to Noise	Col	ntour (in feet)											
			<u> </u>	70	dBA	65 (dBA		60 dBA	55	dBA		
			.dn: IEL		231 240		499 516		1,075 1,112		2,31		

	FHWA-RI	D-77-108 HIGH	IWAY NC	DISE PRED		IODEL (9/12	/2021)						
	io: HY+P				Project Name: Mead Valley Commerce C								
Road Nam	ne: Cajalco Rd				Job N	lumber: 1509	91						
Road Segme	nt: w/o Decker	Rd.											
	SPECIFIC IN	IPUT DATA					EL INPUTS	5					
Highway Data				Site Co	nditions	(Hard = 10,	Soft = 15)						
Average Daily	Traffic (Adt):	39,809 vehicl	es			Auto	s: 15						
Peak Hour	Percentage:	8.10%		N	ledium Tr	ucks (2 Axles	s): 15						
Peak H	lour Volume:	3,224 vehicle	s	H	leavy Tru	cks (3+ Axles	s): 15						
Ve	hicle Speed:	55 mph		Vehicle	Mix								
Near/Far La	ne Distance:	102 feet			hicleType	Day	Evening	Night	Daily				
Site Data	e Data					Autos: 76.6	•	14.5%					
Ba	rrier Height:	0.0 feet		1	Medium T	rucks: 83.3	3% 4.6%	12.1%	7.01				
Barrier Type (0-W		0.0			Heavy T	rucks: 76.9	9% 5.2%	17.9%	6.40				
	ist. to Barrier:	110.0 feet		Noine	Course E	evations (in	faati						
Centerline Dist.	to Observer:	110.0 feet		NOISes	Auto		leel)						
Barrier Distance	to Observer:	0.0 feet				0.000							
Observer Height	server Height (Above Pad): 5.0 feet				um Truck		Grade Adji	uctmont	0.0				
Pad Elevation: 0.0 feet			неа	avy Truck	s: 8.004	Grade Auj	usuneni.	0.0					
Ro	ad Elevation:	0.0 feet		Lane E	quivalen	t Distance (i	n feet)						
	Road Grade:	0.0%			Auto	s: 97.591							
	Left View:	-90.0 degre	es	Medi	um Truck	s: 97.500							
	Right View:	90.0 degre	es	Hea	avy Truck	s: 97.509							
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresnel	Barrier Atte	en Ber	m Attei				
Autos:	71.78	1.75		-4.46	-1.20	-4.7	8 0.0	00	0.0				
Medium Trucks:	82.40	-9.17		-4.45	-1.20	-4.8	8 0.0	00	0.0				
Heavy Trucks:	86.40	-9.56		-4.45	-1.20	-5.1	4 0.0	00	0.0				
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenuation)								
VehicleType	Leq Peak Hou		/ Le	eq Evening	Leq	Night	Ldn		VEL				
Autos:			66.8	63.		60.9	68.6		69				
Medium Trucks:			66.9	60.		59.8	67.9		68				
Heavy Trucks:			70.2	64.		65.1	72.5		72				
	74	.0	73.0	67.	9	67.3	74.9)	75				
Vehicle Noise:													
	ce to Noise Co	ontour (in feet)		-								
Vehicle Noise: Centerline Distan	ce to Noise Co	ontour (in feet		70 dBA		dBA	60 dBA	55	dBA				
	ce to Noise Co) Ldn: NEL:	70 dBA 234 242	1	dBA 505 522	60 dBA 1,087 1,125	55	dBA 2,34 2,42				

FHWA-RD	-77-108 HIGHWAY	NOISE	PREDICTION MODEL (9/12/2021)	
Scenario: E Road Name: Cajalco Rd. Road Segment: e/o Decker	Rd.		Project Name: Mead Valley Comme Job Number: 15091	erce C
SITE SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS	
Highway Data			ite Conditions (Hard = 10, Soft = 15)	
Average Daily Traffic (Adt):	27,611 vehicles		Autos: 15	
Peak Hour Percentage:	8.10%		Medium Trucks (2 Axles): 15	
Peak Hour Volume:	2,236 vehicles		Heavy Trucks (3+ Axles): 15	
Vehicle Speed:	55 mph		ehicle Mix	
Near/Far Lane Distance:	102 feet			ight Daily
Site Data				4.5% 86.56%
	0.0.6			2.1% 7.10%
Barrier Height:	0.0 feet 0.0			7.9% 6.34%
Barrier Type (0-Wall, 1-Berm): Centerline Dist, to Barrier:	0.0 110.0 feet			1.070 0.017
Centerline Dist. to Observer:	110.0 feet		oise Source Elevations (in feet)	
Barrier Distance to Observer:	0.0 feet		Autos: 0.000	
Observer Height (Above Pad):	5.0 feet		Medium Trucks: 2.297	
Pad Elevation:	0.0 feet		Heavy Trucks: 8.004 Grade Adjus	ment: 0.0
Road Elevation:	0.0 feet		ane Equivalent Distance (in feet)	
Road Grade:	0.0%		Autos: 97.591	
Left View:	-90.0 degrees		Medium Trucks: 97.500	
Right View:	90.0 degrees		Heavy Trucks: 97.509	
FHWA Noise Model Calculations	5			
VehicleType REMEL	Traffic Flow Di	stance	Finite Road Fresnel Barrier Atten	Berm Atten
Autos: 71.78	0.16	-4.4		0.00
Medium Trucks: 82.40	-10.70	-4.4	-1.20 -4.88 0.000	0.00
Heavy Trucks: 86.40	-11.19	-4.4	-1.20 -5.14 0.000	0.00
Unmitigated Noise Levels (with				
VehicleType Leq Peak Hou		Leq E		CNEL
Autos: 66			61.9 59.3 67.0	67.
Medium Trucks: 66			58.8 58.3 66.4	66.
Heavy Trucks: 69			62.8 63.5 70.8	71.
Vehicle Noise: 72			66.3 65.7 73.3	73.
Centerline Distance to Noise Co	ntour (in feet)	70	BA 65 dBA 60 dBA	EE dDA
	Ldn:	70		55 dBA
	Lan: CNEL:		183 395 850 190 408 880	1,831
	CNEL:		190 408 880	1,896

FHV	/A-RD-7	77-108 HIGH	NAY	NOISE	E PREDIC	TION	MODEL (9/12/2	021)					
	Scenario: E+P Road Name: Cajalco Rd. Road Segment: e/o Decker Rd.						t Name: Number:		/alley Con	nmerce C	:			
SITE SPECIF	IC INP	UT DATA			NOISE MODEL INPUTS									
Highway Data					Site Con	ditions	; (Hard =	10, Sc	oft = 15)					
Average Daily Traffic (A	dt): 2	8,704 vehicle	s					Autos:	15					
Peak Hour Percenta	ige:	8.10%			Mee	dium Ti	rucks (2 /	Axles):	15					
Peak Hour Volu	me: 2	,325 vehicles			Hea	avy Tru	ıcks (3+)	Axles):	15					
Vehicle Spe		55 mph			Vehicle N	lix								
Near/Far Lane Distar	ice:	102 feet			Vehi	cleTyp	е	Day	Evening	Night	Daily			
Site Data							Autos:	76.6%	8.9%	14.5%	86.85%			
Barrier Heig	nht:	0.0 feet			Me	dium 1	Frucks:	83.3%	4.6%	12.1%	6.85%			
Barrier Type (0-Wall, 1-Be		0.0			F	leavy T	Frucks:	76.9%	5.2%	17.9%	6.319			
Centerline Dist. to Bar	rier:	110.0 feet			Noise So	urco F	lovation	e (in fa	of)					
Centerline Dist. to Obser	ver:	110.0 feet			110/30 00	Auto		000						
Barrier Distance to Obser	ver:	0.0 feet			Mediur			297						
Observer Height (Above P	ad):	5.0 feet				y Truci		004	Grade Ad	iustment	0.0			
Pad Elevat	ion:	0.0 feet												
Road Elevat		0.0 feet			Lane Equ				feet)					
Road Gra		0.0%				Auto		591						
Left Vi		-90.0 degree			Mediur			500						
Right V	ew:	90.0 degree	s		Heav	y Trucl	(S: 97.	509						
FHWA Noise Model Calcul	ations													
VehicleType REME		raffic Flow	Dis	tance	Finite	Road	Fresr		Barrier Att	en Ber	m Atten			
	71.78	0.34		-4.4		-1.20		-4.78		000	0.00			
	32.40	-10.69		-4.4		-1.20		-4.88		000	0.00			
Heavy Trucks:	36.40	-11.05		-4.4	45	-1.20		-5.14	0.0	000	0.00			
Unmitigated Noise Levels	(withou	t Topo and I	barrie	r attei	nuation)									
VehicleType Leq Pea		Leq Day		Leq E	vening	Leq	Night		Ldn		VEL			
Autos:	66.5		65.4		62.1		59.4		67.3		67.			
Medium Trucks:	66.1	-	35.4		58.8		58.3	-	66.		66.			
Heavy Trucks:	69.7		8.7		63.0		63.6		71.		71.			
Vehicle Noise:	72.5		71.6		66.4		65.8	5	73.4	ł	73.			
Centerline Distance to Noi	se Con	tour (in feet)												
			L	70	dBA	65	dBA		i0 dBA		dBA			
			dn:		187		402		867		1,868			
		CA	IEL:		193		417		898		1,934			

Thursday, July 27, 2023

FHWA-	RD-77-	108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9	/12/2	021)			
Scenario: EAC					Project Name: Mead Valley Commerce C							
Road Name: Cajalco F						Job N	umber: 1	5091				
Road Segment: e/o Decker Rd.												
SITE SPECIFIC	INPUT	DATA								3		
Highway Data					Site Con	ditions	Hard =	10, So	,			
Average Daily Traffic (Adt)	39,2	33 vehicle	s					Autos:				
Peak Hour Percentage	8.1	0%					ıcks (2 A	/				
Peak Hour Volume	3,17	8 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15			
Vehicle Speed	5	i5 mph		ŀ	Vehicle N	lix						
Near/Far Lane Distance	10	2 feet		-		cleType	1	Day	Evening	Night	Daily	
Site Data						A	utos:	76.6%	8.9%	14.5%	86.56	
Barrier Height).0 feet			Me	dium Ti	ucks:	83.3%	4.6%	12.1%	7.10	
Barrier Type (0-Wall, 1-Berm)		0.0			H	leavy Tr	ucks:	76.9%	5.2%	17.9%	6.349	
Centerline Dist. to Barrier	: 110	0.0 feet		-	Noise So	urco El	ovations	(in f	oot)			
Centerline Dist. to Observer	: 110	0.0 feet		-	10130 00	Autos						
Barrier Distance to Observer	: 0	0.0 feet			Madium	n Truck:						
Observer Height (Above Pad)	: 5	5.0 feet				y Trucks			Grade Adj	ustment	0.0	
Pad Elevation	: C	0.0 feet			Tieav	y mucks	s. 0.0	104	0/000/10/	uounoni	0.0	
Road Elevation	: C	0.0 feet			Lane Equ	iivalent	Distanc	e (in	feet)			
Road Grade	0.0)%				Autos	s: 97.5	591				
Left View	-90	0.0 degree	s		Mediur	n Trucks	s: 97.5	500				
Right View	90	0.0 degree	s		Heav	y Trucks	s: 97.5	509				
FHWA Noise Model Calculatio	ons											
VehicleType REMEL	Trat	ffic Flow	Dis	stance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atter	
Autos: 71.	78	1.69		-4.4	-6	-1.20		4.78	0.0	00	0.00	
Medium Trucks: 82.4	40	-9.18		-4.4	-5	-1.20		4.88	0.0	00	0.00	
Heavy Trucks: 86.4	40	-9.67		-4.4	5	-1.20		-5.14	0.0	00	0.00	
Unmitigated Noise Levels (wi	thout T	opo and l	barri	er atter	uation)							
VehicleType Leq Peak H	lour	Leq Day		Leq E	vening	Leq	Night		Ldn	CI	VEL	
Autos:	67.8	6	6.8		63.4		60.8		68.5	i	68	
Medium Trucks:	67.6	6	6.9		60.4		59.8		67.9)	68	
Heavy Trucks:	71.1	1	70.1		64.4		65.0		72.4		72	
Vehicle Noise:	73.9	1	73.0		67.8		67.2		74.8	1	75	
Centerline Distance to Noise	Contou	ır (in feet)										
				70	dBA	65 (dBA	(60 dBA	55	dBA	
		1	Ldn:		231		499		1,074		2,31	
			IEL :		240		516		1.112		2.39	

FHW	A-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION N	NODEL (9	9/12/20	021)						
Road Name: Cajalco	Scenario: EAC+P Road Name: Cajalco Rd. Road Segment: e/o Decker Rd.						Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFI	C IN	PUT DATA							L INPUTS	3					
Highway Data				1	Site Con	ditions	(Hard =	10, Sc	oft = 15)						
Average Daily Traffic (Ac	ft): ·	40,325 vehicle	s					Autos:	15						
Peak Hour Percentag		8.10%					rucks (2 A								
Peak Hour Volum		3,266 vehicles	6		Hea	avy Tru	icks (3+ A	(xles):	15						
Vehicle Spee		55 mph		1	Vehicle N	lix									
Near/Far Lane Distand	e:	102 feet			Vehi	cleType	e	Day	Evening	Night	Daily				
Site Data							Autos:	76.6%	8.9%	14.5%	86.779				
Barrier Heigi	ht:	0.0 feet			Me	dium 1	rucks:	83.3%	4.6%	12.1%	6.929				
Barrier Type (0-Wall, 1-Berr	n):	0.0			H	leavy 1	rucks:	76.9%	5.2%	17.9%	6.329				
Centerline Dist. to Barri	er:	110.0 feet		-	Noise So	urco F	lovations	: (in fa	oof)						
Centerline Dist. to Observ	er:	110.0 feet		ŕ	10/30 00	Auto		000							
Barrier Distance to Observ	er:	0.0 feet			Mediun			297							
Observer Height (Above Pa	d):	5.0 feet				y Truck		004	Grade Adj	ustment.	: 0.0				
Pad Elevation		0.0 feet		_											
Road Elevation		0.0 feet		1	Lane Equ				feet)						
Road Grad		0.0%				Auto									
Left Vie Right Vie		-90.0 degree 90.0 degree			Mediun Heav	n Truck y Truck									
FHWA Noise Model Calcula	tions														
VehicleType REMEL		Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten				
	1.78	1.82		-4.46	-	-1.20		-4.78	0.0		0.00				
	2.40	-9.17		-4.4	-	-1.20		-4.88	0.0		0.00				
	5.40	-9.56		-4.4	-	-1.20		-5.14	0.0	00	0.00				
Unmitigated Noise Levels (VehicleType Leq Peak				Leg Ev		1.00	Night		Ldn	0	NEL				
Autos:	67.		66.9	LEYEN	63.6	Leq	60.9		68.7		VEL 69				
Medium Trucks:	67.		66.9		60.4		59.8		67.9		68				
Heavy Trucks:	71.	-	70.2		64.5		65.1		72.5		72				
Vehicle Noise:	74.		73.1		67.9		67.3		74.9		75				
Centerline Distance to Nois	e Co	ntour (in feet))												
				70 c		65	dBA	6	60 dBA	55	dBA				
			Ldn:		235		506		1,089		2,347				
			VEL		243		523		1.128		2.43				

FHWA-RD-77-108 HIGI	IWAY NO			DDEL (9/	12/2021)					
Scenario: HY Road Name: Cajalco Rd. Road Segment: e/o Decker Rd.		Project Name: Mead Valley Commerce C Job Number: 15091								
SITE SPECIFIC INPUT DATA			N	DISE MO	DDEL INPUT	5				
Highway Data		Site Cor	nditions (Hard = 1	0, Soft = 15)					
Average Daily Traffic (Adt): 43,156 vehic	es			AL	<i>itos:</i> 15					
Peak Hour Percentage: 8.10%		Me	edium Tru	cks (2 Ax	<i>les):</i> 15					
Peak Hour Volume: 3,496 vehicle	s	He	eavy Truci	ks (3+ Ax	<i>les):</i> 15					
Vehicle Speed: 55 mph		Vehicle	Mix							
Near/Far Lane Distance: 102 feet			nicleType	D	ay Evening	Night Daily				
Site Data					6.6% 8.9%	14.5% 86.56%				
Barrier Height: 0.0 feet		м	ledium Tru	icks: 8	3.3% 4.6%	12.1% 7.10%				
Barrier Type (0-Wall, 1-Berm): 0.0			Heavy Tru		6.9% 5.2%	17.9% 6.34%				
Centerline Dist. to Barrier: 110.0 feet										
Centerline Dist. to Observer: 110.0 feet		Noise Se	ource Ele		, ,					
Barrier Distance to Observer: 0.0 feet			Autos		-					
Observer Height (Above Pad): 5.0 feet			m Trucks							
Pad Elevation: 0.0 feet		Hea	vy Trucks	8.00	4 Grade Adj	ustment: 0.0				
Road Elevation: 0.0 feet		Lane Eq	uivalent	Distance	(in feet)					
Road Grade: 0.0%			Autos	97.59	91					
Left View: -90.0 degre	es	Mediu	m Trucks	97.50	00					
Right View: 90.0 degre	es	Hea	vy Trucks	97.50	9					
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow	Distanc	e Finite	Road	Fresnel		en Berm Atten				
Autos: 71.78 2.10		4.46	-1.20			000 0.000				
Medium Trucks: 82.40 -8.76		4.45	-1.20			0.000				
Heavy Trucks: 86.40 -9.25	-	4.45	-1.20	-5	5.14 0.0	0.000				
Unmitigated Noise Levels (without Topo and	barrier at	tenuation)								
VehicleType Leq Peak Hour Leq Da		q Evening	Leq N	•	Ldn	CNEL				
Autos: 68.2	67.2	63.8		61.2	69.0					
Medium Trucks: 68.0	67.3	60.8		60.2	68.3					
Heavy Trucks: 71.5	70.5	64.8		65.4	72.8					
Vehicle Noise: 74.3	73.4	68.2	2	67.7	75.3	3 75.5				
Centerline Distance to Noise Contour (in fee										
Centerline Distance to Noise Contour (in fee	í l	70 dBA	65 d		60 dBA	55 dBA				
		70 dBA 247 255	65 d	BA 531 550	60 dBA 1,145 1,185	2,467				

	FHWA-RD-	77-108 HIGHWA	Y NOISE	E PREDIC	TION MO	DEL (9	/12/20	21)					
Road Nam	o: HY+P e: Cajalco Rd. nt: e/o Decker R	td.			Project N Job Nui			/alley Com	imerce C	:			
SITE S	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS									
Highway Data				Site Con	ditions (H	lard =	10, So	ft = 15)					
Average Daily	Traffic (Adt): 4	4,248 vehicles				A	Autos:	15					
Peak Hour	Percentage:	8.10%		Mee	dium Truc	ks (2 A	xles):	15					
Peak H	our Volume: 3	3,584 vehicles		Hei	avy Truck	s (3+ A	xles):	15					
Vel	hicle Speed:	55 mph	F	Vehicle N	Nix								
Near/Far Lar	ne Distance:	102 feet	ľ		cleType		Day	Evening	Night	Daily			
Site Data					Au	itos:	76.6%	8.9%	14.5%	86.75%			
Bar	rier Height:	0.0 feet		Me	edium Tru	cks:	83.3%	4.6%	12.1%	6.94%			
Barrier Type (0-W	•	0.0		F	leavy Tru	cks:	76.9%	5.2%	17.9%	6.32%			
Centerline Dis	. ,	110.0 feet	ŀ	Noise So	urco Elo	ations	(in fo	of					
Centerline Dist.	to Observer:	110.0 feet	-	NUISE 30	Autos:	0.0		eij					
Barrier Distance t	to Observer:	0.0 feet		Mediur	n Trucks:								
Observer Height (J	Above Pad):	5.0 feet			y Trucks:			Grade Ad	iustment	0.0			
	ad Elevation:	0.0 feet					_						
	ad Elevation:	0.0 feet	-	Lane Equ				eet)					
F	Road Grade:	0.0%			Autos:								
	Left View:	-90.0 degrees			n Trucks:								
	Right View:	90.0 degrees		Heav	y Trucks:	97.5	09						
FHWA Noise Mode	el Calculations												
VehicleType	REMEL	Traffic Flow Di	istance	Finite	Road	Fresn	e/ I	Barrier Atte	en Ber	m Atten			
Autos:	71.78	2.22	-4.4	16	-1.20		-4.78	0.0	000	0.00			
Medium Trucks:	82.40	-8.75	-4.4		-1.20		-4.88		000	0.00			
Heavy Trucks:	86.40	-9.16	-4.4	15	-1.20		-5.14	0.0	000	0.00			
Unmitigated Noise	Levels (withou	ut Topo and barr	ier atter	nuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	ight		Ldn	CI	VEL			
Autos:	68.3			64.0		61.3		69.1		69.			
Medium Trucks:	68.0			60.8		60.2		68.3		68.			
Heavy Trucks:	71.6			64.9		65.5		72.9		73.			
Vehicle Noise:	74.4	73.5		68.3		67.7		75.3	3	75.			
Centerline Distanc	e to Noise Con	tour (in feet)											
				dBA	65 dE		6	0 dBA		dBA			
		Ldn:		250		538		1,159		2,498			
		CNEL:		259		557		1,200		2,586			

Thursday, July 27, 2023

FHWA-	RD-77-108 HIG	HWAY NO	OISE PI	REDIC	TION MO	ODEL (9	/12/20	021)				
Scenario: E				Project Name: Mead Valley Commerce C								
Road Name: Cajalco F	Rd.				Job Ni	ımber: 1	5091					
Road Segment: e/o Seate	on Av.											
SITE SPECIFIC	INPUT DATA							L INPUTS	6			
Highway Data			Sit	e Con	ditions (Hard = 1	10, Sc	oft = 15)				
Average Daily Traffic (Adt).	23,167 vehi	les				A	utos:	15				
Peak Hour Percentage	8.10%			Mee	dium Tru	cks (2 A.	xles):	15				
Peak Hour Volume	1,877 vehicl	es		Hea	avy Truc	ks (3+ A.	xles):	15				
Vehicle Speed:	55 mph		Ve	hicle N	lix							
Near/Far Lane Distance.	102 feet				cleType	1	Day	Evening	Night	Daily		
Site Data					A	utos: ī	, 6.6%	8.9%	14.5%	86.56		
Barrier Height	0.0 feet			Me	dium Tru	ucks: 8	33.3%	4.6%	12.1%	7.10		
Barrier Type (0-Wall, 1-Berm)				H	leavy Tru	ucks: 7	76.9%	5.2%	17.9%	6.34		
Centerline Dist. to Barrier	110.0 feet		No	ico So	urco Ela	vations	(in fe	nof)				
Centerline Dist. to Observer	110.0 feet		NO	136 30	Autos			ei)				
Barrier Distance to Observer	0.0 feet			A da ali	n Trucks	. 0.0						
Observer Height (Above Pad)	5.0 feet				y Trucks			Grade Adj	ustment	0.0		
Pad Elevation	0.0 feet			neav	y mucks	. 0.0	04	Orade Auj	usunent.	0.0		
Road Elevation	0.0 feet		La	ne Equ	ivalent	Distanc	e (in i	feet)				
Road Grade	0.0%				Autos	: 97.5	91					
Left View	-90.0 degr	ees			n Trucks		00					
Right View	90.0 degr	ees		Heav	y Trucks	97.5	09					
FHWA Noise Model Calculatio	ons											
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ben	m Atter		
Autos: 71.7	78 -0.6	0	-4.46		-1.20	-	4.78	0.0	00	0.00		
Medium Trucks: 82.4	10 -11.4	6	-4.45		-1.20		4.88	0.0	00	0.00		
Heavy Trucks: 86.4	40 -11.9	6	-4.45		-1.20	-	5.14	0.0	00	0.00		
Unmitigated Noise Levels (wi	thout Topo an	d barrier a	attenua	tion)								
VehicleType Leq Peak H			eq Ever		Leq N	•		Ldn		IEL		
	65.5	64.5		61.1		58.5		66.3		66		
	65.3	64.6		58.1		57.5		65.6		65		
	68.8	67.8		62.1		62.7		70.1		70		
Vehicle Noise:	71.6	70.7		65.5		65.0		72.6		72		
Centerline Distance to Noise	Contour (in fee	et)										
			70 dB.		65 d		6	60 dBA	55	dBA		
		Ldn:		163		351		756		1.62		
		CNEL:		169		363		783		1.68		

FHWA-RD-77-108 HIGHWAY NO	DISE PREDICTION MODEL (9/12/2021)
Scenario: E+P Road Name: Cajalco Rd. Road Segment: e/o Seaton Av.	Project Name: Mead Valley Commerce C Job Number: 15091
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 24,926 vehicles	Autos: 15
Peak Hour Percentage: 8.10%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 2,019 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 55 mph	Vehicle Mix
Near/Far Lane Distance: 102 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 76.6% 8.9% 14.5% 86.46%
Barrier Height: 0.0 feet	Medium Trucks: 83.3% 4.6% 12.1% 6.69%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 76.9% 5.2% 17.9% 6.85%
Centerline Dist. to Barrier: 110.0 feet	Noise Source Elevations (in feet)
Centerline Dist. to Observer: 110.0 feet	Autos: 0.000
Barrier Distance to Observer: 0.0 feet	Medium Trucks: 2.297
Observer Height (Above Pad): 5.0 feet	Heavy Trucks: 8.004 Grade Adjustment: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 97.591
Left View: -90.0 degrees	Medium Trucks: 97.500
Right View: 90.0 degrees	Heavy Trucks: 97.509
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distar	
Autos: 71.78 -0.29	-4.46 -1.20 -4.78 0.000 0.000
Medium Trucks: 82.40 -11.40	-4.45 -1.20 -4.88 0.000 0.000
Heavy Trucks: 86.40 -11.30	-4.45 -1.20 -5.14 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier a	
	eq Evening Leq Night Ldn CNEL
Autos: 65.8 64.8	61.5 58.8 66.6 66.9
Medium Trucks: 65.3 64.7	58.1 57.6 65.7 65.9
Heavy Trucks: 69.4 68.4	62.7 63.4 70.7 70.9
Vehicle Noise: 72.1 71.1	65.9 65.4 73.0 73.2
Centerline Distance to Noise Contour (in feet)	
	70 dBA 65 dBA 60 dBA 55 dBA
Ldn:	175 377 812 1,749
CNEL:	181 390 840 1.810

FHWA	RD-77-1	08 HIGH	NAY N	IOISE	PREDIC		IODEL (9)/12/20	021)		
Scenario: EAC Road Name: Cajalco Road Segment: e/o Seat							Name: N lumber: 1		/alley Com	merce C	;
SITE SPECIFIC	INPUT	DATA							L INPUTS	3	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt)	: 34,51	7 vehicle	s					Autos:	15		
Peak Hour Percentage	: 8.10	0%			Me	dium Tr	ucks (2 A	xles):	15		
Peak Hour Volume	: 2,796	3 vehicles			He	avy Tru	cks (3+ A	xles):	15		
Vehicle Speed	55	5 mph		V	ehicle l	Niv					
Near/Far Lane Distance	: 102	2 feet		-		cleType		Dav	Evening	Night	Daily
Site Data					Veni			76.6%	•	14.5%	
Barrier Height	· 0	.0 feet			Me	edium T	rucks:	83.3%	4.6%	12.1%	7.109
Barrier Type (0-Wall, 1-Berm)		.0			F	leavy T	rucks:	76.9%	5.2%	17.9%	6.349
Centerline Dist. to Barrier		.0 feet		-							
Centerline Dist. to Observer		.0 feet		^	ioise So		levations		eet)		
Barrier Distance to Observer	. 0	.0 feet				Auto n Truck		000			
Observer Height (Above Pad)	: 5	.0 feet						297)04	Grade Adj	unternent	
Pad Elevation	: 0	.0 feet			Heav	y Truck	S: 8.0	104	Grade Auj	usuneni	0.0
Road Elevation	: 0	.0 feet		L	ane Equ	ivalen	t Distanc	e (in i	feet)		
Road Grade	: 0.0	%				Auto	s: 97.5	591			
Left View	-90	.0 degree	s		Mediur	n Truck	s: 97.5	500			
Right View	90	.0 degree	S		Heav	y Truck	s: 97.8	509			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Traff	fic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos: 71.		1.13		-4.46		-1.20		-4.78	0.0		0.00
Medium Trucks: 82.		-9.73		-4.45		-1.20		-4.88	0.0		0.00
Heavy Trucks: 86.	40	-10.22		-4.45	5	-1.20		-5.14	0.0	00	0.00
Unmitigated Noise Levels (w	ithout To		arrier	attenu	uation)						
VehicleType Leq Peak H	lour	Leq Day		Leq Ev		Leq	Night		Ldn		VEL
Autos:	67.3		6.2		62.9		60.2		68.0		68.
Medium Trucks:	67.0		6.3		59.8		59.2		67.3		67.
Heavy Trucks:	70.5		9.5		63.8		64.4		71.8		72.
Vehicle Noise:	73.3	7	2.4		67.2		66.7		74.3		74.
Centerline Distance to Noise	Contou	r (in feet)	T							I	
				70 d		65	dBA	6	60 dBA	55	dBA
			.dn: IEL:		213		458		986		2,125
					220		474		1.021		2.200

	FHWA-RD-7	7-108 HIGHW	ay noi:	SE PREDIC		NODEL (9/12/20	021)		
Scenario: Road Name: Road Segment:	Cajalco Rd.					t Name: I lumber:		√alley Com	imerce C	;
SITE SP	ECIFIC INPL	JT DATA		1				L INPUT	5	
Highway Data				Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tra	affic (Adt): 36	,276 vehicles					Autos:	15		
Peak Hour Pe	ercentage: 8	.10%		Me	dium Ti	rucks (2 A	Axles):	15		
Peak Hou	r Volume: 2,9	938 vehicles		He	avy Tru	icks (3+ A	Axles):	15		
	le Speed:	55 mph		Vehicle I	Mix					
Near/Far Lane	Distance:	102 feet		Veh	icleTyp	e	Day	Evening	Night	Daily
Site Data						Autos:	76.6%	8.9%	14.5%	86.49%
Barrie	er Height:	0.0 feet		M	edium 1	Trucks:	83.3%	4.6%	12.1%	6.82%
Barrier Type (0-Wall		0.0		1	Heavy 7	rucks:	76.9%	5.2%	17.9%	6.69%
Centerline Dist.	to Barrier: 1	10.0 feet		Noise So	urce F	levation	s (in fa	pet)		
Centerline Dist. to	Observer: 1	10.0 feet		110/30 00	Auto		000			
Barrier Distance to	Observer:	0.0 feet		Mediu	m Truck		297			
Observer Height (Ab	,	5.0 feet			y Truck		004	Grade Adj	ustment.	0.0
	Elevation:	0.0 feet			•					
	Elevation:	0.0 feet		Lane Eq				leet)		
		.0%			Auto					
		90.0 degrees			m Truck					
ĸ	ight View:	90.0 degrees		near	y Truck	(5. 97.)	509			
FHWA Noise Model (Calculations									
VehicleType	REMEL Tr	affic Flow	Distance	e Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	71.78	1.34	-4	1.46	-1.20		-4.78	0.0	000	0.00
Medium Trucks:	82.40	-9.69		1.45	-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-9.77	-4	1.45	-1.20		-5.14	0.0	000	0.00
Unmitigated Noise L	evels (without	Topo and ba	rrier att	enuation)						
VehicleType Le	eq Peak Hour	Leq Day	Leg	Evening	Leq	Night		Ldn	CI	VEL
Autos:	67.5	66	.4	63.1		60.4	Ļ	68.2	2	68.
Medium Trucks:	67.1	66		59.8		59.3		67.4		67.
Heavy Trucks:	71.0	70		64.2		64.9		72.3		72.
Vehicle Noise:	73.6	72	.7	67.5		67.0)	74.6	6	74.
Centerline Distance	to Noise Conte	our (in feet)								
				'0 dBA	65	dBA	6	60 dBA		dBA
		Ld CNE		223 231		481		1,035		2,231
						497		1.072		2.309

Thursday, July 27, 2023

	-KD-//	'-108 HIGH\	WAY	NOISE	PREDIC						
Scenario: HY									Valley Corr	merce (2
Road Name: Cajalco						Job Nu	mber: 1	5091			
Road Segment: e/o Sea	ton Av.										
SITE SPECIFIC	INPU	T DATA								S	
Highway Data					Site Con	ditions (l			,		
Average Daily Traffic (Adt		968 vehicle	s					utos:			
Peak Hour Percentage		.10%				dium True					
Peak Hour Volume	e: 3,0	75 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Vehicle Speed		55 mph		F	Vehicle N	lix					
Near/Far Lane Distance	e: 1	02 feet		-		cleType	l	Day	Evening	Night	Daily
Site Data						A	utos:	76.6%	8.9%	14.5%	86.56
Barrier Heigh	<i>t</i> .	0.0 feet			Me	dium Tru	icks: 8	33.3%	4.6%	12.1%	7.109
Barrier Type (0-Wall, 1-Berm		0.0			H	leavy Tru	icks:	76.9%	5.2%	17.9%	6.34
Centerline Dist. to Barrie	r: 1'	10.0 feet		-	Noise So	urce Ele	vations	(in fi	eet)		
Centerline Dist. to Observe	r: 1'	10.0 feet		-		Autos			,		
Barrier Distance to Observe	r:	0.0 feet			Mediur	n Trucks:	0.0				
Observer Height (Above Pad):	5.0 feet				y Trucks:			Grade Ad	iustment	0.0
Pad Elevation	n:	0.0 feet						-			
Road Elevation	1:	0.0 feet			Lane Equ				feet)		
Road Grade	e: 0	.0%				Autos:		91			
Left Viev	V9	0.0 degree	s		Mediur	n Trucks:	97.5	00			
Right View	V: 9	90.0 degree	s		Heav	y Trucks:	97.5	09			
FHWA Noise Model Calculat	ions										
VehicleType REMEL	Tr	affic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Bei	rm Atter
Autos: 71	.78	1.54		-4.4	6	-1.20	-	4.78	0.0	000	0.00
Medium Trucks: 82	.40	-9.32		-4.4	15	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks: 86	.40	-9.81		-4.4	15	-1.20	-	5.14	0.0	000	0.00
Unmitigated Noise Levels (w	rithout	Topo and b	oarrie	r atter	nuation)						
VehicleType Leq Peak		Leq Day		Leq E	vening	Leq N	light		Ldn		NEL
Autos:	67.7		6.6		63.3		60.6		68.4		68
Medium Trucks:	67.4		6.8		60.2		59.6		67.7		67
Heavy Trucks:	70.9	6	69.9		64.2		64.8		72.2		72
Vehicle Noise:	73.8	7	2.8		67.6		67.1		74.7	7	74
Centerline Distance to Noise	Conto	our (in feet)									
			ſ	70	dBA	65 d	BA	(60 dBA		dBA
			.dn: IEL:		226 234		488		1,051		2,26

	FHWA-RD	0-77-108 HIGH	WAY NO	DISE	PREDIC	TION	NODEL (9/12/20	021)				
Scenario Road Name Road Segmen	: Cajalco Rd.				Project Name: Mead Valley Commerce C Job Number: 15091								
SITE S	PECIFIC IN	IPUT DATA							L INPUT	5			
Highway Data				5	Site Cond	ditions	(Hard =	10, Sc	oft = 15)				
Average Daily 1	raffic (Adt):	39,727 vehicle	es				,	Autos:	15				
Peak Hour I	Percentage:	8.10%			Med	dium Ti	rucks (2 A	(xles)	15				
Peak Ho	our Volume:	3,218 vehicle	5		Hea	avy Tru	icks (3+ A	(xles)	15				
Veh	icle Speed:	55 mph		1	Vehicle N	<i>lix</i>							
Near/Far Lar	e Distance:	102 feet		F		cleTyp	e	Day	Evening	Night	Daily		
Site Data								76.6%		14.5%			
Bar	rier Heiaht:	0.0 feet			Me	edium 1	rucks:	83.3%	4.6%	12.1%	6.849		
Barrier Type (0-Wa		0.0			H	leavy T	rucks:	76.9%	5.2%	17.9%	6.66%		
Centerline Dis	. ,	110.0 feet						. (in f.	41				
Centerline Dist. t	o Observer:	110.0 feet			Noise So				eet)				
Barrier Distance t	o Observer:	0.0 feet			Mediun	Auto		000 297					
Observer Height (/	Above Pad):	5.0 feet						297	Grade Adj	ustment	0.0		
Pa	d Elevation:	0.0 feet			Heav	y Truck	(S: 8.0	JU4	Graue Auj	usimeni	0.0		
Roa	d Elevation:	0.0 feet		L	Lane Equ	ıivalen	t Distanc	e (in i	feet)				
F	oad Grade:	0.0%				Auto	os: 97.	591					
	Left View:	-90.0 degree	es		Mediun			500					
	Right View:	90.0 degre	es		Heav	y Truck	(s: 97.	509					
FHWA Noise Mode		-											
VehicleType	REMEL	Traffic Flow	Distai		Finite		Fresn	-	Barrier Atte		m Atten		
Autos:	71.78	1.74		-4.46	-	-1.20		-4.78	0.0		0.00		
Medium Trucks:	82.40	-9.28		-4.4	-	-1.20		-4.88	0.0		0.00		
Heavy Trucks:	86.40	-9.40		-4.45	-	-1.20		-5.14	0.0	100	0.00		
Unmitigated Noise													
	Leq Peak Hou			eq Ev	vening	Leq	Night		Ldn		VEL		
Autos:	67		66.8		63.5		60.8		68.6		68.		
Medium Trucks:	67		66.8		60.3		59.7		67.8		68.		
Heavy Trucks: Vehicle Noise:	71	-	70.3		64.6		65.3		72.6		72.		
venicie ivoise:	74	.0	73.1		67.9		67.4	•	75.0	1	75.		
Centerline Distance	e to Noise Co	ontour (in feet)					_					
				70 a		65	dBA	6	60 dBA	55	dBA		
			Ldn:		237		510		1,099		2,367		
		C	NEL:		245		528		1,137		2,450		

FI	HWA-RD	-77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL (9)/12/20	021)		
Scenario: E Road Name: Caj Road Segment: e/o		v.					Name: N umber: 1		/alley Com	merce C	;
SITE SPEC	IFIC IN	PUT DATA							L INPUTS	3	
Highway Data				(v	Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic	(Adt):	23,947 vehicle	s					Autos:	15		
Peak Hour Perce	ntage:	8.10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hour Vo	olume:	1,940 vehicles	;		He	avy Truc	cks (3+ A	xles):	15		
Vehicle S	peed:	55 mph			Vehicle I	<i>liv</i>					
Near/Far Lane Dis	tance:	102 feet		H		cleType		Dav	Evening	Night	Daily
Site Data					1011			76.6%	•	14.5%	
Barrier H	oiaht:	0.0 feet			Me	edium Tr	ucks:	83.3%	4.6%	12.1%	7.10
Barrier Type (0-Wall, 1-L		0.0			F	leavy Tr	ucks:	76.9%	5.2%	17.9%	6.34
Centerline Dist. to E		110.0 feet		H							
Centerline Dist. to Obs		110.0 feet		'	Voise So				et)		
Barrier Distance to Obs	erver:	0.0 feet				Autos		000			
Observer Height (Above	Pad):	5.0 feet				n Trucks			Grade Adj	unternant	
Pad Ele	vation:	0.0 feet			neav	y Trucks	s. o.u	004	Grade Auj	usuneni	0.0
Road Ele	vation:	0.0 feet		L	Lane Equ	ıivalent	Distanc	e (in f	'eet)		
Road (Grade:	0.0%				Autos	s: 97.5	591			
Left	View:	-90.0 degree	'S		Mediur	n Trucks	s: 97.5	500			
Right	View:	90.0 degree	s		Heav	y Trucks	s: 97.8	509			
FHWA Noise Model Cald	ulations										
VehicleType RE	MEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atter
Autos:	71.78	-0.46		-4.46	-	-1.20		-4.78	0.0		0.00
Medium Trucks:	82.40	-11.32		-4.4	-	-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40	-11.81		-4.4	5	-1.20		-5.14	0.0	00	0.00
Unmitigated Noise Leve											
	eak Hou			Leg Ev	/ening	Leq	Night		Ldn		VEL
Autos:	65.	-	64.6		61.3		58.6		66.4		66
Medium Trucks:	65.		64.8		58.2		57.6		65.7		65
Heavy Trucks:	68.		67.9		62.2		62.8		70.2		70
Vehicle Noise:	71.	8	70.8		65.6		65.1		72.7		72
Centerline Distance to N	loise Co	ntour (in feet)		-				-			
				70 c		65 (dBA	6	0 dBA	55	dBA
			Ldn:		167		359		773		1,666
		CI	VEL:		172		371		800		1,724

Road Name: Cajalco Rd. Jo Road Segment: elo Harvill Av. Sitte SPECIFIC INPUT DATA Highway Data Sitte Condition Average Daily Traffic (Adl): 25,357 vehicles Medium Peak Hour Volume: 2,054 vehicles Heavy Vehicle Speed: 55 mph Vehicle Speed: 102 feet Sitte Data Medium Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Diserver: 110.0 feet Noise Source Noise Source Centerline Dist. to Desrver: 110.0 feet	NOISE Dans (Hard n Trucks (2 Trucks (3-1 Trucks (3-1 Trucks (3-1 Trucks) Autos: m Trucks: ry Trucks:	:: 15091 :: MODE = 10, Si Autos. 2 Axles). + Axles). Day 76.6% 83.3%	EL INPUT: off = 15) 15 15 15 Evening & 8.9% & 4.6%		Daily 86.36%
Highway Data Site Condition Average Daily Traffic (Adt): 25,357 vehicles Peak Hour Percentage: 8.10% Peak Hour Volume: 2,054 vehicles Vehicle Speed: 55 mph Vehicle Speed: 102 feet Site Data Wehicle Mix Barrier Height: 0.0 feet Barrier Type (0-Wail, 1-Berri): 0.0 Centerline Dist. to Diserver: 110.0 feet Noise Source: 0.0 feet	n Trucks (2 Trucks (3 Type Autos: m Trucks: ry Trucks:	= 10, S Autos 2 Axles). + Axles). Day 76.6% 83.3%	oft = 15) : 15 : 15 : 15 : 15 : 15 : 15 : 15 : 15 : 15 : 15 : 15 : . : . : . : . : . : . : . : . : . : . : . : . : .	Night 14.5%	86.36%
Average Daily Traffic (Adt): 25,357 vehicles Peak Hour Percentage: 8.10% Peak Hour Volume: 2,054 vehicles Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Veh	n Trucks (2 Trucks (3+ Type Autos: m Trucks: ry Trucks:	Autos: 2 Axles): + Axles): Day 76.6% 83.3%	: 15 : 15 : 15 : 15 <i>Evening</i> 6 8.9% 6 4.6%	14.5%	86.36%
Peak Hour Percentage: 8.10% Medium Peak Hour Volume: 2.054 vehicles Heavy Vehicle Speed: 55 mph Vehicle Mix Near/Far Lane Distance: 102 feet Vehicle Mix Site Data Barrier Height: 0.0 feet Medium Barrier Height: 0.0 feet Medium Medium Centerline Dist. to Observer: 110.0 feet Noise Source	Trucks (3+ Type Autos: m Trucks: ry Trucks:	2 Axles). + Axles). Day 76.6% 83.3%	: 15 : 15 <i>Evening</i> 6 8.9% 6 4.6%	14.5%	86.36%
Peak Hour Volume: 2,054 vehicles Heavy Vehicle Speed: 55 mph Vehicle Mix Near/Far Lane Distance: 102 feet Vehicle T Site Data Barrier Height: 0.0 feet Mediur Barrier Type (0-Wail, 1-Berri): 0.0 Heavy Centerline Dist. to Dserver: 110.0 feet Noise Source:	Trucks (3+ Type Autos: m Trucks: ry Trucks:	+ Axles). Day 76.6% 83.3%	Evening 8.9% 4.6%	14.5%	86.36%
Vehicle Speed: 55 mph Near/Far Lane Distance: 102 feet Vehicle MX Vehicle T Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 110.0 feet Noise Source: Centerline Dist. to Observer: 110.0 feet	Type Autos: m Trucks: ry Trucks:	Day 76.6% 83.3%	Evening 6 8.9% 6 4.6%	14.5%	86.36%
Bear/Far Lane Distance: 102 feet Venicle Mix Site Data Venice Wedium Barrier Height: 0.0 feet Medium Barrier Type (0-Wail, 1-Berrn): 0.0 Noise Source Centerline Dist. to Barrier: 110.0 feet Noise Source	Autos: m Trucks: vy Trucks:	76.6% 83.3%	6 8.9% 6 4.6%	14.5%	86.36%
Barrier Height: 0.0 feet Mediur Barrier Type (0-Wail, 1-Berri): 0.0 Heav Centerline Dist. to Barrier: 110.0 feet Noise Source Centerline Dist. to Observer: 110.0 feet Noise Source	Autos: m Trucks: vy Trucks:	76.6% 83.3%	6 8.9% 6 4.6%	14.5%	86.36%
Barrier Height: 0.0 feet Medium Barrier Type (-0-Wall, 1-Berm): 0.0 Heav Centerline Dist. to Barrier: 110.0 feet Noise Source Centerline Dist. to Observer: 110.0 feet Noise Source	m Trucks: /y Trucks:	83.3%	6 4.6%		
Barrier Type (0-Wall, 1-Bern): 0.0 feet Heav Centerline Dist. to Barrier: 110.0 feet Noise Source Centerline Dist. to Observer: 110.0 feet Average Ave	y Trucks:	00.07		12.1%	6 70%
Centerline Dist. to Observer: 110.0 feet Centerline Dist. to Observer: 110.0 feet A		76.9%	6 5.2%		0.797
Centerline Dist. to Observer: 110.0 feet	e Elevatio			17.9%	6.85%
Centerline Dist. to Observer: 110.0 feet		ns (in f	eet)		
	lutos:	0.000	000		
Barrier Distance to Observer: 0.0 feet Medium Tr		2.297			
Observer Height (Above Pad): 5.0 feet Heavy Tr	ucks:	8.004	Grade Ad	justment	: 0.0
Pad Elevation: 0.0 feet	la má Diada		f 4)		
Road Elevation: 0.0 feet Lane Equiva			reet)		
		7.591 7.500			
Left View: -90.0 degrees Medium Tr Right View: 90.0 degrees Heavy Tr		7.500			
Hight view. 30.0 degrees houry h	40.00.0	1.000			
FHWA Noise Model Calculations					
VehicleType REMEL Traffic Flow Distance Finite Roa		snel	Barrier Att		rm Atten
	.20	-4.78		000	0.00
	.20	-4.88		000	0.00
Heavy Trucks: 86.40 -11.23 -4.45 -1.	.20	-5.14	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)					
	Leq Night		Ldn		NEL
Autos: 65.9 64.9 61.5		3.9	66.6		67.
Medium Trucks: 65.5 64.8 58.3		7.7	65.8		66.
Heavy Trucks: 69.5 68.5 62.8 Vehicle Noise: 72.1 71.2 66.0		3.4 5.5	70.8		71.
	0.	5.5	73.	1	15.
Centerline Distance to Noise Contour (in feet) 70 dBA	65 dBA		60 dBA		dBA
Ldn: 177	65 dBA 38		60 dBA 822		ава 1.772
CNEL: 183	39		822		1,772

Thursday, July 27, 2023

FHWA-F	RD-77-108 HIGHW	AY NOIS	E PREDIC	TION MO	DEL (9/12/	2021)	
Scenario: EAC						I Valley Comr	nerce C
Road Name: Cajalco R				Job Nu	nber: 1509	1	
Road Segment: e/o Harvil	Av.						
SITE SPECIFIC I	NPUT DATA					EL INPUTS	
Highway Data			Site Cond	ditions (H	lard = 10, S		
Average Daily Traffic (Adt):	50,399 vehicles				Autos		
Peak Hour Percentage:	8.10%				ks (2 Axles	· ·	
Peak Hour Volume:	4,082 vehicles		Hea	avy Truck	s (3+ Axles): 15	
Vehicle Speed:	55 mph		Vehicle N	lix			
Near/Far Lane Distance:	102 feet		Vehi	cleType	Day	Evening	Night Daily
Site Data				Au	tos: 76.6	% 8.9%	14.5% 86.56
Barrier Height:	0.0 feet		Me	dium Tru	cks: 83.3	% 4.6%	12.1% 7.109
Barrier Type (0-Wall, 1-Berm):	0.0		h	leavy Tru	cks: 76.9	% 5.2%	17.9% 6.34
Centerline Dist. to Barrier:	110.0 feet		Noise So	urce Elev	ations (in	feet)	
Centerline Dist. to Observer:	110.0 feet			Autos:	0.000		
Barrier Distance to Observer:	0.0 feet		Mediun	n Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			v Trucks:	8.004	Grade Adiu	stment: 0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet		Lane Equ		Distance (in	n feet)	
Road Grade:	0.0%			Autos:	97.591		
Left View:	-90.0 degrees			n Trucks:	97.500		
Right View:	90.0 degrees		Heav	y Trucks:	97.509		
FHWA Noise Model Calculatio	ns						
VehicleType REMEL		Distance			Fresnel	Barrier Atte	
Autos: 71.7		-4.		-1.20	-4.78		
Medium Trucks: 82.4		-4.		-1.20	-4.88		
Heavy Trucks: 86.4	0 -8.58	-4.	.45	-1.20	-5.14	4 0.00	00.00
Unmitigated Noise Levels (wit							
VehicleType Leq Peak Ho			Evening	Leq N		Ldn	CNEL
	8.9 67		64.5		61.9	69.6	70.
		3.0	61.4		60.9	69.0	69.
		1.1	65.4		66.1	73.4	73.
		1.1	68.9		68.3	75.9	76.
Centerline Distance to Noise (Contour (in feet)				1		
		70) dBA	65 dE	BA	60 dBA	55 dBA
	La CNE	in:	274 283		589 610	1,270 1,314	2,73

FHV	VA-RD	-77-108 HIGHV	/AY N	IOISE	PREDIC	TION MO	DEL (9/ [.]	12/202	1)		
Scenario: EAC+ Road Name: Cajal Road Segment: e/o H	co Rd.	v.				Project N Job Nui	lame: Me mber: 15		lley Com	merce C	;
SITE SPECIF	IC IN	PUT DATA							INPUTS	5	
Highway Data					Site Con	ditions (H			,		
Average Daily Traffic (A		51,810 vehicles						itos:	15		
Peak Hour Percente		8.10%				dium Truc		/	15		
Peak Hour Volu		4,197 vehicles			Hei	avy Truck	s (3+ Ax	les):	15		
Vehicle Spe		55 mph			Vehicle N	lix					
Near/Far Lane Dista	nce:	102 feet		Ē	Vehi	cleType	D	ay E	vening	Night	Daily
Site Data						Au	itos: 76	6.6%	8.9%	14.5%	86.46%
Barrier Hei	aht:	0.0 feet			Me	dium Tru	cks: 8	3.3%	4.6%	12.1%	6.95%
Barrier Type (0-Wall, 1-Be		0.0			F	leavy Tru	cks: 76	6.9%	5.2%	17.9%	6.59%
Centerline Dist. to Bar	rier:	110.0 feet		H	Noise So	urco Elos	vations	(in foo	6		
Centerline Dist. to Obser	ver:	110.0 feet		Ľ	140/36 30	Autos:			9		
Barrier Distance to Obser	ver:	0.0 feet			Mediur	n Trucks:	0.00				
Observer Height (Above P	ad):	5.0 feet				v Trucks:			rade Adj	istment	0.0
Pad Eleva		0.0 feet									
Road Eleva	tion:	0.0 feet		1	Lane Equ				et)		
Road Gr		0.0%				Autos:					
Left V		-90.0 degrees				n Trucks:					
Right V	iew:	90.0 degrees			Heav	y Trucks:	97.50	9			
FHWA Noise Model Calcu											
VehicleType REM		Traffic Flow	Dista		Finite		Fresnel		arrier Atte		m Atten
	71.78	2.89		-4.4	-	-1.20		1.78	0.0		0.00
	82.40	-8.06		-4.4	-	-1.20		1.88	0.0		0.00
Heavy Trucks:	86.40	-8.29		-4.4	5	-1.20	-5	5.14	0.0	00	0.00
Unmitigated Noise Levels			-								
VehicleType Leq Pea				Leq E	vening	Leq N	•	L	dn		VEL
Autos:	69.		B.O		64.6		62.0		69.7		70.
Medium Trucks:	68. 72.		8.0 1.4		61.5 65.7		60.9 66.4		69.0 73.7		69. 73.
Heavy Trucks: Vehicle Noise:	72.	-	4.2		69.1		68.5		76.1		73.
			+.2		09.1		00.0		10.1		10.
Centerline Distance to No.	ise Co	ntour (in feet)		70	dBA	65 dE	84	60	dBA	55	dBA
		,	dn:	,01	282	00 01	607	00	1.308	55	2.819
		CN			202		629		1,354		2,018
		0/1			252		020		.,004		2,010

	FHWA-RD	0-77-108 HIGH	WAY NC	DISE P	REDICT	ION M	ODEL (9/12	2/2021)		
Scenari Road Nam Road Segmer	e: Cajalco Rd						Name: Mea umber: 150	ad Valley Com 91	merce C	
SITE	SPECIFIC IN	IPUT DATA						DEL INPUTS	3	
Highway Data				Si	te Condi	tions ('Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	55,439 vehicle	es				Aut	os: 15		
Peak Hour	Percentage:	8.10%			Medi	um Tru	icks (2 Axle	s): 15		
Peak H	our Volume:	4,491 vehicle	s		Heav	y Truc	ks (3+ Axle	s): 15		
Ve	hicle Speed:	55 mph		Ve	hicle Mi	x				
Near/Far Lar	ne Distance:	102 feet		-		eType	Da	/ Evening	Night	Daily
Site Data							utos: 76.	•	14.5%	86.56%
Bar	rier Height:	0.0 feet			Med	lium Tr	ucks: 83.	3% 4.6%	12.1%	7.10%
Barrier Type (0-W	•	0.0			He	avy Tr	ucks: 76.	9% 5.2%	17.9%	6.34%
Centerline Dis	. ,	110.0 feet					evations (ii	- f 41		
Centerline Dist.	to Observer:	110.0 feet		/\\C	lise Sou	Autos				
Barrier Distance	to Observer:	0.0 feet			Medium					
Observer Height (Above Pad):	5.0 feet			Heavy				ustment	0.0
Pa	d Elevation:	0.0 feet			neavy	TTUCKS	. 0.004	Orade Auj	usunoni.	0.0
Roa	d Elevation:	0.0 feet		La	ne Equi	valent	Distance (in feet)		
F	Road Grade:	0.0%				Autos				
	Left View:	-90.0 degre	es		Medium	Trucks				
	Right View:	90.0 degre	es		Heavy	Trucks	97.509			
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	се	Finite R	oad	Fresnel	Barrier Atte	en Berr	n Atten
Autos:	71.78	3.19		-4.46		-1.20	-4.	78 0.0	00	0.000
Medium Trucks:	82.40	-7.68		-4.45		-1.20	-4.6	38 0.0	00	0.000
		-8.17		-4.45		-1.20	-5	14 0.0	00	0.000
Heavy Trucks:	86.40	-0.17				1.20	-0.			
			barrier a	ttenua		1.20	-0.			
Unmitigated Noise		out Topo and		ttenua eq Eve	ation)	Leq I		Ldn	CN	IEL
Unmitigated Noise VehicleType Autos:	Levels (with Leq Peak Hou 69	out Topo and Ir Leq Day .3	/ Le		ning 64.9		Vight 62.3	70.0)	70.4
Unmitigated Noise VehicleType Autos: Medium Trucks:	Levels (with Leq Peak Hou 69	out Topo and r Leq Day .3	68.3 68.4		ning 64.9 61.9		Vight 62.3 61.3	70.0		70.4 69.6
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (with Leq Peak Hou 69 69 72	out Topo and r Leq Day .3 .1 .6	/ Le 68.3 68.4 71.6		ation) ning 64.9 61.9 65.9		Vight 62.3 61.3 66.5	70.0 69.4 73.9) 	70.4 69.6 74.0
Unmitigated Noise VehicleType Autos: Medium Trucks:	Levels (with Leq Peak Hou 69	out Topo and r Leq Day .3 .1 .6	68.3 68.4		ning 64.9 61.9		Vight 62.3 61.3	70.0) 	70.4 69.6 74.0
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (with Leq Peak Hou 69 69 72 75	out Topo and r Leq Day .3 .1 .6 .4	68.3 68.4 71.6 74.5	eq Eve	ation) ning 64.9 61.9 65.9 69.3	Leq I	Vight 62.3 61.3 66.5 68.7	70.0 69.4 73.9 76.3) 	70.4 69.6 74.0 76.6
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Levels (with Leq Peak Hou 69 69 72 75	out Topo and r Leq Day .3 .1 .6 .4	/ Le 68.3 68.4 71.6 74.5		ation) ning 64.9 61.9 65.9 69.3		Vight 62.3 61.3 66.5 68.7	70.0 69.4 73.9 76.3 60 dBA) 	70.4 69.6 74.0 76.6 dBA
Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Levels (with Leq Peak Hou 69 69 72 75	Dut Topo and r Leq Day .3 .1 .6 .4 Dontour (in feet	68.3 68.4 71.6 74.5	eq Eve	ation) ning 64.9 61.9 65.9 69.3	Leq I	Vight 62.3 61.3 66.5 68.7	70.0 69.4 73.9 76.3) 	70.4 69.6 74.0 76.6

F	HWA-RD-77	7-108 HIGHWA	Y NOISE	E PREDIC	TION MO	DEL (9	/12/20	21)		
Scenario: H` Road Name: Ca Road Segment: e/	ajalco Rd.				Project N Job Nui			alley Com	imerce C	:
SITE SPE	CIFIC INPU	IT DATA							5	
Highway Data				Site Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily Traffi	c (Adt): 56	850 vehicles				A	utos:	15		
Peak Hour Perce	entage: 8	.10%		Mee	dium Truc	ks (2 A	kles):	15		
Peak Hour V	olume: 4,6	05 vehicles		Hei	avy Truck	s (3+ A	kles):	15		
Vehicle	Speed:	55 mph	F	Vehicle N	<i>lix</i>					
Near/Far Lane Di	stance: 1	102 feet	ŀ		cleType	[Dav	Evening	Night	Daily
Site Data						tos: 7	6.6%	8.9%	14.5%	
Barrier I	loiaht.	0.0 feet		Me	edium Tru	cks: 8	3.3%	4.6%	12.1%	6.96%
Barrier Type (0-Wall, 1-		0.0		F	leavy Tru	cks: 7	6.9%	5.2%	17.9%	6.579
Centerline Dist. to	,	10.0 feet	-	Noise So	urae Ela	otiona	lin fo	of)		
Centerline Dist. to Ob	server: 1	10.0 feet	-	Noise 30	Autos:	0.0		el)		
Barrier Distance to Ob	server:	0.0 feet		Modiur	n Trucks:	2.2				
Observer Height (Abov	e Pad):	5.0 feet			y Trucks:	8.0		Grade Ad	iustment	0.0
Pad Ele	evation:	0.0 feet		Tieav	y mucks.	0.0	04	onduc Adj	usunoni	0.0
Road Ele	evation:	0.0 feet		Lane Equ	ivalent D)istanc	e (in f	eet)		
Road	Grade: 0	.0%			Autos:	97.5				
		90.0 degrees			n Trucks:	97.5				
Righ	t View:	90.0 degrees		Heav	y Trucks:	97.5	09			
FHWA Noise Model Cal	culations									
VehicleType RE	EMEL Tr	affic Flow D	istance	Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	71.78	3.29	-4.4		-1.20		4.78	0.0		0.00
Medium Trucks:	82.40	-7.65	-4.4		-1.20		4.88		000	0.00
Heavy Trucks:	86.40	-7.90	-4.4	45	-1.20	-	5.14	0.0	000	0.00
Unmitigated Noise Lev				,						
	Peak Hour	Leq Day		vening	Leq N	•		Ldn		VEL
Autos:	69.4	68.4		65.0		62.4		70.2		70.
Medium Trucks:	69.1	68.4		61.9		61.3		69.4		69.
Heavy Trucks:	72.8	71.8		66.1		66.7		74.1		74.
Vehicle Noise:	75.6	74.6		69.5		68.9		76.5	0	76.
Centerline Distance to	Noise Conto	our (in feet)	70	-10.4	65 <i>1</i>			0 -10 4		-/0.4
		I da		dBA	65 dE		6	0 dBA		dBA
		Ldn:		300		645		1,391		2,996
		CNEL:		310		668		1,439		3,101

APPENDIX 9.1:

UNMITIGATED OPERATIONAL NOISE CALCULATIONS





15091 - Mead Valley Commerce Center

CadnaA Noise Prediction Model: 15091-07.cna Date: 14.02.24 Analyst: B. Lawson

Calculation Configuration

ParameterValueGeneral0.00Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition0.00Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line Sources0nProj. Line Sources0nRef. Time0.00Ref. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.00Sore Obj0.01.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Soure Himit (ISO 9613)DEarrier Coefficients C1,2,33.020.0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wink Igseed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)3.0Railways (FTA/FRA)3.0Railways (FTA/FRA)3.0Railways (FT	Configurat	tion
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Proj. Area SourcesOnRef. Time	Min. Length of Section (%)	0.00
Ref. Time0.00Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Rcvr1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)100Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TIM)Railways (FTA/FRA)Aircraft (???)Interaful for Dir (#Complexite)	Proj. Line Sources	On
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Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Search Radius Rxvr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionScreeningIncl. Ground Att. over Barrier Do xwith limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Incl. Ground Att. over Barrier	Ref. Time	
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DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Max. Distance Source - Revr 1000.00 Min. Distance Source - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 1 Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Darrier Coefficients C1,2,3 Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: State Sta	Recr. Time Penalty (dB)	5.00
Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 search Radius Src 100.00 Search Radius Rovr 100.00 Max. Distance Source - Revr 1000.00 Min. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Screening Incl. Ground Att. over Barrier Do st. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dramperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Internet (??)	Night-time Penalty (dB)	10.00
Model of Terrain Triangulation Reflection 2 search Radius Src 100.00 Search Radius Rovr 1000.00 Max. Distance Source - Revr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 Min. Distance Rvcr - Reflector 0.10 Industrial (ISO 9613) 1 Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Darrier Coefficients C1,2,3 Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???) 10	DTM	
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max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rource - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Roads (TTM)Railways (FTA/FRA)Aircraft (???)International Statement	Model of Terrain	Triangulation
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Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???) Interval	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Intervalue of the second	Industrial (ISO 9613)	
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Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: Comparison of Comparison o	Obst. within Area Src do not shield	On
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Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

Receiver Noise Levels

М.	ID		Level Lr		Lir	nit. Val	ue		Land	Use	Height		C	oordinates	
		Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
	R01	50.2	49.7	56.4	55.0	45.0	0.0				5.00	а	6252359.12	2249964.74	5.00
	R02	56.5	56.5	63.2	55.0	45.0	0.0				5.00	а	6253705.57	2249935.66	5.00
	R03	54.6	54.3	61.0	55.0	45.0	0.0				5.00	а	6254179.53	2248469.51	5.00
	R04	57.6	56.5	63.3	55.0	45.0	0.0				5.00	а	6253307.27	2248425.19	5.00
	R05	54.8	47.3	55.7	55.0	45.0	0.0				5.00	а	6252049.84	2248238.08	5.00
	R06	52.3	48.1	55.5	55.0	45.0	0.0				5.00	а	6252729.91	2247767.15	5.00
	R07	72.5	49.8	69.7	55.0	45.0	0.0				5.00	а	6252258.11	2248426.81	5.00
	R08	65.0	55.0	64.6	55.0	45.0	0.0				5.00	а	6252804.59	2248477.27	5.00
	R09	63.0	56.6	64.6	55.0	45.0	0.0				5.00	а	6253013.95	2248474.05	5.00
	R10	58.7	54.9	62.2	55.0	45.0	0.0				5.00	а	6253150.30	2248346.29	5.00
	R11	54.5	51.5	58.6	55.0	45.0	0.0				5.00	а	6253142.53	2248050.05	5.00
	R12	56.1	47.0	56.1	55.0	45.0	0.0				5.00	а	6252302.77	2247841.12	5.00
	_	M. ID R01 R01 R03 R03 R04 R05 R06 R07 R08 R09 R10 R11	ID JD (dBA) (dBA) R01 50.2 R02 56.5 R03 54.6 R04 57.6 R05 54.8 R06 52.3 R08 65.0 R09 63.0 R10 58.7	M. ID Level Lr M. Day Night (dBA) (dBA) R01 50.2 49.7 R02 56.5 56.5 R03 54.6 54.3 R04 57.6 56.5 R05 52.3 48.1 R06 52.3 48.1 R07 72.5 49.8 R08 65.0 55.0 R09 63.0 56.6 R10 58.7 54.9 R11 54.5 51.5	Day Night CNEL (dBA) (dBA) (dBA) R01 50.2 49.7 56.4 R02 56.5 56.5 63.2 R03 54.6 54.3 61.0 R04 57.6 56.5 63.3 R05 54.8 47.3 55.7 R06 52.3 48.1 55.5 R07 72.5 49.8 69.7 R08 65.0 55.0 64.6 R09 63.0 56.6 64.6 R10 58.7 54.9 62.2 R11 54.5 51.5 58.6	M. ID Level L* Lin 0 Day Night CNEL Day (dBA) (dBA) (dBA) (dBA) (dBA) R01 50.2 49.7 56.4 55.0 R02 56.5 56.5 63.2 55.0 R03 54.6 54.3 61.0 55.0 R04 57.6 56.5 63.3 55.0 R05 54.8 47.3 55.7 55.0 R06 52.3 48.1 55.5 55.0 R07 72.5 49.8 69.7 55.0 R08 65.0 55.0 64.6 55.0 R09 63.0 56.6 64.6 55.0 R10 58.7 54.9 62.2 55.0 R11 54.5 51.5 58.6 55.0	M. ID Level L Limit. Vali M. Day Night CNEL Day Night (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) R01 50.2 49.7 56.4 55.0 45.0 R02 56.5 56.5 63.2 55.0 45.0 R03 54.6 54.3 61.0 55.0 45.0 R04 57.6 56.5 63.3 55.0 45.0 R05 54.8 47.3 55.7 55.0 45.0 R07 52.5 56.5 63.4 55.0 45.0 R07 52.5 55.0 45.0 45.0 R08 65.0 55.0 55.0 45.0 R08 65.0 55.0 55.0 45.0 R08 65.0 55.0 64.6 55.0 45.0 R09 63.0 56.6 64.6 55.0 45.0 <	M. ID Level Lr Limit. Value M. Day Night CNEL Day Night CNEL (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) R01 50.2 49.7 56.4 55.0 45.0 0.0 R02 56.5 56.5 63.2 55.0 45.0 0.0 R03 54.6 54.3 61.0 55.0 45.0 0.0 R04 57.6 56.5 63.3 55.0 45.0 0.0 R05 54.8 47.3 55.7 55.0 45.0 0.0 R05 52.3 48.1 55.5 55.0 45.0 0.0 R07 72.5 49.8 69.7 55.0 45.0 0.0 R08 65.0 55.0 64.6 55.0 45.0 0.0 R08 65.0 55.0 45.0 0.0 0.0 0.0 <	ID L=v=l Lr Limit. Value Image: Night (dBA) (Nght (dBA) (Day (dBA) (dBA)	M. ID Level Lr Limit. Value Land M. ID Night CNEL Day Night CNEL Type Auto (dBA) (dBA)	M. ID Level Lr Limit. Value Land Use M. ID Night CNEL Day Night CNEL Type Auto Noise Type (dBA) (dBA) </td <td>M. ID Level Lr Limit. Value Land Use Height M. Day Night CNEL Day Night CNEL Type Auto Noise Type Might Noise Type Might Might (dBA) (dBA)</td> <td></td> <td></td> <td></td>	M. ID Level Lr Limit. Value Land Use Height M. Day Night CNEL Day Night CNEL Type Auto Noise Type Might Noise Type Might Might (dBA) (dBA)			

Point Source(s)

Name	М.	ID	R	esult. PW	'L		Lw/L	i	Op	erating Ti	me	Height	:	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254189.54	2248848.13	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254080.65	2248845.54	50.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254167.50	2249453.52	50.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254067.68	2249454.82	50.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252797.27	2248858.50	50.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252710.42	2248863.69	50.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252810.23	2249524.82	50.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252714.31	2249526.12	50.00

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Op	erating Ti	ime	Height	:	C	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		BBALL01	83.7	83.7	83.7	Lw	83.7		900.00	0.00	0.00	5.00	а	6252354.12	2248063.76	5.00
POINTSOURCE		BBALL02	83.7	83.7	83.7	Lw	83.7		900.00	0.00	0.00	5.00	а	6252353.42	2248124.87	5.00
POINTSOURCE		DOG01	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252235.98	2247941.44	3.00
POINTSOURCE		DOG02	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252312.23	2247939.64	3.00
POINTSOURCE		DOG03	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252372.31	2247937.08	3.00
POINTSOURCE		DOG04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252325.58	2248004.34	3.00
POINTSOURCE		DOG05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252232.39	2248010.24	3.00
POINTSOURCE		DOG06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252416.72	2248011.27	3.00
POINTSOURCE		DOG07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252332.51	2247862.11	3.00
POINTSOURCE		DOG08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252236.50	2247862.11	3.00
POINTSOURCE		PA01	98.4	98.4	98.4	Lw	98.4		900.00	0.00	0.00	5.00	а	6252264.48	2248066.44	5.00
POINTSOURCE		PA02	98.4	98.4	98.4	Lw	98.4		900.00	0.00	0.00	5.00	а	6252264.48	2248124.78	5.00
POINTSOURCE		PLAY01	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252701.99	2248076.97	5.00
POINTSOURCE		PLAY02	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252753.05	2248029.10	5.00
POINTSOURCE		PLAY03	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252754.87	2248040.27	5.00
POINTSOURCE		PLAY04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252771.05	2248072.18	5.00
POINTSOURCE		PLAY05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252775.61	2248084.49	5.00
POINTSOURCE		PLAY06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252779.03	2248094.74	5.00
POINTSOURCE		PLAY07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252826.44	2248102.27	5.00
POINTSOURCE		PLAY08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252832.82	2248071.50	5.00
POINTSOURCE		PLAY09	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252837.83	2248079.02	5.00
POINTSOURCE		PLAY10	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252842.39	2248087.91	5.00
POINTSOURCE		PLAY11	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252864.96	2248119.82	5.00
POINTSOURCE		PLAY12	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	a	6252866.78	2248131.21	5.00
POINTSOURCE		SPORTS01	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252391.94	2248378.39	5.00
POINTSOURCE		SPORTS02	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252392.60	2248438.41	5.00
POINTSOURCE		SPORTS03	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252329.31	2248406.35	5.00
POINTSOURCE		SPORTS04	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252268.32	2248379.86	5.00
POINTSOURCE		SPORTS05	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252269.14	2248436.77	5.00
POINTSOURCE		SPORTS06	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252962.91	2248381.16	5.00
POINTSOURCE		SPORTS07	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252700.05	2248383.20	5.00
POINTSOURCE		SPORTS08	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252830.06	2248381.16	5.00
POINTSOURCE		SPORTS09	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252896.48	2248321.66	5.00
POINTSOURCE		SPORTS10	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252890.37	2248439.44	5.00
POINTSOURCE		SPORTS11	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252746.51	2248318.81	5.00
POINTSOURCE		SPORTS12	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252749.77	2248443.93	5.00
POINTSOURCE		SPORTS13	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252643.40	2248358.34	5.00
POINTSOURCE		SPORTS14	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252644.22	2248407.65	5.00
POINTSOURCE		SPORTS15	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6253015.89	2248353.86	5.00
POINTSOURCE		SPORTS16	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6253017.52	2248406.43	5.00
POINTSOURCE		SPORTS17	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252912.38	2248277.65	5.00
POINTSOURCE		SPORTS18	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252743.66	2248279.69	5.00
POINTSOURCE		SPORTS19	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252916.86	2248482.64	5.00
POINTSOURCE		SPORTS20	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252751.40	2248483.05	5.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6252309.01	2248160.73	5.00
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6252309.28	2248309.92	5.00
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6252860.79	2249673.90	5.00
POINTSOURCE		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6254013.24	2249666.12	5.00
POINTSOURCE		TRASH05	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6252850.42	2248787.20	5.00

Line Source(s)

Name	М.	ID	R	esult. PW	Ľ	R	esult. PW	Ľ		Lw/L	i	Op	erating Ti	me		Moving	Pt. Src		Heigh	ht
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	72.2	72.2	72.2	Lw	93.2									8	а
LINESOURCE		TRUCK02	93.2	93.2	93.2	73.0	73.0	73.0	Lw	93.2									8	а
LINESOURCE		TRUCK03	93.2	93.2	93.2	67.4	67.4	67.4	Lw	93.2									8	а

Name	ID	ł	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	а		6254022.66	2249589.64	8.00	0.00
					6254126.98	2249588.68	8.00	0.00
					6254149.10	2249583.29	8.00	0.00
					6254170.63	2249575.89	8.00	0.00
					6254191.39	2249566.55	8.00	0.00
					6254211.20	2249555.33	8.00	0.00
					6254229.90	2249542.34	8.00	0.00
					6254252.85	2249524.23	8.00	0.00
					6254276.51	2249507.07	8.00	0.00
					6254300.85	2249490.88	8.00	0.00
					6254320.71	2249485.56	8.00	0.00
					6254341.04	2249482.42	8.00	0.00
					6254361.58	2249481.51	8.00	0.00
					6254382.10	2249482.84	8.00	0.00

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	у	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6254402.35	2249486.39	8.00	0.00
LINESOURCE	TRUCK02	8.00	а		6254073.07	2248708.07	8.00	0.00
					6254167.85	2248706.74	8.00	0.00
					6254189.22	2248704.27	8.00	0.00
					6254210.31	2248699.99	8.00	0.00
					6254230.95	2248693.93	8.00	0.00
					6254259.27	2248682.54	8.00	0.00
					6254287.96	2248672.14	8.00	0.00
					6254304.25	2248665.87	8.00	0.00
					6254321.14	2248661.50	8.00	0.00
					6254338.42	2248659.10	8.00	0.00
					6254355.87	2248658.69	8.00	0.00
					6254409.75	2248661.58	8.00	0.00
LINESOURCE	TRUCK03	8.00	а		6252843.28	2248718.67	8.00	0.00
					6252704.02	2248722.76	8.00	0.00
					6252693.85	2248722.93	8.00	0.00
					6252683.84	2248724.73	8.00	0.00
					6252674.25	2248728.11	8.00	0.00
					6252665.33	2248732.98	8.00	0.00
					6252657.30	2248739.22	8.00	0.00
					6252650.37	2248746.66	8.00	0.00
					6252644.72	2248755.12	8.00	0.00
					6252640.51	2248764.37	8.00	0.00
					6252637.83	2248774.18	8.00	0.00
					6252636.75	2248784.29	8.00	0.00
					6252641.67	2249545.56	8.00	0.00
					6252644.20	2249556.15	8.00	0.00
					6252648.44	2249566.18	8.00	0.00
					6252654.28	2249575.37	8.00	0.00
					6252661.54	2249583.48	8.00	0.00
					6252670.04	2249590.28	8.00	0.00
					6252679.55	2249595.59	8.00	0.00
					6252689.80	2249599.26	8.00	0.00
					6252700.51	2249601.20	8.00	0.00
					6252711.40	2249601.34	8.00	0.00
					6252846.55	2249601.43	8.00	0.00

Area Source(s)

Name	М.	ID	R	esult. PW	'L	Re	esult. PW	L''		Lw/L	i	Оре	erating Ti	me	Heigh	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		CAR01	81.1	81.1	81.1	51.9	51.9	51.9	Lw	81.1					5	а
AREASOURCE		CAR02	81.1	81.1	81.1	47.3	47.3	47.3	Lw	81.1					5	а
AREASOURCE		CAR03	81.1	81.1	81.1	58.5	58.5	58.5	Lw	81.1					5	а
AREASOURCE		CAR04	81.1	81.1	81.1	53.9	53.9	53.9	Lw	81.1					5	а
AREASOURCE		CAR05	81.1	81.1	81.1	52.3	52.3	52.3	Lw	81.1					5	а
AREASOURCE		CAR06	81.1	81.1	81.1	51.6	51.6	51.6	Lw	81.1					5	а
AREASOURCE		CAR07	81.1	81.1	81.1	52.7	52.7	52.7	Lw	81.1					5	а
AREASOURCE		CAR08	81.1	81.1	81.1	56.4	56.4	56.4	Lw	81.1					5	а
AREASOURCE		CAR09	81.1	81.1	81.1	47.7	47.7	47.7	Lw	81.1		900.00	0.00	0.00	5	а
AREASOURCE		CAR10	81.1	81.1	81.1	57.5	57.5	57.5	Lw	81.1		900.00	0.00	0.00	5	а
AREASOURCE		COLD01	111.5	111.5	111.5	68.5	68.5	68.5	Lw	111.5					8	а
AREASOURCE		COLD02	111.5	111.5	111.5	68.4	68.4	68.4	Lw	111.5					8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	x	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	CAR01	5.00	а		6254033.80	2249554.58	5.00	0.00
					6254164.88	2249553.92	5.00	0.00
					6254165.54	2249536.07	5.00	0.00
					6254191.97	2249535.41	5.00	0.00
					6254191.09	2249493.34	5.00	0.00
					6254034.68	2249495.10	5.00	0.00
AREASOURCE	CAR02	5.00	а		6254251.15	2249450.80	5.00	0.00
					6254340.87	2249454.50	5.00	0.00
					6254340.00	2249158.49	5.00	0.00
					6254251.46	2249161.10	5.00	0.00
AREASOURCE	CAR03	5.00	а		6254296.60	2249148.94	5.00	0.00
					6254339.13	2249150.68	5.00	0.00
					6254339.13	2249102.94	5.00	0.00
					6254296.60	2249104.67	5.00	0.00
AREASOURCE	CAR04	5.00	а		6254248.86	2249134.19	5.00	0.00
					6254266.22	2249135.06	5.00	0.00
					6254264.48	2248819.95	5.00	0.00
					6254246.25	2248820.82	5.00	0.00
AREASOURCE	CAR05	5.00	а		6254294.00	2248953.63	5.00	0.00

Name	ID	I	lei	ght		Coordinat	es	
		Begin	_	End	x	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6254337.40	2248952.76	5.00	0.00
					6254335.66	2248760.06	5.00	0.00
					6254294.00	2248761.79	5.00	0.00
AREASOURCE	CAR06	5.00	а		6254095.38	2248797.73	5.00	0.00
					6254253.72	2248797.73	5.00	0.00
					6254253.02	2248736.62	5.00	0.00
					6254094.69	2248738.01	5.00	0.00
AREASOURCE	CAR07	5.00	а		6252671.34	2248808.12	5.00	0.00
					6252802.93	2248807.83	5.00	0.00
					6252802.36	2248748.69	5.00	0.00
					6252689.45	2248748.97	5.00	0.00
					6252689.73	2248767.37	5.00	0.00
					6252670.77	2248767.65	5.00	0.00
AREASOURCE	CAR08	5.00	а		6252667.70	2249623.45	5.00	0.00
					6252667.43	2249643.19	5.00	0.00
					6252835.28	2249641.29	5.00	0.00
					6252836.09	2249623.45	5.00	0.00
AREASOURCE	CAR09	5.00	а		6252653.42	2248267.23	5.00	0.00
					6252997.87	2248266.54	5.00	0.00
					6253000.64	2248199.18	5.00	0.00
					6252654.81	2248198.48	5.00	0.00
AREASOURCE	CAR10	5.00	а		6252278.05	2248296.04	5.00	0.00
					6252297.00	2248296.04	5.00	0.00
					6252298.87	2248175.68	5.00	0.00
					6252276.45	2248176.48	5.00	0.00
AREASOURCE	COLD01	8.00	а		6252848.18	2249499.19	8.00	0.00
					6252849.92	2249681.08	8.00	0.00
					6254023.35	2249671.99	8.00	0.00
					6254023.14	2249488.11	8.00	0.00
AREASOURCE	COLD02	8.00	а		6252844.00	2248881.49	8.00	0.00
					6254017.73	2248872.62	8.00	0.00
					6254017.73	2248812.86	8.00	0.00
					6254073.37	2248811.99	8.00	0.00
					6254071.18	2248689.60	8.00	0.00
					6252844.25	2248698.03	8.00	0.00

Barrier(s)

Name	Sel.	М.	ID	Abso	rption	Z-Ext.	Canti	lever	H	leig	ght		Coordinate	es	
				left	right		horz.	vert.	Begin		End	x	У	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED			0						0.00	а		6252847.29	2249556.92	0.00	0.00
												6252847.21	2249577.33	0.00	0.00
BARRIERPLANNED			0						0.00	а		6252847.79	2249617.86	0.00	0.00
												6252847.98	2249683.02	0.00	0.00
												6254024.91	2249673.82	0.00	0.00
												6254024.48	2249609.06	0.00	0.00
BARRIERPLANNED			0						0.00	а		6254024.13	2249568.26	0.00	0.00
												6254023.79	2249488.11	0.00	0.00
BARRIERPLANNED			0						0.00	а		6252841.75	2248823.37	0.00	0.00
												6252841.36	2248737.48	0.00	0.00
BARRIERPLANNED			0						0.00	а		6252842.11	2248696.85	0.00	0.00
												6253255.65	2248693.73	0.00	0.00
												6253639.85	2248690.78	0.00	0.00
												6254072.84	2248688.17	0.00	0.00
												6254158.43	2248687.13	0.00	0.00
												6254177.90	2248685.46	0.00	0.00
												6254197.09	2248681.75	0.00	0.00
												6254220.05	2248675.16	0.00	0.00
												6254242.48	2248666.95	0.00	0.00

Building(s)

	<u> </u>											
Name	Sel.	м.	ID	RB	Residents	Absorption	Height			Coordinat	es	
							Begin		x	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001	х	0		45.00	а	6252683.18	2249560.17	45.00	0.00
									6252847.29	2249556.92	45.00	0.00
									6252845.20	2249496.50	45.00	0.00
									6254211.78	2249486.77	45.00	0.00
									6254211.99	2249481.85	45.00	0.00
									6254240.02	2249481.75	45.00	0.00
									6254239.39	2249453.61	45.00	0.00
									6254244.83	2249453.72	45.00	0.00
									6254240.35	2248845.57	45.00	0.00
									6254235.32	2248845.74	45.00	0.00
									6254234.81	2248817.75	45.00	0.00

Name	Sel.	М.	ID	RB	Residents	Absorption	Height	:		Coordinat	es	
							Begin		х	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
									6254208.57	2248817.90	45.00	0.00
									6254207.16	2248812.72	45.00	0.00
									6254019.25	2248814.39	45.00	0.00
									6254019.41	2248874.24	45.00	0.00
									6252842.50	2248882.80	45.00	0.00
									6252842.50	2248823.36	45.00	0.00
									6252710.01	2248823.88	45.00	0.00
									6252710.18	2248829.00	45.00	0.00
									6252681.76	2248829.57	45.00	0.00
									6252682.27	2248857.48	45.00	0.00
									6252677.10	2248857.99	45.00	0.00

Ground Absorption(s)

Name	Sel.	М.	ID	G	Coord	inates
					х	У
					(ft)	(ft)
GROUND			0	0.5	6254665.08	2248616.10
					6254665.08	2248478.76
					6251546.42	2248521.68
					6251514.95	2248721.96



APPENDIX 9.2:

MITIGATED OPERATIONAL NOISE CALCULATIONS





15091 - Mead Valley Commerce Center

CadnaA Noise Prediction Model: 15091-07_Mitigated.cna Date: 14.02.24 Analyst: B. Lawson

Calculation Configuration

ParameterValueGeneral0.00Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition0.00Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line Sources0nProj. Line Sources0nRef. Time0.00Ref. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.00Sore Obj0.01.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Soure Himit (ISO 9613)DEarrier Coefficients C1,2,33.020.0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wink Igseed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)3.0Railways (FTA/FRA)3.0Railways (FTA/FRA)3.0Railways (FT	Configurat	tion
Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time.000Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTM.000DTM.000Model of TerrainTriangulationReflection2Search Radius Rcvr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)	Parameter	Value
Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster FactorRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnProj. Area SourcesOnRef. Time.0.00Daytime Penalty (dB)0.00Night-time Penalty (dB)10.00Night-time Penalty (dB)10.00DTM.000Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionSoure Officients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Aircraft (???)	General	
Min. Dist Src to Rcvr0.00Partition0.00Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Rer. Time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr1000.00Min. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1.00Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)1	Max. Error (dB)	0.00
PartitionDescriptionRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Rer. Time Penalty (dB)10.00DTM5Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Order of Reflection2Search Radius Ror100.00Min. Distance Source - Revr1000.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)Darrier Coefficients C1,2,3Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TNM)Railways (FTA/FRA)Aircraft (???)Interfaction	Max. Search Radius (#(Unit,LEN))	2000.01
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Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Industri (???)	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area SourcesOnRef. Time	Min. Length of Section (%)	0.00
Ref. Time0.00Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM0Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Max. Order of Reflection2Search Radius Src100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Rcvr1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)100Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TIM)Railways (FTA/FRA)Aircraft (???)Interaful for Dir (#Complexite)	Proj. Line Sources	On
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Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)Standard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Search Radius Rxvr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionScreeningIncl. Ground Att. over Barrier Do xwith limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Incl. Ground Att. over Barrier	Ref. Time	
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DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Max. Distance Source - Revr 1000.00 Min. Distance Source - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 1 Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Darrier Coefficients C1,2,3 Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: State Sta	Recr. Time Penalty (dB)	5.00
Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 search Radius Src 100.00 Search Radius Rovr 100.00 Max. Distance Source - Revr 1000.00 Min. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Screening Incl. Ground Att. over Barrier Do st. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dramperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Interfaction	Night-time Penalty (dB)	10.00
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max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rource - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral DiffractionLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Roads (TTM)Railways (FTA/FRA)Aircraft (???)International Statement	Model of Terrain	Triangulation
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Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Lateral for Dir (??)	Search Radius Rcvr	100.00
Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Aircraft (???)	Max. Distance Source - Rcvr	1000.00 1000.00
Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Aircraft (???)	Min. Distance Rvcr - Reflector	1.00 1.00
Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???) Interval	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Intervalue of the state of th	Industrial (ISO 9613)	
Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: Comparison of Direct (Comparison of Comparison of Compar	Lateral Diffraction	some Obj
Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: Comparison of Comparison o	Obst. within Area Src do not shield	On
Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???) Image: Comparison of the comparison o	Screening	Incl. Ground Att. over Barrier
Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

Receiver Noise Levels

	••••	10.5		0.0											
М.	ID		Level Lr		Lii	mit. Val	ue		Land	l Use	Height	:	C	oordinates	
		Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
	R01	42.7	39.4	46.5	55.0	45.0	0.0				5.00	а	6252359.12	2249964.74	5.00
	R02	42.9	42.6	49.2	55.0	45.0	0.0				5.00	а	6253705.57	2249935.66	5.00
	R03	46.2	43.8	50.8	55.0	45.0	0.0				5.00	а	6254179.53	2248469.51	5.00
	R04	51.7	42.4	51.6	55.0	45.0	0.0				5.00	а	6253307.27	2248425.19	5.00
	R05	54.2	40.0	52.3	55.0	45.0	0.0				5.00	а	6252049.84	2248238.08	5.00
	R06	50.4	37.4	48.9	55.0	45.0	0.0				5.00	а	6252729.91	2247767.15	5.00
	R07	72.5	44.3	69.5	55.0	45.0	0.0				5.00	а	6252258.11	2248426.81	5.00
	R08	64.5	43.5	61.8	55.0	45.0	0.0				5.00	а	6252804.59	2248477.27	5.00
	R09	61.9	42.9	59.3	55.0	45.0	0.0				5.00	а	6253013.95	2248474.05	5.00
	R10	56.5	41.5	54.5	55.0	45.0	0.0				5.00	а	6253150.30	2248346.29	5.00
	R11	51.7	39.0	50.3	55.0	45.0	0.0				5.00	а	6253142.53	2248050.05	5.00
	R12	55.6	38.1	53.2	55.0	45.0	0.0				5.00	а	6252302.77	2247841.12	5.00
	_	M. ID R01 R01 R03 R03 R04 R05 R06 R07 R08 R09 R10 R11	M. ID U Day (dBA) R01 R02 42.9 R03 46.2 R04 51.7 R05 54.2 R06 50.4 R07 72.5 R08 64.5 R09 61.9 R10 56.5 R11 51.7	M. ID Level Lr Day Night (dBA) (dBA) R01 42.7 R02 42.9 R03 46.2 R03 46.2 R05 54.2 R06 50.4 R07 72.5 R08 64.5 R09 61.9 R10 56.5 R11 51.7	Day Night CNEL (dBA) (dBA) (dBA) R01 42.7 39.4 46.5 R02 42.9 42.6 49.2 R03 46.2 43.8 50.8 R04 51.7 42.4 51.6 R05 54.2 40.0 52.3 R06 50.4 37.4 48.9 R07 72.5 44.3 69.5 R08 64.5 43.5 61.8 R09 61.9 42.9 59.3 R10 56.5 41.5 54.5 R11 51.7 39.0 50.3	M. ID LEVELL Lit Variable Night CNEL Day (dBA) (dBA) (dBA) (dBA) R01 42.7 39.4 46.5 55.0 R02 42.9 42.6 49.2 55.0 R03 46.2 43.8 50.8 55.0 R04 51.7 42.4 51.6 55.0 R05 54.2 40.0 52.3 55.0 R05 54.2 40.0 52.3 55.0 R06 50.4 37.4 48.9 55.0 R07 72.5 44.3 69.5 55.0 R08 64.5 43.5 61.8 55.0 R09 61.9 42.9 59.3 55.0 R09 61.9 42.9 59.3 55.0 R10 56.5 41.5 54.5 55.0 R11 51.7 39.0 50.3 55.0	M. ID LEvel L Limit. Val M. Day Night CNEL Day Night (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) R01 42.7 39.4 46.5 55.0 45.0 R02 42.9 42.6 49.2 55.0 45.0 R03 46.2 43.8 50.8 55.0 45.0 R04 51.7 42.4 51.6 55.0 45.0 R05 54.2 40.0 52.3 55.0 45.0 R05 54.2 40.0 52.3 55.0 45.0 R06 50.4 37.4 48.9 55.0 45.0 R07 72.5 44.3 69.5 55.0 45.0 R08 64.5 43.5 61.8 55.0 45.0 R09 61.9 42.9 59.3 55.0 45.0 R10 56.5 41.5 54.5	M. ID Limit. Value M. ID Level Lr Limit. Value (dBA) Night CNEL Day Night CNEL (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) (dBA) R01 42.7 39.4 46.5 55.0 45.0 0.0 R02 42.9 42.6 49.2 55.0 45.0 0.0 R03 46.2 43.8 50.8 55.0 45.0 0.0 R04 51.7 42.4 51.6 55.0 45.0 0.0 R05 54.2 40.0 52.3 55.0 45.0 0.0 R05 54.2 40.0 52.3 55.0 45.0 0.0 R07 72.5 44.3 69.5 55.0 45.0 0.0 R08 64.5 43.5 51.8 55.0 45.0 0.0 R08 64.5 43.5 54.8 55.0 <		M. ID Level Lr Limit. Value Lance M. ID Night CNEL Day Night CNEL Type Auto (dBA) (dA) (dBA) (dA)	M. ID Level Lr Limit. Value Land Use M. ID Night CNEL Day Night CNEL Type Auto Noise Type (dBA) (dA) (dBA) (dA) <td>M. ID Level Lr Limit. Value Land Use Height M. Day Night CNEL Day Night CNEL Type Auto Noise Type Height (dBA) (dBA</td> <td></td> <td></td> <td></td>	M. ID Level Lr Limit. Value Land Use Height M. Day Night CNEL Day Night CNEL Type Auto Noise Type Height (dBA) (dBA			

Point Source(s)

Name	М.	ID	R	esult. PW	L		Lw/L	i	Op	erating Ti	ime	Height	:	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254189.54	2248848.13	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254080.65	2248845.54	50.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254167.50	2249453.52	50.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254067.68	2249454.82	50.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252797.27	2248858.50	50.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252710.42	2248863.69	50.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252810.23	2249524.82	50.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6252714.31	2249526.12	50.00

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Op	erating Ti	ime	Height	:	C	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		BBALL01	83.7	83.7	83.7	Lw	83.7		900.00	0.00	0.00	5.00	а	6252354.12	2248063.76	5.00
POINTSOURCE		BBALL02	83.7	83.7	83.7	Lw	83.7		900.00	0.00	0.00	5.00	а	6252353.42	2248124.87	5.00
POINTSOURCE		DOG01	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252235.98	2247941.44	3.00
POINTSOURCE		DOG02	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252312.23	2247939.64	3.00
POINTSOURCE		DOG03	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252372.31	2247937.08	3.00
POINTSOURCE		DOG04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252325.58	2248004.34	3.00
POINTSOURCE		DOG05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252232.39	2248010.24	3.00
POINTSOURCE		DOG06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252416.72	2248011.27	3.00
POINTSOURCE		DOG07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252332.51	2247862.11	3.00
POINTSOURCE		DOG08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	3.00	а	6252236.50	2247862.11	3.00
POINTSOURCE		PA01	98.4	98.4	98.4	Lw	98.4		900.00	0.00	0.00	5.00	а	6252264.48	2248066.44	5.00
POINTSOURCE		PA02	98.4	98.4	98.4	Lw	98.4		900.00	0.00	0.00	5.00	а	6252264.48	2248124.78	5.00
POINTSOURCE		PLAY01	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252701.99	2248076.97	5.00
POINTSOURCE		PLAY02	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252753.05	2248029.10	5.00
POINTSOURCE		PLAY03	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252754.87	2248040.27	5.00
POINTSOURCE		PLAY04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252771.05	2248072.18	5.00
POINTSOURCE		PLAY05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252775.61	2248084.49	5.00
POINTSOURCE		PLAY06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252779.03	2248094.74	5.00
POINTSOURCE		PLAY07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252826.44	2248102.27	5.00
POINTSOURCE		PLAY08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252832.82	2248071.50	5.00
POINTSOURCE		PLAY09	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252837.83	2248079.02	5.00
POINTSOURCE		PLAY10	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252842.39	2248087.91	5.00
POINTSOURCE		PLAY11	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	а	6252864.96	2248119.82	5.00
POINTSOURCE		PLAY12	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	a	6252866.78	2248131.21	5.00
POINTSOURCE		SPORTS01	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252391.94	2248378.39	5.00
POINTSOURCE		SPORTS02	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252392.60	2248438.41	5.00
POINTSOURCE		SPORTS03	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252329.31	2248406.35	5.00
POINTSOURCE		SPORTS04	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252268.32	2248379.86	5.00
POINTSOURCE		SPORTS05	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252269.14	2248436.77	5.00
POINTSOURCE		SPORTS06	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252962.91	2248381.16	5.00
POINTSOURCE		SPORTS07	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252700.05	2248383.20	5.00
POINTSOURCE		SPORTS08	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252830.06	2248381.16	5.00
POINTSOURCE		SPORTS09	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252896.48	2248321.66	5.00
POINTSOURCE		SPORTS10	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252890.37	2248439.44	5.00
POINTSOURCE		SPORTS11	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252746.51	2248318.81	5.00
POINTSOURCE		SPORTS12	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252749.77	2248443.93	5.00
POINTSOURCE		SPORTS13	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252643.40	2248358.34	5.00
POINTSOURCE		SPORTS14	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252644.22	2248407.65	5.00
POINTSOURCE		SPORTS15	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6253015.89	2248353.86	5.00
POINTSOURCE		SPORTS16	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6253017.52	2248406.43	5.00
POINTSOURCE		SPORTS17	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252912.38	2248277.65	5.00
POINTSOURCE		SPORTS18	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252743.66	2248279.69	5.00
POINTSOURCE		SPORTS19	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252916.86	2248482.64	5.00
POINTSOURCE		SPORTS20	94.0	94.0	94.0	Lw	94		900.00	0.00	0.00	5.00	а	6252751.40	2248483.05	5.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6252309.01	2248160.73	5.00
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6252309.28	2248309.92	5.00
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6252860.79	2249673.90	5.00
POINTSOURCE		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6254013.24	2249666.12	5.00
POINTSOURCE		TRASH05	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6252850.42	2248787.20	5.00

Line Source(s)

Name	М.	ID	R	esult. PW	Ľ	R	esult. PW	Ľ		Lw/L	i	Op	erating Ti	me		Moving	Pt. Src		Heigh	ht
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	72.2	72.2	72.2	Lw	93.2									8	а
LINESOURCE		TRUCK02	93.2	93.2	93.2	73.0	73.0	73.0	Lw	93.2									8	а
LINESOURCE		TRUCK03	93.2	93.2	93.2	67.4	67.4	67.4	Lw	93.2									8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	а		6254022.66	2249589.64	8.00	0.00
					6254126.98	2249588.68	8.00	0.00
					6254149.10	2249583.29	8.00	0.00
					6254170.63	2249575.89	8.00	0.00
					6254191.39	2249566.55	8.00	0.00
					6254211.20	2249555.33	8.00	0.00
					6254229.90	2249542.34	8.00	0.00
					6254252.85	2249524.23	8.00	0.00
					6254276.51	2249507.07	8.00	0.00
					6254300.85	2249490.88	8.00	0.00
					6254320.71	2249485.56	8.00	0.00
					6254341.04	2249482.42	8.00	0.00
					6254361.58	2249481.51	8.00	0.00
					6254382.10	2249482.84	8.00	0.00

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	x	у	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6254402.35	2249486.39	8.00	0.00
LINESOURCE	TRUCK02	8.00	а		6254073.07	2248708.07	8.00	0.00
					6254167.85	2248706.74	8.00	0.00
					6254189.22	2248704.27	8.00	0.00
					6254210.31	2248699.99	8.00	0.00
					6254230.95	2248693.93	8.00	0.00
					6254259.27	2248682.54	8.00	0.00
					6254287.96	2248672.14	8.00	0.00
					6254304.25	2248665.87	8.00	0.00
					6254321.14	2248661.50	8.00	0.00
					6254338.42	2248659.10	8.00	0.00
					6254355.87	2248658.69	8.00	0.00
					6254409.75	2248661.58	8.00	0.00
LINESOURCE	TRUCK03	8.00	а		6252843.28	2248718.67	8.00	0.00
					6252704.02	2248722.76	8.00	0.00
					6252693.85	2248722.93	8.00	0.00
					6252683.84	2248724.73	8.00	0.00
					6252674.25	2248728.11	8.00	0.00
					6252665.33	2248732.98	8.00	0.00
					6252657.30	2248739.22	8.00	0.00
					6252650.37	2248746.66	8.00	0.00
					6252644.72	2248755.12	8.00	0.00
					6252640.51	2248764.37	8.00	0.00
					6252637.83	2248774.18	8.00	0.00
					6252636.75	2248784.29	8.00	0.00
					6252641.67	2249545.56	8.00	0.00
					6252644.20	2249556.15	8.00	0.00
					6252648.44	2249566.18	8.00	0.00
					6252654.28	2249575.37	8.00	0.00
					6252661.54	2249583.48	8.00	0.00
					6252670.04	2249590.28	8.00	0.00
					6252679.55	2249595.59	8.00	0.00
					6252689.80	2249599.26	8.00	0.00
					6252700.51	2249601.20	8.00	0.00
					6252711.40	2249601.34	8.00	0.00
					6252846.55	2249601.43	8.00	0.00

Area Source(s)

Name	M.	ID	R	esult. PW	Ľ	Re	esult. PW	L''		Lw/L	i	Op	erating Ti	me	Heigh	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		Π
AREASOURCE		CAR01	81.1	81.1	81.1	51.9	51.9	51.9	Lw	81.1					5	а
AREASOURCE		CAR02	81.1	81.1	81.1	47.3	47.3	47.3	Lw	81.1					5	а
AREASOURCE		CAR03	81.1	81.1	81.1	58.5	58.5	58.5	Lw	81.1					5	а
AREASOURCE		CAR04	81.1	81.1	81.1	53.9	53.9	53.9	Lw	81.1					5	а
AREASOURCE		CAR05	81.1	81.1	81.1	52.3	52.3	52.3	Lw	81.1					5	а
AREASOURCE		CAR06	81.1	81.1	81.1	51.6	51.6	51.6	Lw	81.1					5	а
AREASOURCE		CAR07	81.1	81.1	81.1	52.7	52.7	52.7	Lw	81.1					5	а
AREASOURCE		CAR08	81.1	81.1	81.1	56.4	56.4	56.4	Lw	81.1					5	а
AREASOURCE		CAR09	81.1	81.1	81.1	47.7	47.7	47.7	Lw	81.1		900.00	0.00	0.00	5	а
AREASOURCE		CAR10	81.1	81.1	81.1	57.5	57.5	57.5	Lw	81.1		900.00	0.00	0.00	5	а
AREASOURCE		DRY01	103.4	103.4	103.4	60.4	60.4	60.4	Lw	103.4					8	а
AREASOURCE		DRY02	103.4	103.4	103.4	60.3	60.3	60.3	Lw	103.4					8	а

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
AREASOURCE	CAR01	5.00	а		6254033.80	2249554.58	5.00	0.00
					6254164.88	2249553.92	5.00	0.00
					6254165.54	2249536.07	5.00	0.00
					6254191.97	2249535.41	5.00	0.00
					6254191.09	2249493.34	5.00	0.00
					6254034.68	2249495.10	5.00	0.00
AREASOURCE	CAR02	5.00	а		6254251.15	2249450.80	5.00	0.00
					6254340.87	2249454.50	5.00	0.00
					6254340.00	2249158.49	5.00	0.00
					6254251.46	2249161.10	5.00	0.00
AREASOURCE	CAR03	5.00	а		6254296.60	2249148.94	5.00	0.00
					6254339.13	2249150.68	5.00	0.00
					6254339.13	2249102.94	5.00	0.00
					6254296.60	2249104.67	5.00	0.00
AREASOURCE	CAR04	5.00	а		6254248.86	2249134.19	5.00	0.00
					6254266.22	2249135.06	5.00	0.00
					6254264.48	2248819.95	5.00	0.00
					6254246.25	2248820.82	5.00	0.00
AREASOURCE	CAR05	5.00	а		6254294.00	2248953.63	5.00	0.00

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	x	У	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6254337.40	2248952.76	5.00	0.00
					6254335.66	2248760.06	5.00	0.00
					6254294.00	2248761.79	5.00	0.00
AREASOURCE	CAR06	5.00	а		6254095.38	2248797.73	5.00	0.00
					6254253.72	2248797.73	5.00	0.00
					6254253.02	2248736.62	5.00	0.00
					6254094.69	2248738.01	5.00	0.00
AREASOURCE	CAR07	5.00	а		6252671.34	2248808.12	5.00	0.00
					6252802.93	2248807.83	5.00	0.00
					6252802.36	2248748.69	5.00	0.00
					6252689.45	2248748.97	5.00	0.00
					6252689.73	2248767.37	5.00	0.00
					6252670.77	2248767.65	5.00	0.00
AREASOURCE	CAR08	5.00	а		6252667.70	2249623.45	5.00	0.00
					6252667.43	2249643.19	5.00	0.00
					6252835.28	2249641.29	5.00	0.00
					6252836.09	2249623.45	5.00	0.00
AREASOURCE	CAR09	5.00	а		6252653.42	2248267.23	5.00	0.00
					6252997.87	2248266.54	5.00	0.00
					6253000.64	2248199.18	5.00	0.00
					6252654.81	2248198.48	5.00	0.00
AREASOURCE	CAR10	5.00	а		6252278.05	2248296.04	5.00	0.00
					6252297.00	2248296.04	5.00	0.00
					6252298.87	2248175.68	5.00	0.00
					6252276.45	2248176.48	5.00	0.00
AREASOURCE	DRY01	8.00	а		6252848.18	2249499.19	8.00	0.00
					6252849.92	2249681.08	8.00	0.00
					6254023.35	2249671.99	8.00	0.00
					6254023.14	2249488.11	8.00	0.00
AREASOURCE	DRY02	8.00	а		6252844.00	2248881.49	8.00	0.00
					6254017.73	2248872.62	8.00	0.00
					6254017.73	2248812.86	8.00	0.00
					6254073.37	2248811.99	8.00	0.00
					6254071.18	2248689.60	8.00	0.00
					6252844.25	2248698.03	8.00	0.00

Barrier(s)

Name	Sel.	М.	ID	Abso	rption	Z-Ext.	Canti	lever	H	leig	ght		Coordinate	es	
				left	right		horz.	vert.	Begin		End	x	У	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED			0						14.00	а		6252847.29	2249556.92	14.00	0.00
												6252847.21	2249577.33	14.00	0.00
BARRIERPLANNED			0						14.00	а		6252847.79	2249617.86	14.00	0.00
												6252847.98	2249683.02	14.00	0.00
												6254024.91	2249673.82	14.00	0.00
												6254024.48	2249609.06	14.00	0.00
BARRIERPLANNED			0						14.00	а		6254024.13	2249568.26	14.00	0.00
												6254023.79	2249488.11	14.00	0.00
BARRIERPLANNED			0						14.00	а		6252841.75	2248823.37	14.00	0.00
												6252841.36	2248737.48	14.00	0.00
BARRIERPLANNED			0						14.00	а		6252842.11	2248696.85	14.00	0.00
												6253255.65	2248693.73	14.00	0.00
												6253639.85	2248690.78	14.00	0.00
												6254072.84	2248688.17	14.00	0.00
												6254158.43	2248687.13	14.00	0.00
												6254177.90	2248685.46	14.00	0.00
												6254197.09	2248681.75	14.00	0.00
												6254220.05	2248675.16	14.00	0.00
												6254242.48	2248666.95	14.00	0.00
BARRIERPLANNED			0						14.00	а		6254074.78	2248813.90	14.00	0.00
											T	6254074.31	2248728.21	14.00	0.00

Building(s)

Name	Sel.	М.	ID	RB	Residents	Absorption	Height	:		Coordinat	es	
							Begin		х	У	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001	x	0		45.00	а	6252683.18	2249560.17	45.00	0.00
									6252847.29	2249556.92	45.00	0.00
									6252845.20	2249496.50	45.00	0.00
									6254211.78	2249486.77	45.00	0.00
									6254211.99	2249481.85	45.00	0.00
									6254240.02	2249481.75	45.00	0.00
									6254239.39	2249453.61	45.00	0.00
									6254244.83	2249453.72	45.00	0.00
									6254240.35	2248845.57	45.00	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinat	es	
							Begin	х	У	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)
								6254235.32	2248845.74	45.00	0.00
								6254234.81	2248817.75	45.00	0.00
								6254208.57	2248817.90	45.00	0.00
								6254207.16	2248812.72	45.00	0.00
								6254019.25	2248814.39	45.00	0.00
								6254019.41	2248874.24	45.00	0.00
								6252842.50	2248882.80	45.00	0.00
								6252842.50	2248823.36	45.00	0.00
								6252710.01	2248823.88	45.00	0.00
								6252710.18	2248829.00	45.00	0.00
								6252681.76	2248829.57	45.00	0.00
								6252682.27	2248857.48	45.00	0.00
								6252677.10	2248857.99	45.00	0.00

Ground Absorption(s)

Name	Sel.	м.	ID	G	Coord	inates
					x	У
					(ft)	(ft)
GROUND			0	0.5	6254665.08	2248616.10
					6254665.08	2248478.76
					6251546.42	2248521.68
					6251514.95	2248721.96



APPENDIX 10.1:

PROJECT CONSTRUCTION NOISE CALCULATIONS





15091 - Mead Valley Commerce Center CadnaA Noise Prediction Model: 15091-05_Construction.cna

CadnaA Noise Prediction Model: 15091-05_Construction.cna Date: 20.12.23 Analyst: B. Lawson

Calculation Configuration

ParameterValueGeneral	Configurat	tion
Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)0.00Daytime Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Rcvr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10ScreeningIncl. Ground Att. over BarrierDots. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierMin Speed for Dir. (#(Unit,SPEED))3.0Ground Absorption G0.50Wind Speed for Dir. (#Unit,SPEED)3.0Min Speed for Dir. (#Unit,SPEED)3.0Radiways (FTA/FRA)Industrial IGTAircraft (???)Industria IGT	Parameter	Value
Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition	General	
Min. Dist Src to Rov0.00Partition0.50Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Line SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Rer. Time Penalty (dB)10.00DTM100Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1.00Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Intel Stance Scree	Max. Error (dB)	0.00
Partition	Max. Search Radius (#(Unit,LEN))	2000.01
Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnProj. Area SourcesOnRef. Time	Min. Dist Src to Rcvr	0.00
Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. TimeDaytime Penalty (dB)0.00Rer. Time Penalty (dB)0.00Standard Height (m)0.00Min. Length of Section (%)0.00Night-time Penalty (dB)0.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Search Radius Src100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDerrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Aircraft (???)	Partition	
Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Ref. Time Penalty (dB)10.00Night-time Penalty (dB)10.00DTMStandard Height (m)Model of TerrainTriangulationReflection2Search Radius Src100.00Search Radius Rovr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Aircraft (???)	Raster Factor	0.50
Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReffection2Search Radius Rcvr100.00Max. Order of Reflection2Search Radius Rcvr100.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)	Max. Length of Section (#(Unit,LEN))	999.99
Proj. Line SourcesOnProj. Area SourcesOnRef. TimeOnDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMOnStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Some ObjLateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)Interf Carling State (Construct)	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area SourcesOnRef. TimeDaytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Revr1000.00Min. Distance Source - Reflector1.00Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Aircraft (???)	Min. Length of Section (%)	0.00
Ref. TimeImage: Constant of the system of the s	Proj. Line Sources	On
Daytime Penalty (dB)0.00Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2search Radius Src100.00Max. Order of Reflection2Search Radius Rxr100.00Max. Distance Source - Rcvr1000.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Roads (TMM)Railways (FTA/FRA)Aircraft (???)	Proj. Area Sources	On
Recr. Time Penalty (dB)5.00Night-time Penalty (dB)10.00DTM	Ref. Time	
Night-time Penalty (dB)10.00DTM	Daytime Penalty (dB)	0.00
DTMDTMStandard Height (m)0.00Model of TerrainTriangulationReflection2max. Order of Reflection2Search Radius Src100.00Search Radius Rovr100.00Max. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)100Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over Barrier Dz with limit (20/25)Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Railways (FTA/FRA)Aircraft (???)	Recr. Time Penalty (dB)	5.00
Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rovr 100.00 1000.00 Max. Distance Source - Revr 100.00 Min. Distance Source - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) E Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Interline function	Night-time Penalty (dB)	10.00
Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rovr 100.00 Max. Distance Source - Revr 1000.00 1000.00 Min. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 1 Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) 10	DTM	
ReflectionCmax. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Source - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDrawth limit (20/25)Destrier Coefficients C1,2,3Barrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit,TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit,SPEED))3.0Radad (TNM)International Additional Addit	Standard Height (m)	0.00
max. Order of Reflection2Search Radius Src100.00Search Radius Rcvr100.00Max. Distance Source - Rcvr1000.00 1000.00Min. Distance Rvr - Reflector1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOnScreeningIncl. Ground Att. over BarrierDarrier Coefficients C1,2,33.0 20.0 0.0Temperature (#(Unit, TEMP))10rel. Humidity (%)70Ground Absorption G0.50Wind Speed for Dir. (#(Unit, SPEED))3.0Roads (TMM)Industrial (SC)Railways (FTA/FRA)Industrial (SC)Aircraft (???)Industrial (SC)	Model of Terrain	Triangulation
Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 Min. Distance Rcvr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Darrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Intel State	Reflection	
Search Radius Rovr 1000.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) = Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) A	max. Order of Reflection	2
Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Darrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Intercent (#Content (#Conten (#Content (#Content (#Content (#Conten (#Content (#Cont	Search Radius Src	100.00
Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Lateral and the state of the	Search Radius Rcvr	100.00
Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Interface Aircraft (???) Interface	Max. Distance Source - Rcvr	1000.00 1000.00
Industrial (ISO 9613) some Obj Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Railways (FTA/FRA) Aircraft (???)	Min. Distance Rvcr - Reflector	1.00 1.00
Lateral Diffraction some Obj Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Radas (TNM) Railways (FTA/FRA) Aircraft (???) Interference	Min. Distance Source - Reflector	0.10
Obst. within Area Src do not shield On Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Interference	Industrial (ISO 9613)	
Screening Incl. Ground Att. over Barrier Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Image: Comparison of	Lateral Diffraction	some Obj
Dz with limit (20/25) Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit, TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Letter (Construction of Construction of Constructin of Construction of Construction of Construction of Const	Obst. within Area Src do not shield	On
Barrier Coefficients C1,2,3 3.0 20.0 0.0 Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TMM) Railways (FTA/FRA) Aircraft (???) Letter (Comparison of Comparison of Compa	Screening	Incl. Ground Att. over Barrier
Temperature (#(Unit,TEMP)) 10 rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM)		Dz with limit (20/25)
rel. Humidity (%) 70 Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Ground Absorption G 0.50 Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM)	Temperature (#(Unit,TEMP))	10
Wind Speed for Dir. (#(Unit,SPEED)) 3.0 Roads (TNM)	rel. Humidity (%)	70
Roads (TNM) Railways (FTA/FRA) Aircraft (???)	Ground Absorption G	0.50
Railways (FTA/FRA) Aircraft (???)	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Aircraft (???)	Roads (TNM)	
	Railways (FTA/FRA)	
Strictly acc. to AzB	Aircraft (???)	
	Strictly acc. to AzB	

Receiver Noise Levels

	_																
Name	М.	ID		Level Lr		Limit. Value			Land Use			Height		Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
R01		R01	56.8	56.8	63.5	55.0	45.0	0.0				5.00	а	6252359.12	2249964.74	5.00	
R02		R02	59.6	59.6	66.3	55.0	45.0	0.0				5.00	а	6253705.57	2249935.66	5.00	
R03		R03	60.1	60.1	66.8	55.0	45.0	0.0				5.00	а	6254179.53	2248469.51	5.00	
R04		R04	63.6	63.6	70.3	55.0	45.0	0.0				5.00	а	6253307.27	2248425.19	5.00	
R05		R05	64.4	64.4	71.1	55.0	45.0	0.0				5.00	а	6252049.84	2248238.08	5.00	
R06		R06	66.0	66.0	72.7	55.0	45.0	0.0				5.00	а	6252729.91	2247767.15	5.00	

Area Source(s)

Name	M.	ID	R	esult. PW	/L	Re	esult. PW	L''		Lw/L	i	Op	erating Ti	me	Heigh	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
SITEBOUNDARY		CONSTRUCTION01	118.4	118.4	118.4	65.8	65.8	65.8	Lw	118.4					8	а
SITEBOUNDARY		CONSTRUCTION02	118.4	118.4	118.4	70.6	70.6	70.6	Lw	118.4					8	а

Name	ID	Height					Coordinat	es	
		Begin	Begin End		x	У	z	Ground	
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION01	8.00	а			6252564.26	2249715.91	8.00	0.00
						6254403.85	2249701.33	8.00	0.00
						6254401.79	2249406.28	8.00	0.00
						6254413.51	2249406.71	8.00	0.00
						6254412.21	2249169.73	8.00	0.00
						6254411.77	2249170.17	8.00	0.00
						6254409.60	2248625.90	8.00	0.00
						6253466.90	2248662.35	8.00	0.00

Name	ID	Height					Coordinat	es	
		Begin		End		х	У	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
						6252541.11	2248698.38	8.00	0.00
						6252546.32	2249230.50	8.00	0.00
						6252547.19	2249357.23	8.00	0.00
						6252562.38	2249481.80	8.00	0.00
SITEBOUNDARY	CONSTRUCTION02	8.00	а			6253145.73	2248496.91	8.00	0.00
						6253141.01	2247836.68	8.00	0.00
						6252154.78	2247841.91	8.00	0.00
						6252161.02	2248502.70	8.00	0.00

Ground Absorption(s)

Name	Sel.	М.	ID	G	Coord	inates
					х	У
					(ft)	(ft)
GROUND			0	0.5	6254665.08	2248616.10
					6254665.08	2248478.76
					6251546.42	2248521.68
					6251514.95	2248721.96

APPENDIX 10.2:

NIGHTTIME CONCRETE POUR NOISE CALCULATIONS





15091 - Mead Valley Commerce Center

CadnaA Noise Prediction Model: 15091-05_Pour.cna Date: 20.12.23 Analyst: B. Lawson

Calculation Configuration

Configurat	tion
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	М.	ID		Level Lr		Limit. Value				Land	Use	Height		Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
R01		R01	36.9	36.9	43.5	55.0	45.0	0.0				5.00	а	6252359.12	2249964.74	5.00	
R02		R02	40.5	40.5	47.1	55.0	45.0	0.0				5.00	а	6253705.57	2249935.66	5.00	
R03		R03	39.5	39.5	46.1	55.0	45.0	0.0				5.00	а	6254179.53	2248469.51	5.00	
R04		R04	40.4	40.4	47.1	55.0	45.0	0.0				5.00	а	6253307.27	2248425.19	5.00	
R05		R05	34.4	34.4	41.1	55.0	45.0	0.0				5.00	а	6252049.84	2248238.08	5.00	
R06		R06	34.5	34.5	41.1	55.0	45.0	0.0				5.00	а	6252729.91	2247767.15	5.00	

Area Source(s)

			• •													
Name	м.	ID	R	esult. PW	/L	R	esult. PW	L''		Lw/L	i	Op	Operating Time			t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
CONCRETE		0	100.3	100.3	100.3	50.1	50.1	50.1	Lw	100.3					8	а

Name	ID	Height			Coordinat	es		
		Begin End		х	У	z	Ground	
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
CONCRETE	0	8.00	а		6252683.42	2249560.18	8.00	0.00
					6252805.17	2249562.13	8.00	0.00
					6254015.87	2249554.50	8.00	0.00
					6254017.35	2249495.45	8.00	0.00
					6254212.55	2249494.35	8.00	0.00
					6254244.45	2249489.03	8.00	0.00
					6254247.11	2249459.79	8.00	0.00
					6254237.80	2248821.89	8.00	0.00
					6254011.88	2248816.57	8.00	0.00

Name	ID	F	lei	ght		Coordinates						
		Begin		End		х	у	z	Ground			
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)			
						6252801.18	2248827.20	8.00	0.00			
						6252678.34	2248830.22	8.00	0.00			

Ground Absorption(s)

Name	Sel.	М.	ID	G	Coord	Coordinates		
					x	У		
					(ft)	(ft)		
GROUND			0	0.5	6254665.08	2248616.10		
					6254665.08	2248478.76		
					6251546.42	2248521.68		
					6251514.95	2248721.96		

APPENDIX 10.3:

BLASTING NOISE CALCULATIONS





15091 - Mead Valley Commerce Center

CadnaA Noise Prediction Model: 15091-05_Blasting.cna Date: 20.12.23 Analyst: B. Lawson

Calculation Configuration

ParameterValueGeneral	Configurat	tion				
Max. Error (dB)0.00Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00PartitionRaster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (#(Unit,LEN))0.00Proj. Line SourcesOnProj. Area SourcesOnRef. TimeDaytime Penalty (dB)0.00Rer. Time Penalty (dB)10.00DTMStandard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Max. Distance Source - Reflector1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)Lateral Diffractionsome ObjObst. within Area Src do not shieldOn	Parameter	Value				
Max. Search Radius (#(Unit,LEN))2000.01Min. Dist Src to Rcvr0.00Partition	General					
Min. Dist Src to Rcvr0.00Partition	Max. Error (dB)	0.00				
Partition0.50Raster Factor0.50Max. Length of Section (#(Unit,LEN))999.99Min. Length of Section (#(Unit,LEN))1.01Min. Length of Section (%)0.00Proj. Line SourcesOnProj. Line SourcesOnRef. Time0.00Daytime Penalty (dB)0.00Rer. Time Penalty (dB)0.00Night-time Penalty (dB)10.00DTM0.00Standard Height (m)0.00Model of TerrainTriangulationReflection2Search Radius Src100.00Search Radius Rcvr100.00Min. Distance Source - Rctvr1.00 1.00Min. Distance Source - Reflector0.10Industrial (ISO 9613)1.01Lateral Diffractionsome ObjObst. within Area Src do not shieldOn	Max. Search Radius (#(Unit,LEN))	2000.01				
Raster Factor 0.50 Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Line Sources On Ref. Time Daytime Penalty (dB) Daytime Penalty (dB) 0.00 DTM Standard Height (m) Model of Terrain Triangulation Refeftcion 2 Search Radius Src 100.00 Search Radius Src 100.00 Min. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction	Min. Dist Src to Rcvr	0.00				
Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Line Sources On Ref. Time Daytime Penalty (dB) Daytime Penalty (dB) 0.00 DTM Standard Height (m) Model of Terrain Triangulation Reflection Triangulation Reflection 2 Search Radius Src 100.00 Search Radius Revr 100.00 Min. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Lateral Diffraction some Obj	Partition					
Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Daytime Penalty (dB) Daytime Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) Model of Terrain Triangulation Reflection 2 Search Radius Src 100.00 Max. Distance Source - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Lateral Diffraction some Obj	Raster Factor	0.50				
Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Daytime Penalty (dB) Daytime Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Min. Distance Source - Rcvr 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Lateral Diffraction some Obj	Max. Length of Section (#(Unit,LEN))	999.99				
Proj. Line Sources On Proj. Area Sources On Ref. Time Daytime Penalty (dB) Daytime Penalty (dB) 0.00 Rer. Time Penalty (dB) 10.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) Model of Terrain Triangulation Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Min. Distance Source - Rcvr 1000.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Dots. within Area Src do not shield On	Min. Length of Section (#(Unit,LEN))	1.01				
Proj. Area Sources On Ref. Time	Min. Length of Section (%)	0.00				
Ref. Time 0.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Min. Distance Source - Rcvr 1000.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 1.01 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Proj. Line Sources	On				
Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Revr 100.00 Min. Distance Source - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Data Diffraction some Obj	Proj. Area Sources	On				
Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Revr 100.00 Max. Distance Source - Revr 1000.00 1000.00 Min. Distance Source - Reflector 1.00 Industrial (ISO 9613) 1.00 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Ref. Time					
Night-time Penalty (dB) 10.00 DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 100 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Daytime Penalty (dB)	0.00				
DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 2 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Recr. Time Penalty (dB)	5.00				
Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Source - Reflector 1.00 Industrial (ISO 9613) 100 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Night-time Penalty (dB)	10.00				
Model of Terrain Triangulation Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 100 Lateral Diffraction some Obj Obst. within Area Src do not shield On	DTM					
Reflection 2 max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) 100 Lateral Diffraction some Obj Obst. within Area Src do not shield On	Standard Height (m)	0.00				
max. Order of Reflection 2 Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Lateral Diffraction Dost. within Area Src do not shield On	Model of Terrain	Triangulation				
Search Radius Src 100.00 Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Editeral Diffraction Some Obj Obst. within Area Src do not shield	Reflection					
Search Radius Rcvr 100.00 Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial Diffraction Lateral Diffraction some Obj Obst. within Area Src do not shield On	max. Order of Reflection	2				
Max. Distance Source - Rcvr 1000.00 1000.00 Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On	Search Radius Src	100.00				
Min. Distance Rvcr - Reflector 1.00 1.00 Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On	Search Radius Rcvr	100.00				
Min. Distance Source - Reflector 0.10 Industrial (ISO 9613) Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On	Max. Distance Source - Rcvr	1000.00 1000.00				
Industrial (ISO 9613) Lateral Diffraction some Obj Obst. within Area Src do not shield On	Min. Distance Rvcr - Reflector	1.00 1.00				
Lateral Diffraction some Obj Obst. within Area Src do not shield On	Min. Distance Source - Reflector	0.10				
Obst. within Area Src do not shield On	Industrial (ISO 9613)					
	Lateral Diffraction	some Obj				
Screening Incl. Ground Att. over Barrier	Obst. within Area Src do not shield	On				
	Screening	Incl. Ground Att. over Barrier				
Dz with limit (20/25)		Dz with limit (20/25)				
Barrier Coefficients C1,2,3 3.0 20.0 0.0	Barrier Coefficients C1,2,3	3.0 20.0 0.0				
Temperature (#(Unit,TEMP)) 10	Temperature (#(Unit,TEMP))	10				
rel. Humidity (%) 70	rel. Humidity (%)	70				
Ground Absorption G 0.00	Ground Absorption G	0.00				
Wind Speed for Dir. (#(Unit,SPEED)) 3.0	Wind Speed for Dir. (#(Unit,SPEED))	3.0				
Roads (TNM)	Roads (TNM)					
Railways (FTA/FRA)	Railways (FTA/FRA)					
Aircraft (???)	Aircraft (???)					
Strictly acc. to AzB	Strictly acc. to AzB					

Receiver Noise Levels

Name	М.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	78.5	78.5	85.2	0.0	0.0	0.0		х	Total	5.00	а	6252359.12	2249964.74	5.00
RECEIVERS		R2	74.3	74.3	81.0	0.0	0.0	0.0		х	Total	5.00	а	6253705.57	2249935.66	5.00
RECEIVERS		R3	70.5	70.5	77.2	0.0	0.0	0.0		х	Total	5.00	а	6254179.53	2248469.51	5.00
RECEIVERS		R4	76.7	76.7	83.4	0.0	0.0	0.0		х	Total	5.00	а	6253307.27	2248425.19	5.00
RECEIVERS		R5	73.3	73.3	80.0	0.0	0.0	0.0		х	Total	5.00	а	6252049.84	2248238.08	5.00
RECEIVERS		R6	72.1	72.1	78.8	0.0	0.0	0.0		х	Total	5.00	а	6252729.91	2247767.15	5.00

Area Source(s)

Name	М.	ID	Result. PWL			Re	esult. PW	Lw / Li			Op	Height	t			
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	Π
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
BLASTBUFF20		BLAST01	125.7	125.7	125.7	97.6	97.6	97.6	Lw	125.7					3	а
BLASTBUFF20		BLAST02	125.7	125.7	125.7	97.7	97.7	97.7	Lw	125.7					3	а
BLASTBUFF20		BLAST03	125.7	125.7	125.7	97.3	97.3	97.3	Lw	125.7					3	а
BLASTBUFF20		BLAST04	125.7	125.7	125.7	97.3	97.3	97.3	Lw	125.7					3	а

Name	ID	ŀ	lei	ght		Coordinates						
		Begin	End		x	У	z	Ground				
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)			
BLASTBUFF20	BLAST01	3.00	а			6252524.90	2249540.98	3.00	0.00			
						6252521.60	2249540.68	3.00	0.00			
						6252518.29	2249540.93	3.00	0.00			
						6252515.07	2249541.72	3.00	0.00			
						6252512.02	2249543.03	3.00	0.00			
						6252509.23	2249544.83	3.00	0.00			

Name	ID	Begin	iel	ght End		x	Coordinat	z	Ground
		(ft)		(ft)	—	(ft)	у (ft)	(ft)	(ft)
		(11)	-	(11)			2249547.06	3.00	0.00
			-			6252506.78 6252504.73	2249549.67	3.00	0.00
			-		_	6252504.73			
			-				2249552.58	3.00	0.00
			_			6252502.05	2249555.71	3.00	0.00
						6252501.50	2249558.98	3.00	0.00
						6252501.49	2249562.30	3.00	0.00
						6252502.04	2249565.57	3.00	0.00
						6252503.11	2249568.71	3.00	0.00
						6252504.69	2249571.63	3.00	0.00
						6252506.73	2249574.24	3.00	0.00
						6252604.26	2249679.90	3.00	0.00
						6252606.69	2249682.13	3.00	0.00
						6252609.46	2249683.93	3.00	0.00
						6252612.48	2249685.26	3.00	0.00
						6252615.69	2249686.06	3.00	0.00
						6252618.98	2249686.33	3.00	0.00
						6252622.27	2249686.05	3.00	0.00
						6252625.47	2249685.24	3.00	0.00
						6252628.49	2249683.91	3.00	0.00
						6252631.26	2249682.10	3.00	0.00
						6252633.68	2249679.86	3.00	0.00
			-		⊢	6252635.71	2249677.25	3.00	0.00
-			-		⊢	6252635.71	2249674.34	3.00	0.00
			-		⊢		2249674.34	3.00	0.00
			-		ŀ	6252638.35	2249671.21		
			-		-	6252638.89		3.00	0.00
			-		-	6252638.88	2249664.65	3.00	0.00
						6252638.33	2249661.39	3.00	0.00
			_			6252637.26	2249658.27	3.00	0.00
						6252635.68	2249655.37	3.00	0.00
						6252633.65	2249652.76	3.00	0.00
						6252536.12	2249547.11	3.00	0.00
						6252533.73	2249544.91	3.00	0.00
						6252531.01	2249543.13	3.00	0.00
						6252528.04	2249541.81	3.00	0.00
LASTBUFF20	BLAST02	3.00	а			6252705.73	2249118.38	3.00	0.00
						6252702.25	2249118.07	3.00	0.00
						6252698.78	2249118.38	3.00	0.00
						6252695.41	2249119.28	3.00	0.00
						6252692.25	2249120.75	3.00	0.00
						6252689.40	2249122.75	3.00	0.00
						6252686.93	2249125.22	3.00	0.00
						6252684.93	2249128.07	3.00	0.00
						6252683.46	2249131.23	3.00	0.00
						6252682.56	2249134.60	3.00	0.00
			-			6252682.25	2249134.00	3.00	0.00
			-				2249138.07		0.00
			-			6252682.25		3.00	
			_			6252682.56	2249279.71	3.00	0.00
			_				2249283.07	3.00	0.00
							2249286.23	3.00	0.00
							2249289.09	3.00	0.00
							2249291.55	3.00	0.00
					L		2249293.55	3.00	0.00
						6252695.41	2249295.03	3.00	0.00
							2249295.93	3.00	0.00
					Ĺ		2249296.23	3.00	0.00
		_				6252705.73	2249295.93	3.00	0.00
			L		L	6252709.09	2249295.03	3.00	0.00
					Ľ	6252712.25	2249293.55	3.00	0.00
						6252715.11	2249291.55	3.00	0.00
		-				6252717.57	2249289.09	3.00	0.00
						6252719.57	2249286.23	3.00	0.00
						6252721.05	2249283.07	3.00	0.00
						6252721.95	2249279.71	3.00	0.00
					F	6252722.25	2249276.23	3.00	0.00
						6252722.25	2249138.07	3.00	0.00
					F	6252721.95	2249138.60	3.00	0.00
			-		ŀ		2249134.60	3.00	0.00
			-		-				
			-		⊢	6252719.57	2249128.07	3.00	0.00
			-		-	6252717.57	2249125.22	3.00	0.00
			-		-	6252715.11	2249122.75	3.00	0.00
			-		1	6252712.25	2249120.75	3.00	0.00
			_			6252709.09	2249119.28	3.00	0.00
BLASTBUFF20	BLAST03	3.00	а		Ĺ	6253412.78	2249008.66	3.00	0.00
						6253409.18	2249008.36	3.00	0.00
			L		Ĺ	6253252.60	2249010.39	3.00	0.00
					. —				
						6253249.14	2249010.74	3.00	0.00

Name	ID		Hei	ght			Coordinat			
		Begin		End (ft)	<u> </u>	X (f+)	У (f+)	Z (f+)	Ground	
		(ft)	\vdash	(ft)		(ft)	(ft) 2249013.19	(ft)	(ft)	
			┝			6253242.66 6253239.83	2249013.19	3.00	0.00	
			-		-	6253237.40	2249013.22	3.00	0.00	
						6253237.40	2249017.71	3.00	0.00	
			\vdash			6253235.43	2249020.58	3.00	0.00	
			-		_				0.00	
			-			6253233.13	2249027.11	3.00		
			-		_	6253232.86	2249030.58	3.00	0.00	
			-			6253233.20	2249034.05	3.00	0.00	
						6253234.13	2249037.40	3.00	0.00	
						6253235.63	2249040.54	3.00	0.00	
						6253237.65	2249043.37	3.00	0.00	
						6253240.13	2249045.81	3.00	0.00	
						6253242.99	2249047.78	3.00	0.00	
						6253246.16	2249049.23	3.00	0.00	
						6253249.52	2249050.11	3.00	0.00	
						6253252.99	2249050.39	3.00	0.00	
						6253409.57	2249048.36	3.00	0.00	
						6253413.02	2249048.01	3.00	0.00	
						6253416.36	2249047.07	3.00	0.00	
			L			6253419.49	2249045.57	3.00	0.00	
			L			6253422.31	2249043.55	3.00	0.00	
			Ĺ		L	6253424.75	2249041.07	3.00	0.00	
						6253426.71	2249038.21	3.00	0.00	
						6253428.15	2249035.05	3.00	0.00	
						6253429.03	2249031.69	3.00	0.00	
						6253429.31	2249028.24	3.00	0.00	
						6253428.98	2249024.78	3.00	0.00	
						6253428.07	2249021.43	3.00	0.00	
						6253426.59	2249018.29	3.00	0.00	
						6253424.59	2249015.45	3.00	0.00	
						6253422.13	2249013.01	3.00	0.00	
						6253419.28	2249011.02	3.00	0.00	
						6253416.13	2249009.56	3.00	0.00	
BLASTBUFF20	BLAST04	3.00	a			6253000.33	2248695.77	3.00	0.00	
			-			6252996.73	2248695.47	3.00	0.00	
						6252842.18	2248697.50	3.00	0.00	
						6252838.72	2248697.85	3.00	0.00	
						6252835.37	2248698.79	3.00	0.00	
			-			6252832.24	2248000.30	3.00	0.00	
						6252829.41	2248702.33	3.00	0.00	
			-			6252825.41	2248702.33	3.00	0.00	
			-				2248704.82		0.00	
			-			6252825.02		3.00		
			-			6252823.58	2248710.86	3.00	0.00	
			-			6252822.71	2248714.23	3.00	0.00	
						6252822.45	2248717.69	3.00	0.00	
			-			6252822.78	2248721.16	3.00	0.00	
			-		Ĺ	6252823.71	2248724.51	3.00	0.00	
							2248727.65	3.00	0.00	
					Ĺ		2248730.48	3.00	0.00	
					Ĺ		2248732.92	3.00	0.00	
						6252832.58	2248734.89	3.00	0.00	
							2248736.34	3.00	0.00	
						6252839.11	2248737.22	3.00	0.00	
						6252842.58	2248737.50	3.00	0.00	
			L		L	6252997.12	2248735.46	3.00	0.00	
						6253000.58	2248735.12	3.00	0.00	
			117		117	6253003.92	2248734.18	3.00	0.00	
							2248732.68	3.00	0.00	
							2248732.68 2248730.66	3.00 3.00		
						6253007.05	2248730.66		0.00	
						6253007.05 6253009.87 6253012.30	2248730.66	3.00	0.00	
						6253007.05 6253009.87 6253012.30	2248730.66 2248728.18 2248725.32	3.00 3.00	0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71	2248730.66 2248728.18 2248725.32	3.00 3.00 3.00	0.00 0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58	2248730.66 2248728.18 2248725.32 2248722.16	3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.86	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34	3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.86 6253016.54	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34 2248711.89	3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.86 6253016.54 6253015.62	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34 2248711.89 2248708.54	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.54 6253015.62 6253014.14	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34 2248711.89 2248708.54 2248705.40	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.54 6253015.62 6253014.14 6253012.14	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34 2248715.34 2248708.54 2248705.40 2248702.56	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
						6253007.05 6253009.87 6253012.30 6253014.26 6253015.71 6253016.58 6253016.54 6253015.62 6253014.14	2248730.66 2248728.18 2248725.32 2248722.16 2248718.80 2248715.34 2248715.34 2248708.54 2248705.40 2248702.56 2248700.12	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	

Ground Absorption(s)

Name	Sel.	м.	ID	G	Coord	dinates		
					x	У		
					(ft)	(ft)		
GROUND			0	0.5	6254665.08	2248616.10		
					6254665.08	2248478.76		
					6251546.42	2248521.68		
					6251514.95	2248721.96		